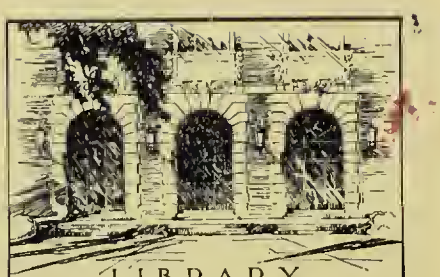

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UNITED STATES DEPARTMENT OF LABOR
L. B. Schwellenbach, *Secretary*

BUREAU OF LABOR STATISTICS
Ewan Clague, *Commissioner*

Trends in Urban Wage Rates
April 1946

Bulletin No. 891

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Letter of Transmittal

United States Department of Labor,
Bureau of Labor Statistics,
Washington, D. C., November 4, 1946.

The Secretary of Labor:

I have the honor to transmit herewith a report on the trend of urban wage rates in April 1946, which was prepared in the Bureau's Wage Analysis Branch under the direction of Frances Jones Clerc and Eleanor K. Buschman. Field work for the survey was conducted under the direction of the Bureau's regional wage analysts.

Ewan Clague, *Commissioner.*

Hon. L. B. Schwellenbach,
Secretary of Labor.

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Bulletin No. 891 of the

United States Bureau of Labor Statistics

[Reprinted from the MONTHLY LABOR REVIEW, November 1946.]

Trends in Urban Wage Rates, April 1946[1]

URBAN wage rates showed greater advances between October 1945 and April 1946 than in any 6-month period since the beginning of World War II, and at the end of August 1946 they were still registering substantial gains each month. Despite large increases in basic rates, however, real wages still showed only moderate advances over January 1941 levels, as a result of a 42.6-percent rise in consumers' prices between January 1941 and August 1946. If measured from wartime peak levels, real weekly earnings show a decline despite the basic wage rate increases that have occurred during the reconversion period, whereas real wage rates show a small gain.

These facts were disclosed by an analysis of the Bureau of Labor Statistics semiannual survey of the trend of urban wage rates for April 1946. The urban wage-rate series covers all manufacturing industries and the wholesale and retail trade, finance groups, local utilities, and service trades of the nonmanufacturing industries.

War and Postwar Wage Movements in Manufacturing

In April 1946, 8 months after the end of war with Japan, average hourly wage rates in urban manufacturing industry as a whole stood 11.7 percent above the VJ-day level, 12.4 percent above the VE-day level, and 48.9 percent above the rates that prevailed prior to the wartime wage rise, in January 1941 (table 1). Since April 1946,[2] wage rates have continued to advance at a rate of approximately 1 percent per month.

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[1] For a more detailed description of the Bureau's measure of urban wage trends and the findings of previous surveys, see Monthly Labor Review, October 1944 (p. 684), or Serial No. R. 1684; February 1945 (p. 379), or Bulletin No. 809; September 1945 (p. 519), or Bulletin No. 846; and February 1946 (p. 289), or Bulletin No. 860.

Urban wage rate trends should not be confused with trends of factory earnings published in each issue of the Monthly Labor Review. The urban wage-rate series measures changes in basic wage rates resulting from general changes in pay scales and from individual wage-rate adjustments within occupational classifications. For incentive workers they reflect changes in straight-time hourly earnings of key occupational groups. They exclude the effect of such factors as the shifting of employment among regions, industries, and occupations, and most of the changes in the composition of the labor force, as well as changes in payments for overtime and late-shift work, vacations and holidays, and other similar items.

The series dealing with trends of factory earnings, on the other hand, is based on gross earnings of all wage earners and reflects such factors as hours of work, premium pay for overtime and late-shift work, and shifting of employment among regions, industries, and occupations. The estimated straight-time average hourly earnings are computed by applying a correction factor to gross average earnings to eliminate the effect of overtime premiums but not of night-shift premiums or other factors affecting gross earnings.

Urban wage rates showed moderate increases throughout the war. An advance of 17.0 percent in manufacturing industries occurred during the 21-month prestabilization period (January 1941 to October 1942). The subsequent period of wage stabilization (October 1942 to August 1945) witnessed gains in manufacturing wage rates averaging somewhat less than one-half of 1 percent per month and totaling 13.9 percent, bringing the total increase between January 1941 and the end of the war with Japan to 33.3 percent. Average weekly earnings in manufacturing rose more sharply, and reached a high point in January 1945, which was 78.3 percent above the January 1941 base period. This gain was the composite result of higher wage rates, a longer average workweek (by 16.4 percent), substantial amounts of premium pay for overtime and late-shift work, and the movement of large numbers of workers from lower-wage industries and areas to those where higher wages prevailed.

The months following January 1945, however, recorded a steady decline in weekly manufacturing earnings from the all-time high of that month, culminating in a sharp break in August 1945, coincident with the end of the war with Japan. This decline reflected the influence of the above-named factors (except wage-rate increases) operating in reverse while reconversion to a peacetime economy got under way.[3]

In the summer of 1945, organized labor began a concerted drive for increases in wage rates that would maintain wartime levels of earnings under a potentially shorter peacetime workweek. When wage controls were relaxed in August 1945, numerous employers immediately put into effect wage increases that were pending approval by the National War Labor Board; some gave raises that they had been prevented from granting during the period of wage stabilization; and still others allowed interim increases of small amounts which they intended to supplement after clarification of governmental wage policy and the establishment of wage-movement patterns for individual industries or areas. These types of increases accounted for most of the 1.7 percent rise in urban wage rates that occurred between August and October 1945.

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[2] Estimate based on the Bureau's monthly series of average weekly hours and average hourly earnings. The latest data for the urban wage-rate series apply to April 1946.

The upward movement of wages since April 1946 is caused mainly by first or additional increases negotiated to bring the rates in specific establishments into line with industry or area patterns.

[3] See the Bureau's monthly series of Hours and Earnings, and of Employment and Pay Rolls, published monthly in mimeographed form and summarized in each issue of the Monthly Labor Review.

During the 6-month period following October 1945, pattern-setting wage negotiations of national importance were concluded, and increases in wage rates became general throughout the country. Some of these increases followed industry patterns, some followed area patterns, and a great many were modeled after the pattern of 18½ cents set in the 1946 steel case.[4] The net increase in urban wage rates between October 1945 and April 1946, chargeable in the main to these general wage changes, was 9.8 percent. More than half of this amount occurred after February 13, 1946, the closing date of the "wage increase pattern period" established by Executive Order No. 9697 of February 14, 1946. General wage increases between VJ-day and April 1946 brought the total of manufacturing wage changes resulting from this type of increase to 29.6 percent for the period since January 1, 1941.

Table 1 shows movements of wages in manufacturing, as indicated by various Bureau of Labor Statistics wage measures, for specified periods, January 1941 to April 1946.

TABLE 1.—*Comparative Summary of Changes in Earnings and Wage Rates in Manufacturing, January 1941–April 1946*

Period	Percent of change in specified period				
	Gross weekly earnings	Gross hourly earnings	Adjusted hourly earnings[1]	Urban wage rates	General wage changes
Total period (January 1941–April 1946)	+61.0	+54.9	+54.7	[2]+48.9	+29.6
Prestabilization period (January 1941–October 1942)	+46.0	+30.7	+21.5	[2]+17.0	+12.6
Stabilization period (October 1942–August 1945)	+7.3	+14.7	[3]+15.6	[2]+13.9	+3.6
October 1942–April 1943	+9.2	+5.7	+3.2	[2]+3.0	+1.1
April 1943–October 1943	+5.6	+4.7	+3.6	+3.8	+.5
October 1943–April 1944	+1.5	+2.5	+3.0	+1.9	+.5
April 1944–October 1944	+3.1	+1.8	+2.1	+2.2	+.4
October 1944–April 1945 (VE-day)	+.4	+1.3	+1.9	+1.6	+.5
April 1945–August 1945 (VJ-day)	−11.5	−1.9	[3]+.9	+.7	+.4
Postwar period (August 1945–April 1946)	+2.8	+3.3	[3]+10.1	[4]+11.7	[4]+11.1
August 1945–October 1945	−1.8	−3.8	[3]+1.0	[4]+1.7	[4]+1.5
October 1945–February 1946 (Executive Order No. 9697)	−1.0	+1.7	+4.2	+4.3	+4.1
February 1946–April 1946	+5.7	+5.6	+4.6	+5.3	+5.1

[1] Hourly earnings excluding premium payments for overtime, and with industries weighted in proportion to their 1941 employment.

[2] Partially estimated.

[3] Data not available for August 1945. July 1945 data substituted.

[4] October 1945 estimates revised on basis of more precise data obtained in connection with the April 1946 survey. Previously published October estimates were obtained from a survey of 18 of the 69 cities usually represented in the Bureau's indexes of urban wage rates.

MOVEMENTS OF GROSS AND REAL MANUFACTURING WAGES

Wartime trends.—Projecting the urban wage-rate index beyond April 1946 in the light of other wage measures for the same period, there appears to have been a further increase of 4 to 5 percent between

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[4] For data on postwar general wage increases, see Postwar Increases in Basic Wage Rates, Monthly Labor Review, September 1946, or mimeographed Bureau press release, Increases Granted in Basic Rates Since VJ-day, dated September 20, 1946.

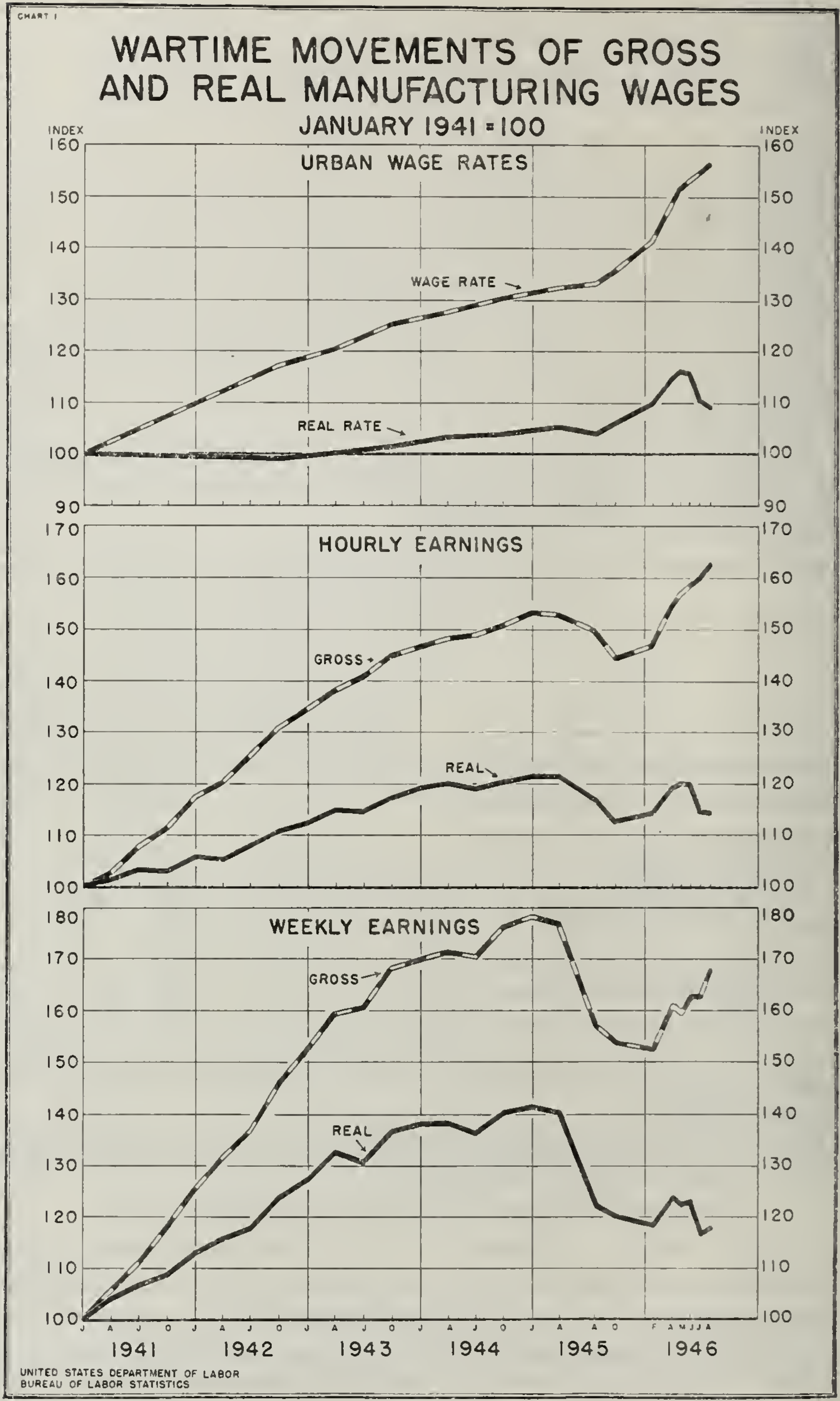

CHART I

WARTIME MOVEMENTS OF GROSS AND REAL MANUFACTURING WAGES

JANUARY 1941 = 100

UNITED STATES DEPARTMENT OF LABOR
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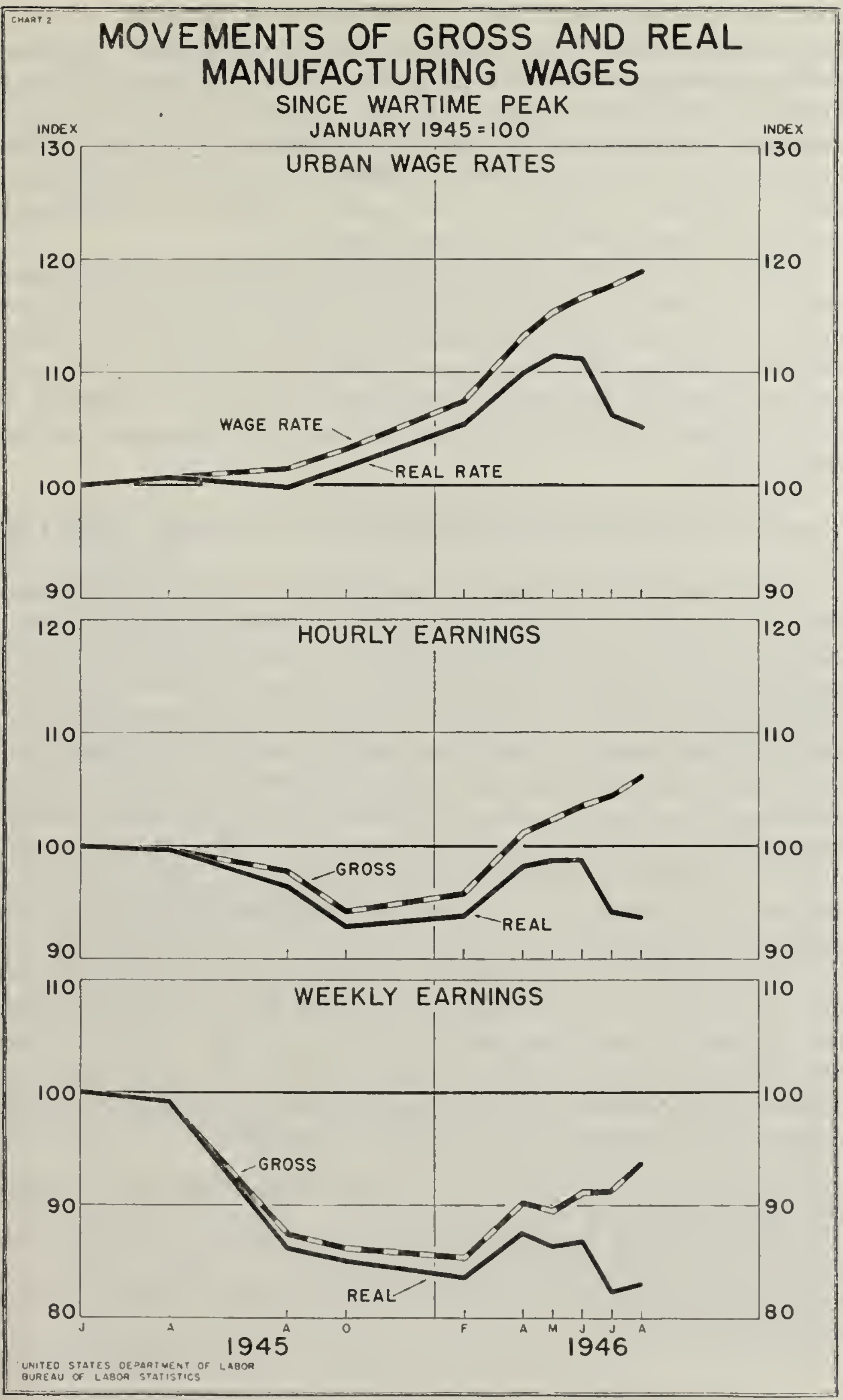

CHART 2

MOVEMENTS OF GROSS AND REAL MANUFACTURING WAGES

SINCE WARTIME PEAK

JANUARY 1945=100

URBAN WAGE RATES

HOURLY EARNINGS

WEEKLY EARNINGS

UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS

April and August 1946. Urban wage rates were, therefore, about 56 percent above prewar (January 1941) levels in August 1946. Average weekly earnings, which fell 14.6 percent between January 1945 and February 1946, began to rise again with increases in basic rates, and in August 1946 were 67.5 percent above January 1941 levels. The impact of the 42.6-percent rise in consumers' prices [5] over the same period reduced the increase in real weekly earnings to 17.5 percent, and in real wage rates to 9.4 percent (chart 1).[6]

Trends since wartime peak.—In comparing wage levels in August 1946 with peak wartime conditions (January 1945), wage rates increased an estimated 18.9 percent, but average weekly earnings stood 6.1 percent below the January 1945 base (chart 2). Adjusted by consumers' prices, the real earnings for these two measures of wages became a 5.1-percent advance and a 17.0-percent decline, respectively.

Trend of Manufacturing Wage Rates, April 1945 to April 1946

During the period of wartime wage stabilization, increases in wage rates as revealed by the urban wage-rate index, reflected not only general wage changes,[7] which usually accounted for only a small proportion of the increase, but also wage "adjustments" for individual workers, promotions of workers to the tops of job-rate ranges, hiring above normal entrance rates, and similar practices growing out of tight labor-market conditions. Since straight-time hourly earnings for incentive occupations are used in constructing the indexes, changes in productivity for these workers have also been reflected in the series. At the end of the war (VJ-day) urban wage rates had actually advanced 33.3 percent over the January 1941 level, but general wage changes accounted for an increase of only 16.7 percent (table 1).

By contrast with the war period, changes in wage rates since VJ-day may be identified very closely with general changes in wage scales. General wage changes amounted to an 11.1-percent increase in wage rates between August 18, 1945, and April 1946; the urban wage-rate index rose 11.7 percent.[8] The respective figures for the 1-year period covered by this study were 11.5 and 12.4 percent.

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[5] As measured by the BLS index of consumers' prices. For an explanation of this index, see November 1946, Monthly Labor Review, p. 781.

[6] Real wages represent the purchasing power of actual wages. Real-wage indexes are computed by dividing actual-wage indexes by consumers' price indexes.

[7] The Bureau's definition of "general wage change," for purposes of these studies, is a general or across-the-board change in rates that affects, at one time, 10 percent or more employees, or all workers in important occupational classifications.

[8] See footnote 4.

CHANGES IN WAGE RATES IN INDUSTRY GROUPS

The trend of urban wage rates for major groups of manufacturing ndustries between January 1941 and April 1946 is presented in table 2. The change from VJ-day to April 1946 has not been separated or measurement at the industry-group level, but wage-rate changes etween April and August 1945 (as shown in table 1) were negligible n volume.[9]

Table 2.—*Percent of Change in Urban Wage Rates in Manufacturing, by Industry Group, January 1941–April 1946* [1]

Industry group	Percent of change from—								
	Jan 1941 to Oct 1942 [1]	Oct. 1942 to Apr. 1943 [1]	Apr. 1943 to Oct. 1943	Oct. 1943 to Apr. 1944	Apr. 1944 to Oct. 1944	Oct. 1944 to Apr. 1945	Apr. 1945 to Oct. 1945 [2]	Oct. 1945 to Apr. 1946	Jan. 1941 to Apr. 1946 [1]
All manufacturing industries	+17.0	+3.0	+3.8	+1.9	+2.2	+1.6	+2.4	+9.8	+48.9
Food and kindred products	+13.6	+3.6	+3.2	+1.1	+1.9	+1.4	+3.0	+7.8	+40.9
Tobacco manufactures	+15.7	+2.8	+1.1	+3.1	+1.7	+3.7	+5.3	+7.4	+47.8
Textile-mill products	+24.2	+2.1	+2.7	+2.7	+2.3	+1.1	+5.0	+12.3	+63.1
Apparel and allied products	+13.8	+5.6	−.2	+5.0	+7.6	+6.7	+3.1	+11.0	+65.6
Lumber and timber basic products	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)
Furniture and finished lumber products	+16.2	−3.0	+3.4	+1.8	+2.9	+1.0	+5.7	+9.0	+41.9
Paper and allied products	+13.6	+2.4	+5.2	+.2	+1.7	+.4	+3.2	+11.6	+44.1
Printing, publishing, and allied industries	+7.4	+1.9	+3.1	+1.6	+2.5	+2.1	+3.5	+9.1	+35.5
Chemicals and allied products	+15.9	+2.8	+2.4	+1.3	+1.2	+.8	+5.0	+10.6	+46.4
Products of petroleum and coal	+18.0	+1.0	−.3	(4)	+.3	+.1	+5.7	+12.0	+41.2
Rubber products	+15.5	+2.8	+2.0	+2.5	+1.4	+2.0	+.5	+15.2	+48.5
Leather and leather products	+20.3	+3.2	+4.5	+4.0	+4.2	+4.2	+3.1	+12.9	+70.5
Stone, clay, and glass products	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)
Basic iron and steel	(5)	(5)	(5)	+.7	−.6	+.4	(5)	[6]+13.2	[7]+13.8
Shipbuilding	(5)	(5)	+.4	+.4	+.5	+.8	+.4	+10.0	[8]+12.8
Metalworking (except basic iron and steel and shipbuilding)	+16.2	+3.4	+5.4	+1.9	+2.0	+1.2	+2.0	+8.9	+47.9

[1] Data for periods prior to April 1943 are estimated.

[2] October 1945 estimates revised on basis of more precise data obtained in connection with the April 1946 survey. Previously published October estimates were obtained from a survey of 18 of the 69 cities usually represented in the Bureau's indexes of urban wage rates.

[3] Representation inadequate to show percent of change.

[4] Less than a tenth of 1 percent.

[5] Data not available.

[6] April 1945 to April 1946. Does not include the effect of 4-cent second shift and 6-cent third shift differentials introduced in 1945. The inclusion of shift differentials would bring the increase in urban wage rates between April 1945 and April 1946 to 15.4 percent.

[7] October 1943 to April 1946.

[8] April 1943 to April 1946.

The largest gains in rates for the 1-year period were made by petroleum (18.4 percent) and textiles (17.9 percent); the smallest gains[10] were in the food, shipbuilding, and the metal products industries other than basic iron and steel and shipbuilding (11.0, 10.4, and 11.1 percent, respectively). Including postwar gains as of April 1946, wage rates advanced after January 1941 by 70.5 percent and 65.6 percent, respectively, in the leather and leather products and the apparel industries. In view of the importance of piecework in these industries, these figures, to some extent, may reflect increased productivity. A similar increase in rates (63.1 percent) occurred in the textile industries. Rate advances in the metal products industries over the long period were slightly under the average for all manufacturing.

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[9] General wage changes for the period ranged in volume from one-half of 1 percent for products of petroleum and coal to seven-tenths of 1 percent for furniture and finished lumber products.

[10] Relatively small gains were also made by the lumber, and the stone, clay, and glass-products industries, for which separate data are not published.

The postwar increase in wage rates shown by the urban wage rate index for manufacturing as a whole, as already noted, is almost the same as the increase from general wage changes alone. This also holds true for several of the individual industry groups, notably metal products, shipbuilding, rubber products, and petroleum. In other industries, the urban wage rate index shows an increase larger than the advance from general wage changes alone. On the other hand, part of the rise caused by general wage changes in basic iron and steel was offset by other factors, so that the full amount of the increase was not evident in the urban wage-rate index.

The variations that were found among industries in the postwar movement of wage rates were traceable to such factors as manpower shortages in low-wage consumer-goods industries, in which wage rates during the war had not increased proportionately with those of the war industries; changes in sex-composition of the labor force; [11] and increases in the proportion of all workers found in the lower range of rate brackets during the period of reconversion. Slackening of incentive earnings resulting from changes in products, materials shortages, and tightening of incentive standards was another factor affecting the trend of wage rates in some industries, although the consumer-goods industries, in which piecework is important, registered larger gains in the urban wage-rate index than the increases reported as general wage changes only. Had the index of urban wage rates in manufacturing been confined to time workers, the increase for manufacturing as a whole for the year April 1945 to April 1946 would have been approximately 1.5 percentage points greater than the increase for both time and incentive workers.

The upward trend of rates in individual industries during the year after VJ–day did not exactly follow the course of the increases granted in the major wage cases during the first months of 1946. In some industries, especially those which in previous months had been engaged in war production, the rise was substantially less than the amounts of the pattern-setting advances granted by major firms in the industry. In other industries, such as the textiles, the increases vere somewhat greater than the typical general wage changes during he period. Failure of the urban series to follow the publicized pat-ern-setting general wage increases results primarily from the inclusion n the index of plants which gave varying amounts of general wage aises, averaging on an industry-wide basis less than the amount of ncrease given in the pattern-setting cases.[12]

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[11] Although constant weights for sex groups normally prevent this factor from influencing the urban wage-rate index, women workers have disappeared from some occupations in which they were found during the war, and the weights for them were consequently dropped. The effect of these changes on the index is believed to be only slight.

AREA COMPARISONS

The amount of postwar increase in manufacturing wage rates showed ome variation among individual cities or wage areas, but, in general, here was remarkable uniformity. Of the 15 major cities for which eparate postwar data can be presented (table 3), only 3 deviate more han 3 percentage points from the average advance for all manufac-uring. The largest gains were made in Portland, Oreg., and Hous-on, Tex.; wartime gains in both of these cities had been well below he national average. The smallest postwar rise in rates occurred in inneapolis. This city likewise had experienced relatively small war-

ABLE 3.—*Percent of Change in Urban Wage Rates in Manufacturing, by Selected Area, April 1943–April 1946*

Urban area	Percent of change from—						
	Apr. 1943 to Oct. 1943	Oct. 1943 to Apr. 1944	Apr. 1944 to Oct. 1944	Oct. 1944 to Apr. 1945	Apr. 1945 to Oct. 1945	Apr. 1915 to Apr. 1946	Apr. 1943 to Apr. 1946
otal, United States	+3.8	+1.9	+2.2	+1.6	[1] +2.4	+12.4	+23.5
tlanta	+3.6	+1.4	+2.7	+2.9	+4.9	(2)	----------
altimore	+1.2	+1.6	+1.6	+.5	(2)	+11.7	+17.2
irmingham	+1.9	+3.5	+1.2	+4.1	(2)	+11.7	+24.2
oston	+5.3	+1.6	+1.1	+3.7	+1.7	(2)	----------
uffalo	+9.3	+2.3	+.5	+1.8	(2)	+12.7	+29.0
hicago	+3.1	+1.8	+3.0	+2.1	+.3	(2)	----------
leveland	+5.3	+1.2	+2.7	+1.0	(2)	+9.6	+21.1
allas	+7.2	+1.9	+1.7	+2.4	+2.2	(2)	----------
enver	+4.1	+3.3	+1.8	−2.1	+2.3	(2)	----------
etroit	+5.9	+.2	+.3	0	−.4	(2)	----------
ouston	+1.6	+.2	+.8	+.1	(2)	+15.5	+18.7
ndianapolis	+3.6	+.9	+1.4	+.6	(2)	+12.2	+19.7
ansas City	+1.4	+1.7	+1.7	+3.1	+.9	(2)	----------
os Angeles	+6.8	+1.5	+1.1	+1.2	+1.1	+12.7	+25.0
ouisville	+1.4	+3.9	+3.3	+1.3	(2)	+10.0	+21.3
emphis	+3.8	+2.5	+2.0	+6.0	(2)	(2)	----------
ilwaukee	+2.7	+.3	+3.1	+1.5	(2)	(2)	----------
inneapolis	+2.8	+.9	+1.2	+1.6	(2)	+7.4	+14.5
ewark	+6.4	+1.8	+2.8	+.9	(2)	(2)	----------
ew Orleans	+7.3	+.5	+1.0	+1.0	(2)	+14.9	+26.4
ew York	+.5	+5.0	+6.4	+4.7	−.3	+12.1	+31.7
Philadelphia	+2.1	+1.5	+2.3	+1.6	(2)	+12.7	+21.5
Pittsburgh	+1.0	+1.8	+2.2	−.3	(2)	(2)	----------
Portland, Oreg	+.5	−.1	+.8	+.2	(2)	+16.2	+17.8
Providence	+2.6	+.7	+2.3	+.9	(2)	+10.0	+17.2
St. Louis	+4.9	+5.4	+1.0	+.8	(2)	+10.6	+24.7
San Francisco	+.9	+.4	+.8	0	(2)	(2)	----------
Seattle	+.9	+2.4	+.4	+.3	+.5	(2)	----------

[1] October 1945 estimates revised on basis of more precise data obtained in connection with the April 1946 survey. Previously published October estimate was obtained from a survey of 18 of the 69 cities usually represented in the Bureau's indexes of urban wage rates.

[2] Data not available.

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[12] See footnote 4, p. 3.

time wage increases in manufacturing industries. Its small postwar advance is attributable, at least in part, to reconversion problems in the metal-products industries, which employ a majority of the city's manufacturing workers.

Changes in Selected Nonmanufacturing Industries, April 1945 to April 1946

Urban wage rates in the nonmanufacturing industries covered by the survey advanced more evenly between April 1945 and April 1946 than in manufacturing, the 10-percent annual increase being almost equally divided between the two 6-month periods (table 4). In contrast, the greater portion of the 12.4-percent rise in manufacturing occurred during the period October 1945–April 1946, and much of it was concentrated around the precedent-setting wage increases of the first 3 months in 1946.

Table 4.—*Percent of Change in Urban Wage Rates in Selected Nonmanufacturing Industries, by Industry Group, April 1943–April 1946*

Industry group [1]	Percent of change from—						
	Apr. 1943 to Oct. 1943	Oct. 1943 to Apr 1944	Apr. 1944 to Oct. 1944	Oct. 1944 to Apr. 1945	Apr. 1945 to Oct. 1945 [2]	Oct. 1945 to Apr. 1946	Apr. 1943 to Apr. 1946
Total, selected industries	+6.4	+2.5	+4.2	+3.7	+4.1	+5.7	+29.7
Wholesale trade	+2.5	+2.0	+2.9	+1.5	+4.1	+4.3	+18.6
Retail trade	+9.2	+2.7	+5.7	+4.6	+5.5	+6.8	+39.7
Finance, insurance, and real estate	+3.9	+3.1	+1.6	+4.5	+1.7	+4.1	+20.3
Local utilities	+1.5	+1.1	+.3	+1.5	+2.3	+10.1	+17.6
Service trades	+6.4	+2.4	+5.4	+3.2	+2.8	+4.1	+26.9

[1] The specific industries selected to represent these groups in the measurement of wage-rate changes were as follows: *Wholesale trade*—general-line wholesale groceries; *retail trade*—department stores, clothing stores, and groceries; *finance, insurance, and real estate*—banks and savings and loan associations; *local utilities*—electric light and power or gas companies; *service trades*—hotels, power laundries, and auto-repair shops.

[2] October 1945 estimates were revised on basis of more precise data obtained in connection with the April 1946 survey. Previously published October estimates were obtained from a survey of 18 of the 69 cities usually represented in the Bureau's indexes of urban wage rates.

Type of wage-rate changes.—The increases in nonmanufacturing industry wages were largely the result of wage adjustments for individual workers rather than of general or across-the-board wage increases, such as occurred in manufacturing. In the period between August 18, 1945, and April 1946, for example, an estimated 41 percent of all the workers in the selected nonmanufacturing industries received general wage increases, whereas about 79 percent of all manufacturing workers were given such raises.[13] Nevertheless, the over-all increase in nonmanufacturing rates between April 1945 and April 1946 was only 2.4 percentage points less than the increase in manufacturing.

WAGE INCREASES IN INDIVIDUAL INDUSTRIES

Local utilities and retail trade made the greatest advances in rates during the 1-year period of all the five nonmanufacturing industry groups studied. Moreover, the gains registered by them (12.6 and 12.7 percent, respectively) compared more favorably with gains in manufacturing industries than did the increases in the finance industries, the service trades, and wholesale trade, which were all less than 10 percent (table 4).

Only the utilities group had received general or across-the-board increases in rate scales that approximated the advance in the urban wage-rate index. More than 95 percent of the workers in this group are estimated to have benefited from general wage increases following VJ-day, as contrasted with about half of the employees in wholesale trade and approximately one-third in retail trade, the service trades, and the finance group.[13]

AREA COMPARISONS

The nonmanufacturing urban wage-rate indexes of individual wage areas showed a great deal of variation in amounts of increase, ranging from 4.7 percent (in Cleveland) to 18.3 percent (in Minneapolis) between April 1945 and April 1946 (table 5). In 9 of the 15 cities for which separate data can be shown, rates had advanced by more than the national average, and these include such widely separated areas as Providence, New Orleans, Baltimore, and Buffalo. Among the cities showing lower-than-average increases are New York City, Cleveland, Houston, and Portland, Oreg.

These variations cannot be ascribed to differences in industrial composition of the city indexes, as the nonmanufacturing indexes, unlike manufacturing indexes, represent the same industries in all cities. Individual city trends in nonmanufacturing wage rates during the past year apparently have been influenced by such factors as labor supply and the size of wartime wage increases.

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[13] See footnote 4, p. 3.

TABLE 5.—*Percent of Change in Urban Wage Rates in Selected Nonmanufacturing Industries, by Selected Area, April 1943–April 1946*

Urban area	Percent of change from—						
	Apr. 1943 to Oct. 1943	Oct. 1943 to Apr. 1944	Apr. 1944 to Oct. 1944	Oct. 1944 to Apr. 1945	Apr. 1945 to Oct. 1945	Apr. 1945 to Apr. 1946	Apr. 1943 to Apr. 1946
Total, United States	+6.4	+2.5	+4.2	+3.7	[1] +4.1	+10.0	+29.7
Atlanta	+9.8	+3.6	+6.3	+5.6	+1.3	(2)	----------
Baltimore	+6.0	+3.3	+2.7	+3.6	(2)	+14.6	+33.5
Birmingham	+9.2	+2.6	+8.8	+2.2	(2)	+11.2	+38.5
Boston	+2.9	+2.8	+3.3	+4.1	+1.9	(2)	----------
Buffalo	+3.3	+1.0	+2.0	+2.0	(2)	+11.9	+21.5
Chicago	+8.8	+2.7	+6.3	+3.8	+2.6	(2)	----------
Cleveland	+7.0	+4.0	+3.5	+1.9	(2)	+4.7	+22.8
Dallas	+8.7	+12.1	+.8	+2.1	+1.0	(2)	----------
Denver	+2.9	+2.2	+3.3	+4.9	+2.3	(2)	----------
Detroit	+15.2	+.8	+5.5	+2.5	+3.4	(2)	----------
Houston	+13.5	+2.5	+3.2	+1.7	(2)	+6.9	+30.5
Indianapolis	+4.0	+3.2	+2.1	−.3	(2)	+11.7	+22.0
Kansas City	+8.6	+2.9	+1.1	+5.7	+5.5	(2)	----------
Los Angeles	+5.0	+1.3	+3.0	+2.5	+7.6	+17.0	+31.4
Louisville	+7.4	+7.8	+2.6	+4.0	(2)	+6.3	+31.4
Memphis	+11.6	+.7	+8.7	+.7	(2)	(2)	----------
Milwaukee	+9.8	+1.2	+4.6	+3.5	(2)	(2)	----------
Minneapolis	+4.8	+2.6	+7.6	−4.1	(2)	+18.3	+31.3
Newark	+8.5	+3.9	+3.8	+2.4	(2)	(2)	----------
New Orleans	+14.5	+4.1	+1.7	+2.1	(2)	+13.6	+40.7
New York	+5.4	+1.9	+3.2	+6.2	+1.9	+9.1	+28.5
Philadelphia	+9.1	+3.5	+1.9	+4.2	(2)	+11.2	+33.3
Pittsburgh	+3.3	+2.4	+2.1	+2.3	(2)	(2)	----------
Portland, Oreg	+2.6	+1.7	+6.6	−1.0	(2)	+6.8	+17.5
Providence	0	+2.4	+1.3	+5.6	(2)	+13.4	+24.2
St. Louis	+7.5	+3.2	+3.9	+3.5	(2)	+11.3	+32.7
San Francisco	+1.7	+1.6	+5.9	−2.0	(2)	(2)	----------
Seattle	+.2	+1.3	+4.0	+.4	+2.8	(2)	----------

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[1] October 1945 estimates revised on basis of more precise data obtained in connection with the April 1946 survey. Previously published October estimate was obtained from a survey of 18 of the 69 cities usually represented in the Bureau's indexes of urban wage rates.

[2] Data not available.

U. S. GOVERNMENT PRINTING OFFICE: 1946

BUSINESS MACHINE SERVICEMEN

prospects • Training • Earnings • Working conditions

Cover picture—Repairing a typewriter. Two or three years of on-the-job training is required to learn the work.

UNITED STATES DEPARTMENT OF LABOR
L. B. Schwellenbach, *Secretary*

Bureau of Labor Statistics
Ewan Clague, *Commissioner*

EMPLOYMENT OUTLOOK FOR BUSINESS MACHINE SERVICEMEN

Bulletin No. 892

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LETTER OF TRANSMITTAL

United States Department of Labor,
Bureau of Labor Statistics,
Washington, D. C., October 17, 1946.

The Secretary of Labor:

I have the honor to transmit herewith a report on employment outlook for business machine servicemen. This is one of a series of occupational studies prepared in the Bureau's Occupational Outlook Division for use in vocational counseling of veterans, young people in schools, and others considering the choice of an occupation. The present study was prepared by Claire L. Labbie, under the supervision of Richard H. Lewis. The Bureau wishes to acknowledge the cooperation received from companies and trade associations in the business machine servicing field.

Ewan Clague, *Commissioner.*

Hon. L. B. Schwellenbach,
Secretary of Labor.

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The photographs reproduced in this bulletin are by courtesy of the Underwood Corp., Remington Rand, Inc., National Cash Register Co., and Marchant Calculating Machine Co.

EMPLOYMENT OUTLOOK FOR BUSINESS MACHINE SERVICEMEN

Introduction

About 20,000 men have the important job of keeping in good running condition the machines hat millions of office and store workers use in their work. Business-machine servicing is not a large ield, but one of interest to young men with mehanical aptitudes because it offers opportunity for a limited number to enter in the next few years with the prospect of steady employment for a long period.

Business machines have changed the way most ffice jobs are done, have created new types of jobs, and have made possible the great increase in the olume and scope of correspondence, accounting, tatistics, and general clerical work that has ocurred in recent years. In a few decades they have ecome essential for the efficient operation of all ypes of business offices and stores. The typewriter has eliminated the old time penman who aboriously and slowly copied letters and records by longhand. Instead of many bookkeepers painstakingly making entries on ledger sheets, we find in large modern offices workers operating machines which post and compute accounting records in a single operation. Busy executives save time by dictating to machines instead of stenographers; clerks in stores handle sales transactions with greater speed and accuracy with cash registers; and duplicating machines make possible the speedy and economical production of copies of special notices, bulletins, and advertising leaflets. Punched card accounting-statistical machines rapidly sort record cards, make computations, add up the results, and print the answers.

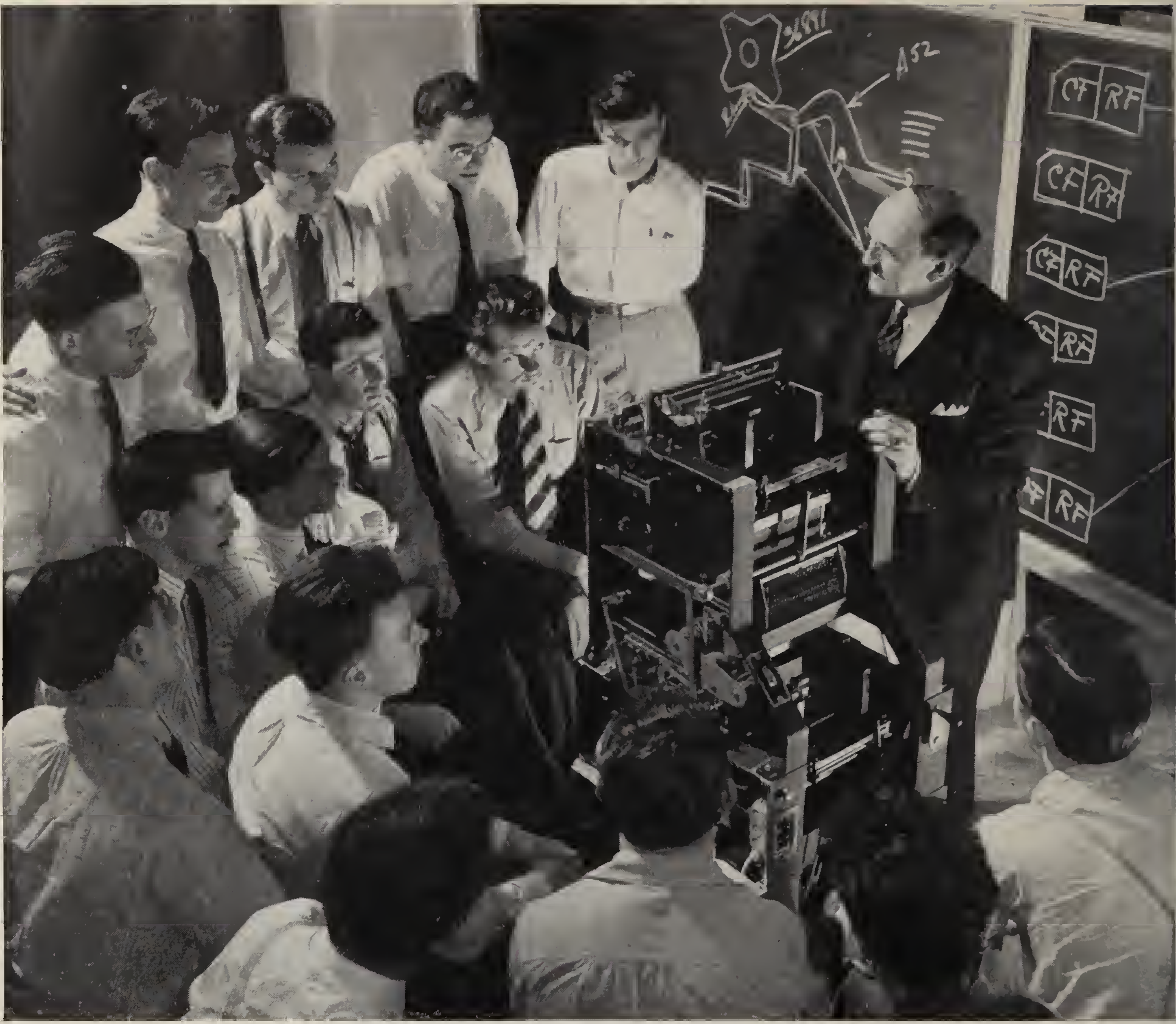
The widespread use of these machines is fairly recent. Most of the growth has occurred in the past 3 decades along with the general increase of clerical and accounting work. This trend is shown by the increase in the number of clerical and related workers from less than 4,000,000 in 1910 to almost 9,000,000 in 1940.

The Work of Business Machine Servicemen

Duties

The most important business machines, in terms of the number of jobs they provide for servicemen, are typewriters, adding machines, calculators, cash registers, accounting-bookkeeping machines, punched card accounting-statistical machines, dictating and transcribing machines, and the various duplicating machines. There are in addition many other kinds of business machines, including equipment for handling checks, coins, currency, and envelopes; autographic registers; time recording machines; postage meters; and microfilm machines. Although there are a small number of men who repair as many as four or five different types of machines, most servicemen specialize in repairing one or two types.

Business machine servicemen must know thoroughly the mechanism of their respective types of machines. They inspect and take apart appliances to find defects; adjust the various parts of the machines, using such common hand tools as wrenches and pliers, and special tools designed for the particular type of machine; repair or replace broken or worn parts; and clean and oil machines. Sometimes they are required to explain to operators how the machines work and how to avoid damaging them. Minor adjustments are usually made in the offices where the machines are used; all other work is performed in the repair shop. In some shops, the servicemen specialize in working either "outside" or "inside" the shop.



Class in repair of punched-card accounting machines.

Training

In general, the way to learn this work is to be hired as a trainee in an office machine repair shop. The beginner is paid a salary while he is working and receiving instruction. Training may be given on the job, through courses in a company school, or through a combination of both of these methods. The length of this training varies greatly, depending upon the types of equipment serviced, the number of different brands repaired, and the kind of shop in which employed. Training in independent shops tends to be somewhat longer than in manufacturers' service branches, because of the greater variety of the work in independent shops and the more informal nature of much of the instruction. A few schools have recently been opened to give instruction in business machine servicing, covering mainly typewriter repair. Because this is a new development it is not known at this time if their graduates will qualify as skilled mechanics when they seek employment, or to what extent their training time on the job would be reduced.

The Federal Committee on Apprenticeship has approved a 2-year training program for "business machine mechanics" with the requirement that the apprentices' training include the repair of several ypes of appliances and various makes of each type.

The main aptitudes needed by a trainee are general mechanical ability and manual dexterity. The work is relatively light, except for the occasional lifting of appliances; in general, physical demands are not high. Nevertheless, very few women are employed, this being almost entirely a man's occupation.

Chances for Advancement

Business machine servicemen may be promoted o supervisory jobs, such as that of service manager n a local service branch. Some may become salesmen of the equipment which they have repaired and, as salesmen, generally earn much more than repairmen. Experienced men sometimes open their own independent repair shops.

Working Conditions

Repairing business machines is comparatively free from the danger of accident and is cleaner than most mechanical trades.

Very few business machine repairmen are members of unions. Most of those who are members, however, belong to the International Association of Machinists, the United Electrical, Radio and Machine Workers of America (CIO), or to small independent unions.

The amount of work does not vary much from season to season, and most servicemen are employed the year round.

Where Employed

Business machine repairmen are employed mainly in the local service branches of companies which make the machines. These service branches are operated in connection with the sales offices of the firms. Repairmen in service branches repair, and are trained on, only the company's own make of machine. A large proportion of typewriter and adding machine servicemen, however, work in independently owned local repair shops. Most of these independent shops have only a few employees who usually service all make of typewriters and adding machines. Another source of employment is found in Federal, State, and local governments. In the Federal Government, men repair mainly typewriters, adding machines, and calculators. Applicants for Federal employment must have had at least 3 years' experience in servicing at least one type of office machine. The basic entrance salary for office appliance repairmen in the Federal Government is $2,243 a year.

Servicemen are employed principally in the large cities, since this is where the bulk of office machines are used. In small cities and in towns most of the work is done by independent repair shops, many of which are dealers for the manufacturing companies.

General Employment Outlook

In the next several years, although no sharp increases in employment are expected, there will be some opportunities for new workers to get into most of the different types of business-machine servicing jobs. Looking further into the future, the prospects are for a gradual rise in the employment of business-machine servicemen. During the past 30 years, the increase in the volume of record keeping and general clerical work, a desire to increase efficiency of office work and reduce labor costs, and the development and introduction of new types of machines have caused a steady growth in the use of business machines of all kinds. This trend should continue, and, particularly for certain types of business machines, there are many places where new installation of machines can improve efficiency and reduce costs.

During the war, the production of business machines for civilian use was drastically curtailed. Although manufacture has been resumed there is still a large accumulated demand which will take several years to fill. Much of the demand is for replacement of existing machines, but the machines in use should be increased substantially beyond the present number. The eventual effect of this increase will be to require more servicemen to keep the business machines functioning efficiently.

The general upward trend of employment in this occupation is significant in considering the long-run opportunities, but also important is the relative stability shown. In prosperous periods additional machines are put in use, thus adding to the need for repairmen. In less favorable times, sales of new machines usually fall; but, since this means that the machines are used longer than would normally be the case, there is continued need for maintenance work. The result has been that employment of servicemen has held up relatively well in periods of depression. Men who establish themselves in this field, particularly if employed by the large national concerns, are fairly well assured of continuing employment for many years if their work is satisfactory.

The employment opportunities, training requirements, and earnings in each major type of business machine servicing job are discussed below. It should be realized that in each case the description of opportunities refers to the conditions in the country generally, and that individual companies and particular localities may vary in the opportunities afforded for employment of new workers.

Employment Opportunities in Individual Occupations

Typewriter Servicemen

Typewriters are the most widely used of the business machines, having an important place in almost every type of office. In addition, many typewriters are used by individuals in their homes, which is not the case with other business machines. Typewriter servicing is the largest office machine repair occupation, with approximately 8,000 typewriter mechanics employed at the present time to maintain the millions of typewriters now in use.

A 2- to 3-year period of on-the-job training is ordinarily necessary to become a skilled typewriter repairman. During this training period, the mechanic learns how typewriters work and is taught how to clean the machine and to make all kinds of repairs, including aligning (making type print evenly), fixing the escapement (spacer), and adjusting the shift mechanism and ribbon movement.

During the war, while typewriter manufacturing was curtailed, there was an increased need for servicemen to keep existing typewriters in good working condition and to replace those machanics going into the armed forces. Despite this situation relatively few workers were trained during this period—owing to the drain of young men to the armed forces, the wartime labor shortage, and the reluctance of many shops to take on trainees—and a shortage of skilled men resulted. This shortage has continued, and demand has been only partly met by veterans skilled in typewriter repair work returning to the trade. Thus, there should be opportunities for a small number of newcomers to get jobs as trainees in the next several years. In some areas, particularly in the smaller towns, there are also opportunities for experienced and skilled typewriter servicemen, with general business and sales ability, to open their own repair and sales shops. In the longer run, employment in this field will tend to rise as the use of typewriters gradually increases, particularly in homes and schools.

In 1945 the typical pay of experienced typewriter servicemen for a 40-hour week was between $40 and $65 in the larger cities. This represents an increase over prewar earnings. Because they are required to work on various makes of typewriters, servicemen employed in independent repair shops usually earn more than men in the service branches of manufacturing companies. There are no figures on the earnings of the men who run their own repair shops. The profits of these shops vary widely and are influenced by such factors as the size of the firm and its location.

Adding-Machine Servicemen

Adding-machine repair requires less skill than most of the major business machine servicing occupations. Consequently the training period is relatively short, 6 months to a year of on-the-job instruction usually being all that is needed to learn the repair of a single make of adding machine. However, for those who learn to repair several makes of adding machines a longer training period is necessary. Very often, the servicing of adding machines is combined with typewriter repair or calculator repair into a single job.

Employment prospects for adding-machine repairmen are about the same as for typewriter mechanics. The actual number of new openings, however, will be far fewer for adding-machine mechanics, as there are four times as many men servicing typewriters as repairing adding machines. About 1,800 men now have jobs in which most of their time is spent in adding machine repair, in addition to the large number who repair adding machines part time along with other business machines.

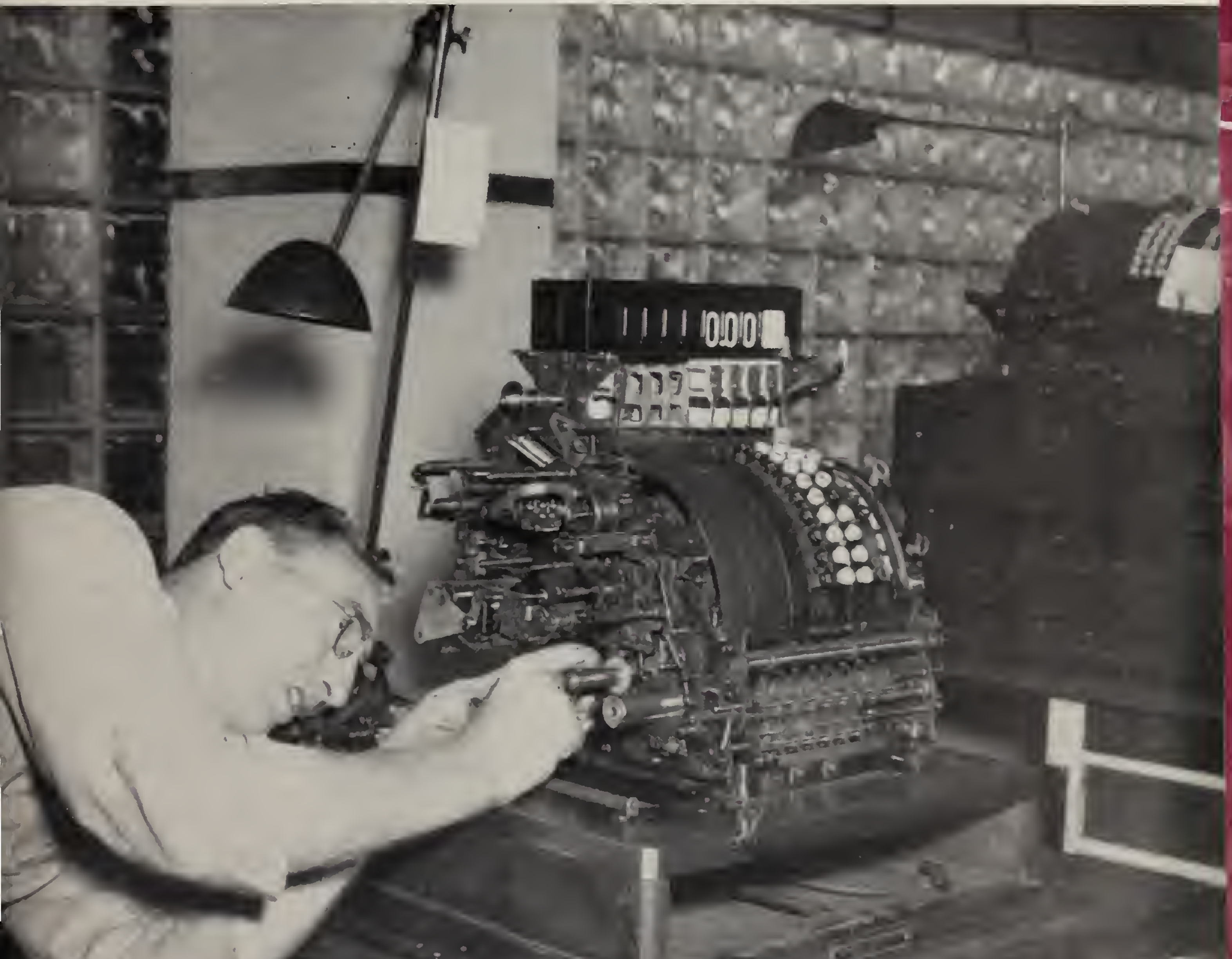
In 1945, typical weekly salaries of experienced adding-machine servicemen were between $40 and $60 in large cities. This is substantially higher than their prewar earnings.

Cash Register Servicemen

Next to typewriters, cash registers are the most widely used business machines. They are found mainly in retail stores and service establishments. Cash registers vary greatly in the number of things they can do. The simple models merely record each transaction, total the day's receipts, and provide a change drawer. The more complicated cash registers tabulate several different kinds of information on one transaction simultaneously, such as identification of clerk, department, and type of merchandise, as well as provide printed receipts with such information for the customer. The more elaborate cash registers actually perform many functions of accounting machines.

Nearly all cash register repairmen are trained in and employed by the service branches of the one

Repairing a cash register—Usually done in service branch of principal manufacturer.



company which manufactures the great majority of cash registers. Training for this work consists of 1 year of on-the-job instruction followed by about 6 months at the company school. In addition, a brief learning period in adding-machine repair may also be provided, since cash register servicemen in some cases also work on adding machines.

During the next few years there will probably be more cash registers in use than ever before, since retail trade is expected to expand. This will mean an increased demand for cash register repairmen. Thus, prospects are favorable for entry into this field, although the number of men who can enter in any one year is limited by the small size of the occupation. At the present time there are probably not more than 1,600 cash register repairmen in the United States.

Prewar average weekly earnings of cash register servicemen were from $35 to $50 in the larger cities. During the war these workers averaged between $50 and $75 a week.

Calculator Servicemen

Calculating machines, which add, subtract, divide, multiply, and also perform combinations of these operations, are used mostly in offices where a great many computations are necessary. These machines, most of which are electrically operated, have elaborate mechanisms, and, therefore, skilled men are required to repair them. This is a fairly small field of work, with about 2,000 employed at the present time.

To become a calculating machine repairman it is necessary to have 1 to 2 years of on-the-job training, often combined with 3 or 4 months of instruction at a company school. In the next several years there will be openings for only a very limited number of calculating machine servicemen. The shortage of these men during the past few years was caused primarily by their entrance into the armed forces. The return of these mechanics to their former jobs limits the number of beginners needed in the next several years. After the temporary period of adjustment is over a continued gradual expansion in the use of calculators should create some additional servicing jobs and insure steady employment for those in the trade.

In 1945, typical weekly earnings of experienced calculating machine servicemen in the large cities were from $45 to $65.

Accounting-Bookkeeping Machine Servicemen

Accounting-bookkeeping machines vary greatly in function. Some machines only post entries, some do billing, while others are combination typewriter and computing devices. All types have keyboards, like typewriters and adding machines, and are operated by striking the proper keys. They should not be confused with the punched card accounting-statistical machines which are described in another section. Accounting-bookkeeping machines are used wherever a great deal of accounting and bookkeeping is done, such as in department stores, retail and wholesale businesses, and banks. Since there are several different types of machines, each quite complicated, the servicing is highly skilled work. About 1,000 men are now employed in this work.

Usually a man must have had 1 or 2 years' experience as an adding machine, calculator, or cash register repairman in order to be eligible for accounting-bookkeeping machine training—which consists of 2 to 3 years of on-the-job instruction and, in some cases, an additional 6 months of training at a company school. In at least one major office machine appliance firm, however, this work is combined with the servicing of other office machines, and a total of 4 or 5 years' training is required.

Many veterans skilled as accounting-bookkeeping machine repairmen have returned to their former jobs, but there are not enough of them to meet the need resulting from the curtailment of training during the war. Thus, there will be jobs for trainees. These openings will be filled, however, by men who have had the required background in servicing adding machines, calculators, or cash registers. It will be several years before men not having this background can get the experience to qualify for jobs as trainees. By that time there will be fewer openings than at present, although the growth in the use of these machines and the need to replace men who leave the occupation will provide opportunities for a small number of beginners each year.

In 1945, typical weekly earnings of experienced accounting-bookkeeping machine servicemen in the large cities were from $65 to $85, excluding overtime—substantially higher than their prewar earnings of between $40 and $65 a week.

Accounting-Statistical Machine Servicemen

Most amazing of the business appliances are the punched card accounting-statistical machines. Great masses of accounting and statistical data may be recorded, tabulated, and analyzed with this equipment. The information is punched on cards alphabetically or according to a code, and the cards are put into machines which sort them and tabulate the results. Besides the basic card punching, sorting, and tabulating machines, many other machines are used, such as collators, verifiers, and multipliers and dividers, each having its own specific purpose. These machines are used mainly in large organizations, such as government agencies, department stores, insurance companies, and large industrial establishments for pay-roll and other accounting records, inventory control, statistical surveys, and similar purposes.

The servicemen are employed solely by the two firms which manufacture and service all punched card accounting-statistical machines. These men may be assigned to work anywhere in the United States. They rarely transfer from one company to the other. High school graduation, followed by about 2 years of technical schooling in electrical or mechanical engineering is a necessary qualification for this work. However, the equivalent in practical experience may be substituted. After a 2-month on-the-job trial period, new men are given 3 to 4 months' instruction at a company school. They then work under experienced repairmen until they are able to service machines on their own.

For many years in the future there will be continued growth in the use of punched card accounting-statistical machines. This growth, together with the need for replacing those who leave this work, means that prospects should be favorable for entering the occupation and remaining employed in it for many years. The number of men that will be hired in any one year will be limited, however, by the small size of the occupation—there are about 2,400 punched card accounting-statistical machine servicemen employed at the present time—and by the fact that increases in use of the machines will be gradual rather than sharp. In recent months, there have been practically no openings for beginners in the company employing the majority of servicemen, because of the large number of experienced veterans returning to their jobs with the firm. This company expects, however, to resume the hiring of new men for this work within the next year. The other company in the field is currently hiring men for trainee jobs.

The entrance salary for punched card accounting-statistical machine servicemen is about $35 per week. After completing the first 6 months of training they earn about $40. Periodic pay increases are given thereafter, according to skill and experience.

Dictating Machine Servicemen

The widespread use of dictating and transcribing machines is a relatively recent development. There are now about 1,000 skilled men employed in servicing this equipment. At present, however, the application of electronic principles and the use of electronic tubes is changing considerably the nature of the dictating and transcribing machines being manufactured. This shift, from an acoustic machine to an electronic one, affects the servicing of the equipment and hence, to some extent, the qualifications and training needed. Although the introduction of electronic machines means that the servicemen must have additional knowledge, the electronic features require far less servicing than the mechanical features.

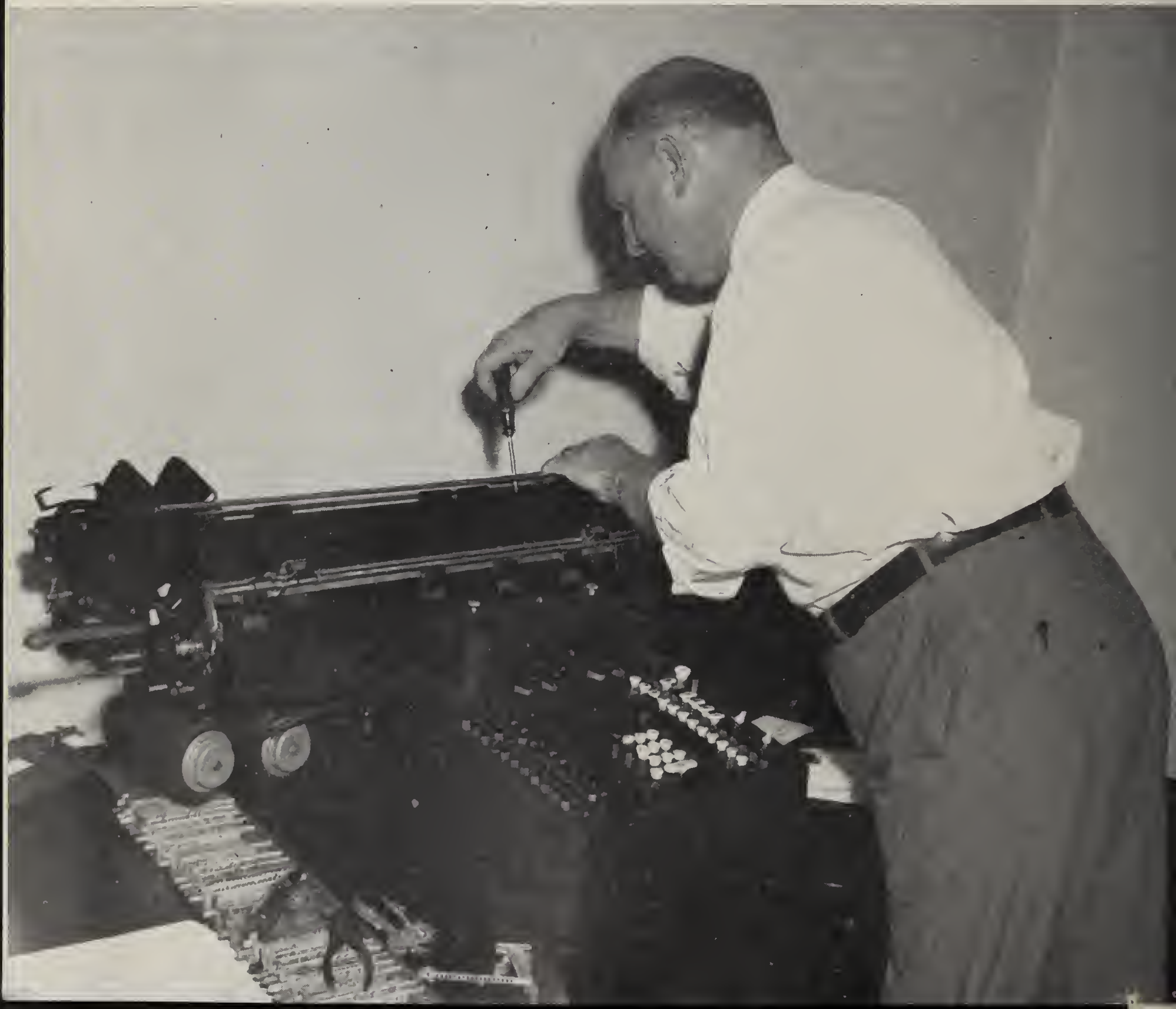
Cleaning a calculator with a fine spray of cleaning fluid—An important step in keeping the complicated mechanism in good running condition.

At least 1 year of technical training in electricity and electronics, or equivalent knowledge, is now required before entering employment. The length of the subsequent training varies considerably among the companies in the field. Two of the important firms require 6 months to a year of on-the-job training, often combined with instruction by visiting teachers; in another company, 2 to 3 weeks of instruction at the factory school is the only training given. Returning veterans who are experienced in servicing acoustic dictating and transcription machines usually need additional training on the electronic machines. The length of this added training depends upon the man's background in electricity and electronics.

Dictating machine repairmen are employed mainly in cities and large towns either by the service branches of the firms manufacturing this equipment or by their distributors. In the small towns, typewriter and adding machine mechanics often learn to service the acoustic dictating and transcribing machines. However, because these men lack the necessary electronic background, they will be unable to repair the electronic machines.

In the next year or two, job opportunities for beginners will vary among the major companies

Repairing an accounting-bookkeeping machine—One of the most highly paid of business machine servicing jobs.



mploying dictating machine servicemen. Some ompanies will have openings for new men; others lready have enough experienced workers to meet heir immediate needs. However, in the years head, there will probably be far more dictating nd transcribing machines in use than there are at resent. This expansion will create additional ervicing jobs and will also provide steady employnent for men already trained in the work. The ccupation is small, nevertheless, and the number f new openings in any one year will be limited. Ioreover, some of the servicing of electronic dicating and transcribing machines may be done by adio repairmen, who can in a few months learn to ervice this equipment. In the future there may e widespread application of wire recording to dicating and transcribing appliances. If this should appen, more of the repair of these machines would e done by men trained as radio servicemen.

In 1945, typical weekly earnings of experienced lictating machine servicemen in the large cities vere from $40 to $50.

Duplicating Machine Servicemen

There are five main types of duplicating mahines used in offices—direct, gelatin hektograph, pirit, offset, and stencil. These machines vary n the way they operate, but they are all used for he same purpose, which is the speedy and economcal production of advertising leaflets, special noices, instruction manuals, press releases, and imilar materials.

Duplicating machine repair is the least skilled of the office machine servicing occupations, and consequently requires the shortest training period. The length of this training varies somewhat with the type of duplicating appliance to be repaired. For stencil and gelatin hektograph equipment, less training is needed than for the other types. In general, however, to learn duplicating machine repair requires from 3 to 6 weeks at a company school plus about 3 or 4 months of on-the-job training. A repairman learns to service all the machines manufactured by his company. In order to transfer to a firm making a different type of duplicator, almost complete retraining is required.

Duplicating machine repairmen are employed either by the service branches of companies manufacturing these appliances or by their dealers. They may work in any sizable city or town throughout the country.

At the present time there are about 1,300 workers employed in this occupation. During the next year or two there will be few openings for newcomers, because experienced veterans returning to their former jobs, plus those trained as replacements during the war, will fill nearly all employment requirements. Thereafter, because of normal replacement needs, the hiring of a small number of men annually will be resumed.

In 1945 typical earnings of experienced duplicating machine servicemen were between $40 and $55 a week in the larger cities.

How to Get More Information About Job Opportunities in the Field

Men interested in becoming office machine mechanics may find out what job openings are available in several ways. The classified section of the local telephone book lists independent repair shops and the service branches of manufacturing companies. The national office of firms manufacturing these appliances can furnish the addresses of their service branches.

The major companies manufacturing and servicing dictating and transcribing machines are:

Dictaphone Corp., 420 Lexington Ave., New York, N. Y.
Thomas A. Edison, Inc., Ediphone Division, West Orange, N. J.
Soundscriber Corp., 146 Munson St., New Haven 4, Conn.

There are a large number of companies manufacturing duplicating machines. A few of the more well-known firms are:

Addressograph-Multigraph Corp., 1200 Babbitt Rd., Cleveland. Ohio.
A. B. Dick Co., 720 West Jackson Blvd., Chicago 6, Ill. (makers of "Mimeograph" equipment).
Ditto, Inc., Harrison at Oakley Blvd., Chicago 12, Ill.

Major manufacturers of other types of business machines with Nationwide service branches are listed in the appendix table.

Those interested in working for independent repair shops may write to the National Office Machine Dealers Association, 818 Winters Bank Bldg., Dayton, Ohio, for the names of firms in their home town. The local office of the United States Employment Service should also be consulted. Veterans may get information, especially about Government financial aid while training, at the nearest Veterans Information Center.

Appendix.—*Major Companies Employing Business Machine Servicemen*[1]

Company and home office address	Type of business machine manufactured and serviced[2]					
	Typewriters	Adding machines	Calculators	Cash registers	Accounting-bookkeeping machines	Accounting-statistical machines
llen Calculators, Inc. 678 Front Ave. NW., Grand Rapids, Mich.	---	X	X	X	---	---
urroughs Adding Machine Co. 6071 Second Blvd., Detroit, Mich.	X	X	X	X	X	---
omptometer Co. 1735 N. Paulina St., Chicago 22, Ill.	---	---	X	---	---	---
riden Calculating Machine Co., Inc. 2350 Washington Ave., San Leandro, Calif.	---	---	X	---	---	---
nternational Business Machines Corp. 590 Madison Ave., New York 22, N. Y.	X	---	---	---	---	X
anston Monotype Machine Co. 24th and Locust Sts., Philadelphia, Pa.	---	X	---	---	---	---
archant Calculating Machine Co. 1475 Powell St., Oakland 8, Calif.	---	---	X	---	---	---
onroe Calculating Machine Co., Inc. Orange, N. J.	---	X	X	---	X	---
ational Cash Register Co. Dayton, Ohio.	---	X	---	X	X	---
hmer Register Co. Dayton, Ohio.	---	---	---	X	---	---
Remington Rand, Inc. 315 Fourth Ave., New York 10, N. Y.	X	X	X	---	X	X
Royal Typewriter Co., Inc. 2 Park Ave., New York, N. Y.	X	---	---	---	---	---
Smith, L. C., & Corona Typewriters, Inc. 701 E. Washington St., Syracuse 1, N. Y.	X	X	---	X	---	---
nderwood Corp. 1 Park Ave., New York 16, N. Y.	X	X	X	X	X	---
ictor Adding Machine Co. 3900 North Rockwell St., Chicago 18, Ill.	---	X	---	---	---	---
Woodstock Typewriter Co. Woodstock, Ill.	X	---	---	---	---	---

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[1] This list includes the major companies which manufacture the types of business machines specified and which have Nation-wide service branches.

[2] Excludes certain other types of business machines manufactured and serviced by the firms shown.

Occupational Outlook Publications of the Bureau of Labor Statistics

This bulletin is one of a series of reports on employment trends and opportunities in the various occupations and professions, for use in the vocational guidance of veterans, young people in schools, and others considering the choice of an occupation. The reports describe the long-run outlook for employment in each occupation and give information on earnings, working conditions, and the training required.

Reports are usually first published in the Monthly Labor Review (subscription price per year, $3.50) and are reprinted as bulletins. Both the Monthly Labor Review and the bulletins may be purchased from the Superintendent of Documents, Washington 25, D. C.

Employment Opportunities for Diesel-Engine Mechanics.
Bulletin No. 813 (1945), price 5 cents. (Monthly Labor Review, February 1945.)

Occupational Data for Counselors: A Handbook of Census Information Selected for Use in Guidance.
Bulletin No. 817 (1945), price 10 cents. (Prepared jointly with the U. S. Office of Education.)

Employment Opportunities in Aviation Occupations, Part 1.—Postwar Employment Outlook.
Bulletin No. 837–1 (1945), price 10 cents. (Monthly Labor Review, April and June 1945.)

Employment Opportunities in Aviation Occupations, Part 2.—Duties, Qualifications, Earnings, and Working Conditions.
Bulletin No. 837–2 (1946), price 20 cents. (Monthly Labor Review, August 1946.)

Employment Outlook for Automobile Mechanics.
Bulletin No. 842 (1945), price 10 cents. (Monthly Labor Review, February 1946.)

Employment Opportunities for Welders.
Bulletin No. 844 (1946), price 10 cents. (Monthly Labor Review, September 1945.)

Postwar Outlook for Physicians.
Bulletin No. 863 (1946), price 10 cents. (Monthly Labor Review, December 1945.)

Employment Outlook in Foundry Occupations.
Bulletin No. 880 (1946), price 15 cents. (Monthly Labor Review, December 1945 and April 1946.)

Factors Affecting Earnings in Chemistry and Chemical Engineering.
Bulletin No. 881 (1946), price 10 cents. (Monthly Labor Review, June 1946.)

Employment Outlook in Machine Shop Occupations.
Bulletin No. 895 (1947). (In press.)

UNITED STATES DEPARTMENT OF LABOR
L. B. Schwellenbach, *Secretary*

BUREAU OF LABOR STATISTICS
Ewan Clague, *Commissioner*

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State and Regional Variations in Prospective Labor Supply

Bulletin No. 893

UNITED STATES
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Letter of Transmittal

United States Department of Labor,
Bureau of Labor Statistics,
Washington, D. C., March 4, 1947.

The Secretary of Labor:

I have the honor of transmitting herewith a bulletin presenting the results of a study of State and regional variations in prospective labor supply. The information presented here should prove helpful to labor, business, and government groups concerned with problems of employment, industrial location, marketing, housing, and social security.

The study was prepared by Lester M. Pearlman and Leonard Eskin in the Bureau's Occupational Outlook Division. Sophia C. Mendelsohn and Mary J. Levy assisted in the formulation of the estimating procedures and supervised the statistical operations.

Ewan Clague, *Commissioner.*

Hon. L. B. Schwellenbach,
Secretary of Labor.

Bulletin No. 893 of the

United States Bureau of Labor Statistics

[Reprinted from the MONTHLY LABOR REVIEW, December 1946, with additiona. data]

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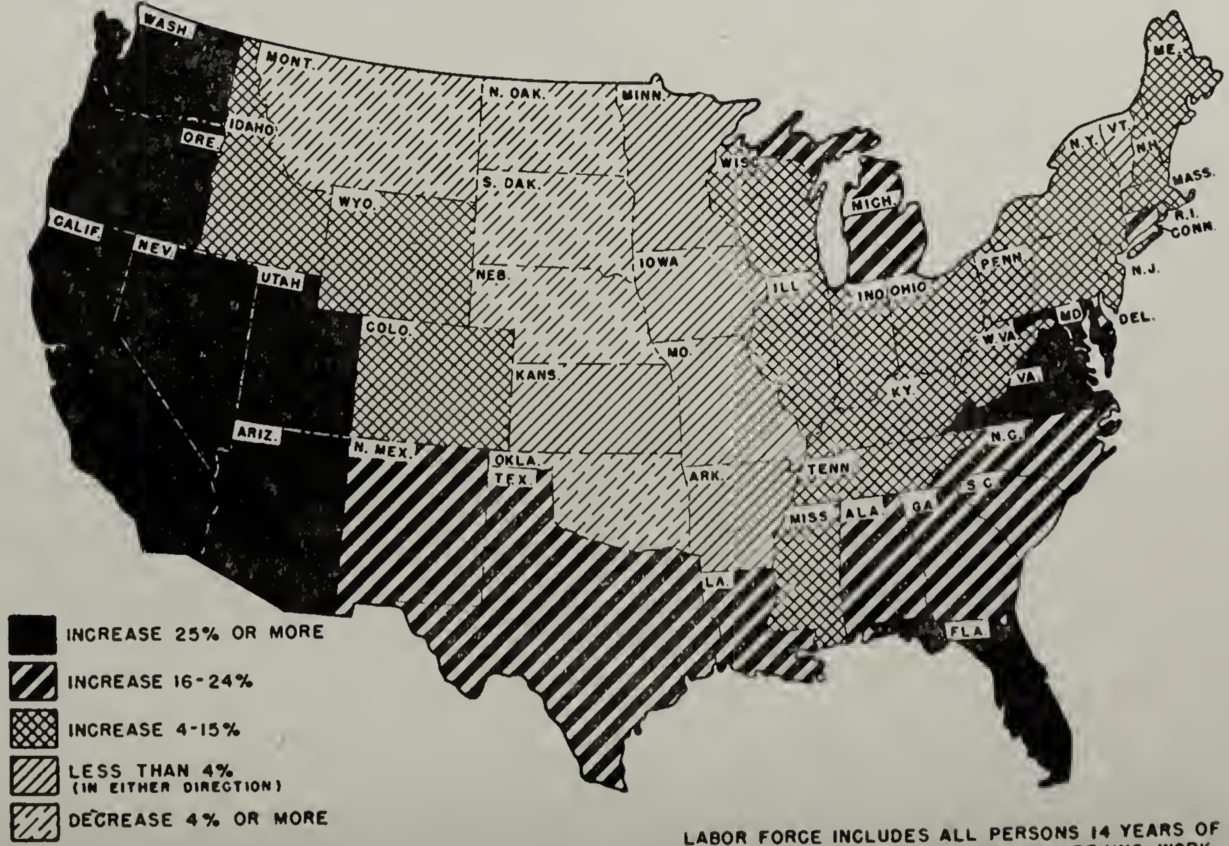
PROSPECTIVE LABOR FORCE CHANGES, BY STATE
1940 – 1950



LABOR FORCE INCLUDES ALL PERSONS 14 YEARS OF AGE AND OVER WHO ARE WORKING OR SEEKING WORK.

UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS

State and Regional Variations in Prospective Labor Supply

LABOR, business, and government groups engaged in labor-market analysis or concerned with problems of maintaining high levels of employment need some quantitative measure of prospective labor supply in their particular States or regions. An estimate of the total number of persons who will be working or seeking work provides a framework for the analysis of a variety of social and economic problems relating to employment, industrial location, marketing, housing, and social security. This report contains basic information on past trends and wartime developments in labor-force growth which will aid in the preparation of such an estimate for each of the 48 States.

The Pacific Coast States and the South are expected to register the largest relative gains in labor force between 1940 and 1950. (See map on opposite page and table 4, p. 20.) On the other hand the Great Plains States stretching from North Dakota to Oklahoma will probably suffer a net loss in working population. Migrants, drawn largely from the South and the Great Plains States, accounted for much of the rapid expansion of labor supply on the Pacific Coast during the war. Most of these migrants are likely to remain in their new locations because their movements followed a well-established long-term trend. The predominantly rural South, despite the fact that it loses many workers through migration to other regions, ranks second to the West Coast in the prospective rate of labor-force growth because of its relatively high birth rate. The industrial Northeast accounts for about half of the Nation's working population, but lags behind the rest of the country in prospective labor-force growth because its birth rates are relatively low and it does not characteristically draw workers from other regions.

Two types of data are presented here for use in estimating the size of each State's labor force in 1950, a year when short-run dislocations of the postwar transition period are expected to be over.

First, the base figure shown is the "normal" labor force in 1950—the work force that would have been expected if peacetime trends in labor-market participation and interstate migration had continued after 1940 and if economic conditions similar to those of 1940 had prevailed. The normal estimates, although not predictions of the actual size of the labor force in each State, provide a basis from which realistic estimates may be made.

Second, data are presented on the wartime changes in the labor force of each State. This material will aid in estimating the extent to which the actual size of the labor force in 1950 may differ from the normal level.

Normal Growth of the Labor Force, 1940 to 1950

NATIONAL CHANGES

A brief examination of normal labor-force projections for the Nation as a whole between 1940 and 1950 shows a number of broad trends in population growth and labor-market participation which operate in all States. In addition, the national trends serve as a background against which State and regional variations can be studied.

TABLE 1.—*"Natural" and "Normal" Labor-Force Growth, by State, 1940 to 1950* [1]

Region, division ,and State	Labor force, 1940 [2] (in thousands) (1)	"Natural" labor-force projection, 1950 [3]		"Normal" labor-force projection, 1950 [4]	
		Number (in thousands) (2)	Percent change from 1940 (3)	Number (in thousands) (4)	Percent change from 1940 (5)
UNITED STATES	54,778	60,830	11.0	60,830	11.0
NORTH	32,627	35,289	8.2	34,618	6.1
New England	3,757	4,082	8.6	4,062	8.1
Maine	343	384	12.0	373	8.7
New Hampshire	215	234	8.8	242	12.6
Vermont	147	161	9.5	157	6.8
Massachusetts	1,917	2,077	8.3	2,033	6.1
Rhode Island	335	366	9.3	367	9.6
Connecticut	800	860	7.5	890	11.2
Middle Atlantic	12,249	13,233	8.0	13,074	6.7
New York	6,188	6,571	6.2	6,501	5.1
New Jersey	1,928	2,065	7.1	2,098	8.8
Pennsylvania	4,133	4,597	11.2	4,475	8.3
East North Central	11,203	12,086	7.9	12,109	8.1
Ohio	2,865	3,089	7.8	3,071	7.2
Indiana	1,379	1,494	8.3	1,516	9.9
Illinois	3,485	3,697	6.1	3,677	5.5
Michigan	2,202	2,418	9.8	2,495	13.3
Wisconsin	1,272	1,388	9.1	1,350	6.1
West North Central	5,418	5,888	8.7	5,373	−.8
Minnesota	1,142	1,242	8.8	1,218	6.7
Iowa	992	1,069	7.8	1,007	1.5
Missouri	1,579	1,698	7.5	1,599	1.3
North Dakota	244	277	13.5	214	−12.3
South Dakota	248	279	12.5	221	−10.9
Nebraska	519	569	9.6	463	−10.8
Kansas	694	754	8.6	651	−6.2
SOUTH	16,303	19,314	18.5	19,104	17.2
South Atlantic	7,249	8,625	19.0	8,844	22.0
Delaware	119	128	7.6	140	17.6
Maryland	797	879	10.3	948	18.9
District of Columbia	358	380	6.1	413	15.4
Virginia	1,072	1,256	17.2	1,307	21.9
West Virginia	657	791	20.4	767	16.7
North Carolina	1,388	1,736	25.1	1,716	23.6
South Carolina	763	966	26.6	951	24.6
Georgia	1,277	1,577	23.5	1,538	20.4
Florida	818	912	11.5	1,064	30.1
East South Central	4,050	4,833	19.3	4,645	14.7
Kentucky	1,037	1,217	17.4	1,171	12.9
Tennessee	1,114	1,308	17.4	1,266	13.6
Alabama	1,058	1,300	22.9	1,229	16.2
Mississippi	841	1,008	19.9	979	16.4

See footnotes at end of table.

TABLE 1.—*"Natural" and "Normal" Labor-Force Growth, by State, 1940 to 1950* [1]—Continued

Region, division, and State	Labor force, 1940 [2] (in thousands) (1)	"Natural" labor-force projection, 1950 [3]		"Normal" labor-force projection, 1950 [4]	
		Number (in thousands) (2)	Percent change from 1940 (3)	Number (in thousands) (4)	Percent change from 1940 (5)
SOUTH—Continued.					
West South Central	5, 004	5, 856	17. 0	5, 615	12. 2
Arkansas	704	827	17. 5	764	8. 5
Louisiana	919	1.082	17. 7	1, 088	18. 4
Oklahoma	834	983	17. 9	820	−1. 7
Texas	2, 547	2, 964	16. 4	2, 943	15. 5
WEST	5, 848	6, 227	6. 5	7, 108	21. 5
Mountain	1, 580	1, 797	13. 7	1, 856	17. 5
Montana	233	250	7. 3	240	3. 0
Idaho	198	223	12. 6	237	19. 7
Wyoming	104	115	10. 6	119	14. 4
Colorado	437	481	10. 1	489	11. 9
New Mexico	184	229	24. 5	243	32. 1
Arizona	187	222	18. 7	255	36. 4
Utah	187	226	20. 9	213	13. 9
Nevada	50	51	2. 0	60	20. 0
Pacific	4, 268	4, 430	3. 8	5, 252	23. 1
Washington	742	765	3. 1	843	13. 6
Oregon	470	487	3. 6	559	18. 9
California	3, 056	3, 178	4. 0	3, 850	26. 0

[1] Data presented in this table cover total labor force including armed forces. All data at April seasonal level. Annual average for total United States is about three-fourths of a million higher.

[2] Data from 1940 census have been revised upward for comparability with current census series. Preliminary, pending release of official revision of United States total by Bureau of the Census. See Appendix A, section 1.

[3] This projection assumes (1) continuation of prewar trends in the percentage of the population that works or seeks work; (2) economic conditions in 1950 similar to those of 1940; and (3) no interstate migration between 1940 and 1950. See Appendix A, section 2.

[4] Assumption (1) and (2) same as above, but interstate migration between 1940 and 1950 assumed to be twice the 1935–40 volume. See Appendix C, section 3.

Estimates of normal labor force for the United States have been constructed by projecting 1920 to 1940 relationships between population and labor force through the decade 1940–50.[1] The decennial increases in the labor force and population from 1920 to 1940 and the normal increase from 1940 to 1950 are shown in the following tabulation:

	Increase (in thousands)		
	1920–30	*1930–40*	*1940–50 (normal)*
Population, 14 years of age and over: Total	14, 957	12, 002	9, 205
Male	7, 134	5, 466	3, 920
Female	7, 823	6, 536	5, 285
Labor force: Total	[1] 7, 359	5, 895	6, 052
Male	[1] 5, 110	3, 276	2, 570
Female	[1] 2, 249	2, 619	3, 482

[1] Since data for 1920 are not available on a "labor force" basis, the 1920–30 change refers to "gainful workers."

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[1] Labor-force projections for the United States as a whole appearing in this article represent preliminary revisions by the authors of estimates prepared by the Bureau of the Census and published in Population, Special Reports, Series P–44 No. 12, Bureau of the Census (Washington), June 12, 1944. The revisions are designed to be consistent with current Census estimates which are based on a revised interviewing procedure adopted in July 1945. See Bureau of the Census, Monthly Report on the Labor Force, especially MRLF No. 39, September 20, 1945.

Despite the expected decline in the rate of population growth and an assumed continuation of past trends toward longer schooling and earlier retirement, the projected increment to the labor force during this decade is somewhat larger than the increase during the 1930's.

The long-term trend toward an increasing number of women workers is the major factor supporting the large normal labor-force growth during the current decade. Over the years, it has been possible for a larger proportion of women to work outside the home because of greater mechanization of household and industrial processes, increasing urbanization, decline in the birth rate, and social attitudes more favorable to the employment of women.

On the basis of peacetime expectations, the national labor force in 1950 would number about 60.8 million persons—43.6 million men and 17.2 million women.[2]

STATE AND REGIONAL VARIATIONS

The rate of expansion of the national labor force during the decade 1940–50 represents the net effect of widely varying rates among the States. Differences in the birth rate and interstate migration play the leading roles in causing these variations.

Differential Fertility and "Natural" Labor-Force Growth

In the absence of migration, the South would be expected to have the fastest growing labor force in the Nation between 1940 and 1950. This is attributable to the high birth rates which prevail in the predominantly rural Southern States. Rural areas throughout the country have significantly higher fertility rates than urban areas. Regional differences in the "natural" rate of labor-force growth [3] are as follows:

	Natural growth in the labor force, 1940–50 (percent)
United States	11
North	8
South	18
West	6

In the broad region called the South,[4] the labor force of only two States, Delaware and Maryland (which are not typical of the other Southern States), would be expected to grow at a slower rate between 1940 and 1950 than the 11-percent natural increase anticipated for the Nation as a whole (table 1, column 3). The labor force in North Carolina, South Carolina, Georgia, and Alabama would be expected to grow more than twice as fast as the national labor force. In 24 out of 32 States in the North and West, the natural rate of labor-force growth would fall below the corresponding rate for the Nation. The lowest rates of labor-force growth in the country would prevail in the geographic division embracing the trio of Pacific Coast States—California, Oregon, and Washington.

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[2] All data presented in this article cover total labor force including the armed forces. Projections are made at April seasonal level (the time of year when the decennial census is usually taken). On an annual average basis, the United States total labor force would be about three-fourths of a million higher.

[3] The "natural" rate of labor-force growth is here defined as the projected rate of growth, assuming no interstate migration.

[4] Regional classifications used in this article are the same as those used by the Bureau of the Census. See tables for States included in each region

In every State the natural rate of increase in the labor force is very much greater for women than for men. This reflects the increasing participation of women workers as well as the declining proportion of boys and older men in the labor force. In the absence of interstate migration, the number of male workers in the Pacific Coast States, Nevada, and the District of Columbia would be expected to decline between 1940 and 1950, but these decreases would be more than offset by gains in the number of women workers. (See Appendix B, tables 1 and 2.)

Replacement rates.—Thus far natural labor-force growth has been dealt with only in terms of *net* changes between 1940 and 1950. But these net changes result from differences between the number of persons who enter the labor market and the number who leave. The accessions to and separations from the labor force are analyzed in this section, not only to indicate their magnitude, but also to highlight State differences in the competitive position of new entrants to the labor market. The analysis is confined to male workers because the movements of women in and out of the labor market are complicated by changes in marital and family status.

Areas of relatively high birth rates and comparatively young population will have more new workers entering the labor force and fewer older workers leaving than areas where the population is relatively old. In the South, for example, some 3,895,000 young men (exclusive of in-migrants) would be expected to enter the labor force between 1940 and 1950, whereas only 2,321,000 would leave because of death or retirement.[5] (See table 2, columns 1 and 2.) This means an average of 168 accessions for every 100 separations—a *replacement rate* of 168. In other words, if there were no migration into or out of the South, every 100 men leaving that region's labor force between 1940 and 1950 would be replaced by 168 new male workers. This rate is much higher than the rates for the North (118) or the West (107). Replacement rates for individual States tend to cluster about the regional average (see chart 1), but there are some exceptions, such as New Mexico, Arizona, and Utah, where replacement rates more nearly resemble those of the South than those of the West. On the other hand, the pattern of labor-market accessions and separations in Delaware, Maryland, District of Columbia, and Florida is more like the North than like the South.

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[5] Figures exclude accessions and separations of seasonal or intermittent workers.

The differences in the relation between labor-market accessions and separations are reflected in the composition of the labor force at any one time. If there were no interstate migration between 1940 and 1950, 28 percent of the South's male labor force in 1950 would have less than 10 years' labor-market experience as compared with 24 percent in the North and 23 percent in the West. In South Carolina, one out of every three men in the 1950 labor force would be a new worker added after 1940; in California the corresponding figure would be only one out of every five.

TABLE 2.—*"Natural" and "Normal" Accessions, Separations, and Replacement Rates for the Male Labor Force, by State, 1940 to 1950*

Region, division, and State	"Natural"[1]			"Normal"[2]		
	Accessions (in thousands) (1)	Separations (in thousands) (2)	Replacement rate (accessions per 100 separations) (3)	Accessions[3] (in thousands) (4)	Separations[3] (in thousands) (5)	Replacement rate (accessions per 100 separations) (6)
UNITED STATES	10,974	8,404	131	10,974	8,404	131
NORTH	6,033	5,102	118	6,250	5,818	107
New England	664	566	117	740	653	113
Maine	72	57	126	84	75	112
New Hampshire	39	35	111	56	48	117
Vermont	30	25	120	39	36	108
Massachusetts	332	287	116	379	362	105
Rhode Island	58	47	123	74	62	119
Connecticut	133	115	116	186	148	126
Middle Atlantic	2,150	1,819	118	2,332	2,126	110
New York	983	911	108	1,158	1,151	101
New Jersey	321	277	116	430	364	118
Pennsylvania	846	631	134	913	780	117
East North Central	2,109	1,797	117	2,470	2,143	115
Ohio	547	471	116	664	602	110
Indiana	277	234	118	368	307	120
Illinois	588	541	109	764	735	104
Michigan	436	339	129	577	424	136
Wisconsin	261	212	123	293	271	108
West North Central	1,110	920	121	1,138	1,326	86
Minnesota	227	188	121	278	254	109
Iowa	207	175	118	243	256	95
Missouri	296	259	114	369	404	91
North Dakota	61	43	142	54	83	65
South Dakota	59	42	140	56	84	67
Nebraska	113	90	126	113	169	67
Kansas	147	123	120	171	222	77
SOUTH	3,895	2,321	168	4,219	2,781	152
South Atlantic	1,654	988	167	2,021	1,178	172
Delaware	21	18	117	36	25	144
Maryland	145	114	127	236	154	153
District of Columbia	40	43	93	115	101	114
Virginia	248	151	164	355	211	168
West Virginia	186	100	186	210	142	148
North Carolina	364	172	212	408	224	182
South Carolina	201	94	214	226	129	175
Georgia	298	167	178	356	242	147
Florida	151	129	117	305	176	173

See footnotes at end of table.

Table 2.—*"Natural" and "Normal" Accessions, Separations, and Replacement Rates for the Male Labor Force, by State, 1940 to 1950*—Continued

Region, division, and State	"Natural"[1]			"Normal"[2]		
	Accessions (in thousands) (1)	Separations (in thousands) (2)	Replacement rate (accessions per 100 separations) (3)	Accessions[3] (in thousands) (4)	Separations[3] (in thousands) (5)	Replacement rate (accessions per 100 separations)[3] (6)
SOUTH—Continued.						
East South Central	1,034	595	174	1,096	789	139
Kentucky	271	159	170	305	226	135
Tennessee	271	162	167	316	238	133
Alabama	282	148	191	298	214	139
Mississippi	210	126	167	234	168	139
West South Central	1,207	738	164	1,306	1,018	128
Arkansas	189	114	166	219	192	114
Louisiana	220	133	165	272	177	154
Oklahoma	217	131	166	226	267	85
Texas	581	360	161	712	505	141
WEST	1,046	981	107	1,830	1,130	162
Mountain	371	256	144	580	418	139
Montana	47	41	115	71	72	99
Idaho	48	34	141	87	61	143
Wyoming	22	16	138	46	36	128
Colorado	91	73	125	151	128	118
New Mexico	54	26	208	91	52	175
Arizona	46	28	164	99	56	177
Utah	55	29	190	64	48	133
Nevada	8	9	89	27	21	129
Pacific	675	725	93	1,393	855	163
Washington	126	137	92	247	194	127
Oregon	79	83	95	178	128	139
California	470	505	93	1,063	628	169

[1] Assumes no interstate migration between 1940 and 1950. See Appendix A, section 6.

[2] Assumes interstate migration between 1940 and 1950 to be twice the 1935–40 volume. See Appendix A, section 7.

[3] United States, regional, and divisional totals are less than the sum of their components because they exclude accessions and separations due to migration between States within the United States, region, or division.

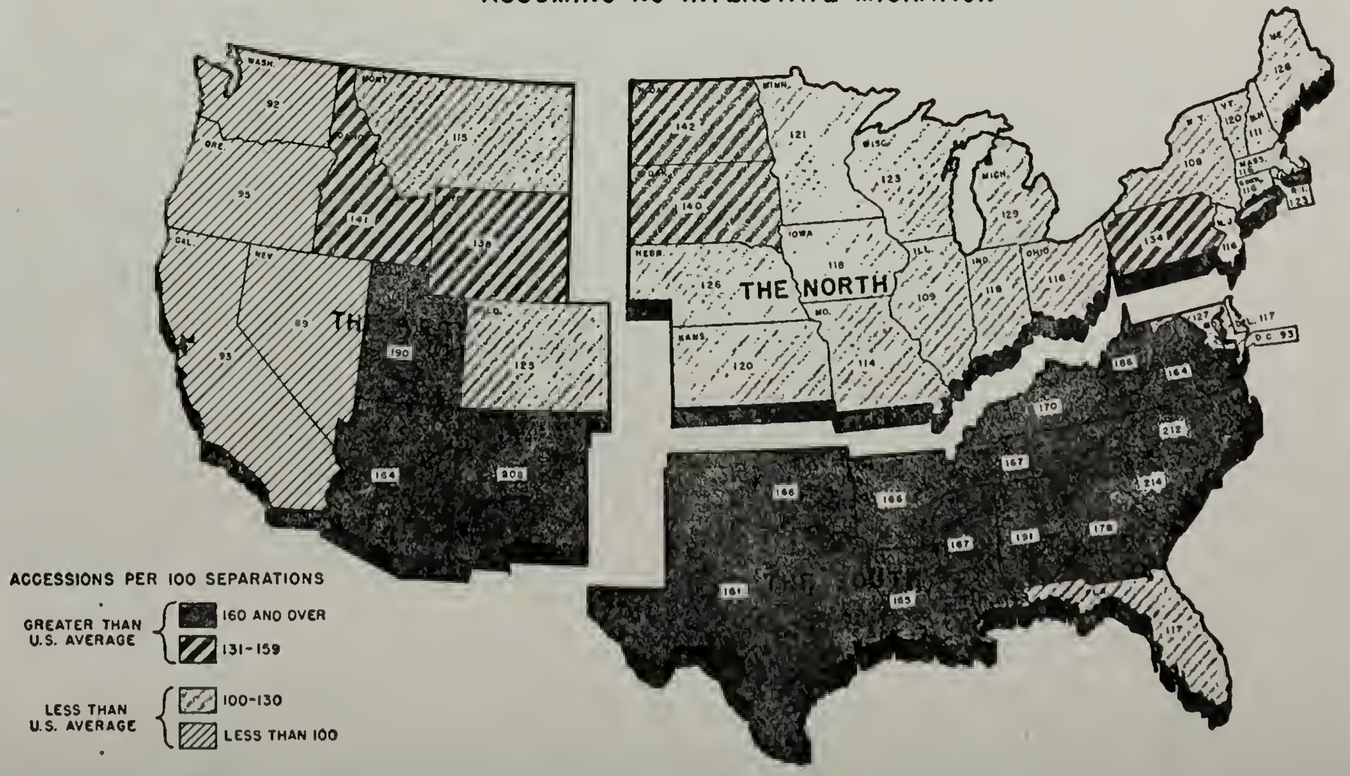
State variations in replacement rates should not be interpreted without reference to variations in economic opportunity. A State with a rapidly expanding economy may easily absorb 200 replacements for every 100 persons leaving the labor force, whereas a less fortunate State might have difficulty providing employment opportunity for say 110 replacements. Given *equal* employment opportunity for two States, however, jobs would be harder to find in the one with the higher replacement rate because on the average more workers would be competing for each job opening. The difficulty of finding jobs would be greatly accentuated in a State with both a relatively high replacement rate and relatively low employment opportunity.

Actually, the areas with the highest replacement rates and the greatest rates of natural labor-force growth tend to be the ones where economic opportunity is below par. This disparity between labor

CHART 8

NATURAL REPLACEMENT RATES FOR THE MALE LABOR FORCE
1940-1950

ASSUMING NO INTERSTATE MIGRATION



UNITED STATES DEPARTMENT OF LABOR
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supply and economic opportunity has resulted in a consistent pattern of internal migration. The South and Great Plains characteristically have been losers in the give and take of population between regions. The West, on the other hand, has been able to draw large numbers of people from other regions of the country, while losing few. The effect of large-scale migration on State variations in labor-force growth is shown in the next section.

Internal Migration and "Normal" Labor-Force Growth

Because of the extreme importance of population movements to the supply of labor in a given State, the estimates of "normal" labor-force growth include an assumption with respect to interstate migration. For this purpose, the rate of interstate migration between 1935 and 1940 was projected through the decade 1940–50. The "normal" labor force for each State, therefore, consists of a projection of migration movements as well as trends in labor-market participation. In the procedure employed no attempt was made to estimate the *actual magnitude* of migration. But the prewar population movements do reflect a migration *pattern* that prevailed during the war and is likely to carry over into the postwar period.[6]

Since these normal labor force estimates by State assume a prewar migration pattern, there is also implicit the assumption that the prewar distribution of employment opportunity will not shift radically. In view of the past stability in the geographic distribution of economic resources and opportunity, both in years of war and peace,[7] there is a strong likelihood that this distribution will not change significantly in the next 5 years.

Estimates of normal labor-force growth and replacement rates between 1940 and 1950 by State and region including allowance for interstate migration are shown in tables 1 and 2. The introduction of the prewar migration pattern exerts great influence on the State and regional rates of labor-force growth as a comparison of these rates with those computed on a no-migration basis readily indicates (see chart 2).

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[6] See Demographic Aspects of World War II: Migration. Paper delivered before the American Sociological Society (Cleveland, Ohio, March 1, 1946), by Henry S. Shryock, Jr., and Hope Tisdale Eldridge. It should be reemphasized at this point that the so-called normal labor-force projections assume economic conditions similar to those of 1940. Their main function is to serve as a base upon which more realistic projections can be made and not to estimate the size of the labor force under ideal economic conditions. This is especially true with regard to the migration assumption. The 1935–40 experience was chosen simply because (1) it reflected a general pattern that has prevailed in the past and is likely to continue in the future, (2) the time reference is close to the 1940 conditions to which the "normal" projections apply, and (3) there are more data available on the characteristics of migrants during the 1935–40 period than during any other period.

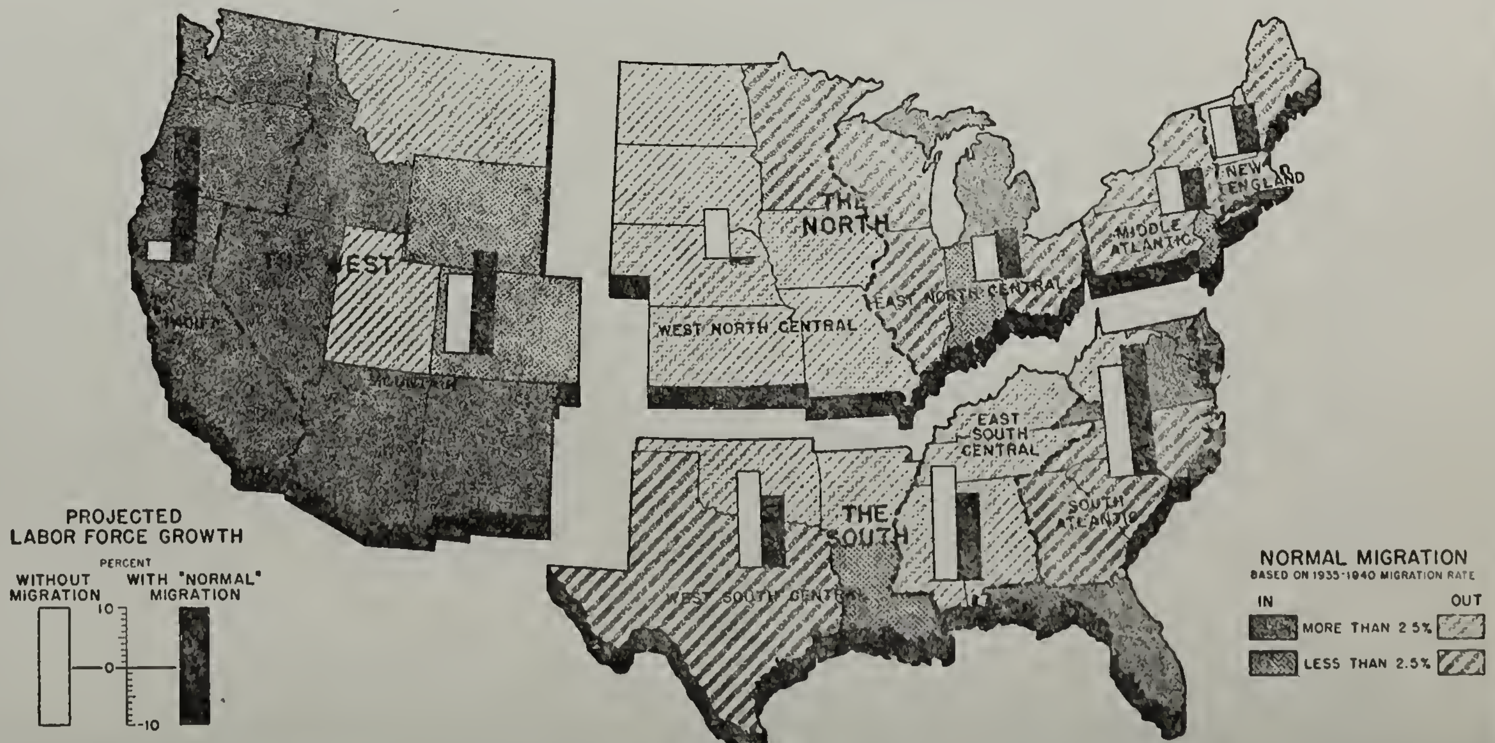
[7] On this subject see National Resources Committee, Structure of the American Economy, Philadelphia, 1939; Is Industry Decentralizing? by Daniel Creamer, Philadelphia, 1935; Growth of American Manufacturing Areas, by Glenn E. McLaughlin, Philadelphia, 1935; Regional Distortions Resulting from the War, in Survey of Current Business, October 1943.

CHART 8

EFFECT OF MIGRATION ON NORMAL LABOR FORCE GROWTH

1940–1950

SOUTH AND GREAT PLAINS, WHERE NATURAL GROWTH OF LABOR FORCE OUTSTRIPS OPPORTUNITIES FOR EMPLOYMENT, SUPPLY LABOR TO EXPANDING WEST COAST



UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS

Although the West has the slowest rate of natural increase in working population, the great inflow of migrants causes this region to have the fastest growing labor force in the Nation. California's rate of labor-force growth increases from 4 percent to 26 percent when allowance is made for migrant workers. The South, which had the highest rate of natural labor-force growth, runs second to the West when the migration factor is taken into account.

Perhaps the most striking effect of migration on labor-force growth is shown in the Great Plains States where the labor force will actually decline between 1940 and 1950, if the exodus of workers equals or exceeds the prewar rate. And the heavy migration from this region during World War II[8] leaves little doubt that by the end of this decade there will be in fact fewer workers in the area from North Dakota to Oklahoma than there were in 1940. Wartime migration, although creating some new local problems of overcrowding and expansion of populations beyond the peacetime capacities of local economies to support them, was in general a movement from areas of low or declining opportunity to more favorably situated places.

However, there is typically not enough migration from areas of low economic opportunity to drain off the surplus labor supply. Many workers are reluctant to leave familiar surroundings and family ties. The uncertainty and fear attending migration are reinforced by its cost. This is particularly significant, for it is precisely those who should move who usually lack the means to do so. Added to these factors is the general ignorance as to where employment opportunities lie. The war stimulated migration not only because new job opportunities arose but also because they were dramatized and publicized to an unusual degree.

There has been a noteworthy trend toward the development of industry in areas of surplus labor supply. During recent decades, for example, industrialization of the South has been proceeding more rapidly than in the country as a whole. Nevertheless, it appears that the resulting shift in the distribution of employment opportunity has been relatively small. Internal migration will have to continue if all workers are to be afforded useful employment opportunities.[9]

Factors Determining Deviation of Labor Force from Normal, 1950

The 1950 labor force in a given State may differ from a normal based on projection of prewar trends for two principal reasons: (1) the proportion of the population that works or seeks work may differ from that yielded by the normal projections; and (2) the actual volume of interstate migration may deviate from the assumed volume. National labor-force growth will be affected primarily by only the first of these factors; State labor-force growth will be influenced by both factors, but principally by the second.

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[8] See Bureau of the Census, Population, Special Reports, Series P-46, No. 3 (Washington), February 12, 1946. Migration data for the war and prewar periods are presented in Appendix B, table 3.

[9] See Internal Migration and Full Employment, in Journal of the American Statistical Association, September 1945.

Table 3.—*Estimated Deviation of Labor Force From "Normal," by State, April 1945*[1]

[In thousands]

Region, division, and State	Estimated actual labor force[2]	"Normal" labor force projection[3]	Deviation of estimated labor force from "normal"		
			Total	Caused by "abnormal" migration[4]	Caused by participation of "extra" workers
	(1)	(2)	(3)	(4)	(5)
UNITED STATES	65,986	58,000	[5]7,986	0	7,986
NORTH	38,619	33,781	4,838	60	4,778
New England	4,386	3,926	460	58	402
Maine	398	358	40	−11	51
New Hampshire	229	227	2	−10	12
Vermont	147	151	−4	−14	10
Massachusetts	2,225	1,985	240	34	206
Rhode Island	387	354	33	13	20
Connecticut	1,000	851	149	46	103
Middle Atlantic	14,069	12,737	1,332	−84	1,416
New York	6,920	6,378	542	−154	696
New Jersey	2,339	2,028	311	70	241
Pennsylvania	4,810	4,331	479	0	479
East North Central	13,883	11,705	2,178	258	1,920
Ohio	3,689	2,983	706	124	582
Indiana	1,776	1,452	324	29	295
Illinois	4,200	3,600	600	40	560
Michigan	2,747	2,356	391	98	293
Wisconsin	1,471	1,314	157	−33	190
West North Central	6,281	5,413	868	−172	1,040
Minnesota	1,308	1,184	124	−86	210
Iowa	1,103	1,002	101	−66	167
Missouri	1,865	1,589	276	−8	284
North Dakota	254	231	23	−19	42
South Dakota	257	236	21	−17	38
Nebraska	602	496	106	0	106
Kansas	892	675	217	24	193
SOUTH	19,660	17,730	1,930	−440	2,370
South Atlantic	8,868	8,067	801	−54	855
Delaware	144	130	14	3	11
Maryland	1,087	874	213	82	131
District of Columbia	510	387	123	77	46
Virginia	1,399	1,191	208	52	156
West Virginia	800	712	88	−58	146
North Carolina	1,574	1,553	21	−121	142
South Carolina	884	859	25	−62	87
Georgia	1,465	1,423	42	−44	86
Florida	1,005	938	67	17	50
East South Central	4,705	4,350	355	−225	580
Kentucky	1,162	1,103	59	−109	168
Tennessee	1,349	1,191	158	−12	170
Alabama	1,302	1,143	159	−21	180
Mississippi	892	913	−21	−83	62

See footnotes at end of table.

Table 3.—*Estimated Deviation of Labor Force From "Normal," by State, April 1945* [1]—Continued

[In thousands]

Region, division, and State	Estimated actual labor force [2] (1)	"Normal" labor force projection [3] (2)	Deviation of estimated labor force from "normal"		
			Total (3)	Caused by "abnormal" migration [4] (4)	Caused by participation of "extra" workers (5)
SOUTH—Continued.					
West South Central	6,087	5,313	774	−161	935
Arkansas	826	733	93	−82	175
Louisiana	1,054	1,003	51	−11	62
Oklahoma	944	830	114	−71	185
Texas	3,263	2,747	516	3	513
WEST	7,707	6,489	1,218	380	838
Mountain	1,848	1,719	129	−57	186
Montana	247	237	10	−31	41
Idaho	217	217	0	−30	30
Wyoming	118	112	6	−6	12
Colorado	493	463	30	−15	45
New Mexico	202	213	−11	−29	18
Arizona	259	221	38	23	15
Utah	245	201	44	23	21
Nevada	67	55	12	8	4
Pacific	5,859	4,770	1,089	437	652
Washington	1,028	796	232	78	154
Oregon	624	515	109	33	76
California	4,207	3,459	748	326	422

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[1] Data presented in this table cover total labor force including armed forces.

[2] Includes members of armed forces in States from which they were inducted. Preliminary, pending release of Bureau of the Census official estimate of United States total on basis comparable with current census series. See Appendix A, section 4.

[3] Assumes interstate migration between 1940 and 1945 to be equal to the 1935–40 volume. See Appendix A, section 3.

[4] Estimate includes only migrants who would be in labor force on basis of prewar patterns of labor-market participation. Any migrants who were in the labor force in April 1945 but who would not have been workers under normal peacetime conditions are counted in column 5. See Appendix A, section 5.

[5] Revised slightly from United States total of 8.1 million published in Monthly Labor Review for November 1946.

Analysis of the differential impact of the war on the labor force of each State gives insight into the probable postwar deviation of the actual labor force from normal. The wartime expansion of the Nation's labor force to a level approximately 8 million above peacetime expectations was distributed very unevenly among the States. The extent to which these State variations in wartime excess of labor force over normal were caused by differences in degree of recruitment of new workers and by "abnormal" migration is shown in table 3. The two factors may supplement one another or offset each other. For example, the fact that California's wartime labor force exceeded normal by approximately 750,000 workers resulted from the larger than usual inflow of migrants as well as from the more complete utilization of its prewar labor supply. In contrast, out-migration of large numbers of North Carolina's working population offset the "extra" workers drawn into its labor force, so that very little increase over normal took place.

The degree to which wartime change in the labor force of a given State came about through migration rather than through more extensive utilization of the resident labor supply will play a major role in determining the future size of the State's labor force. In general, the effects of migration are likely to be more lasting than the effects of drawing extra workers into the labor force from the resident population.

EXTRA WORKERS

Some indication of the extent to which extra workers will remain in the labor market may be obtained by examining the picture for the Nation as a whole. During the war, some 8 million persons who ordinarily would have been housewives, students, retired men, or others not in search of gainful employment were drawn into the Nation's labor force.[10] These included about 4 million youths of school and college age, ½ million young women aged 20–34; 2 million women over the age of 35; and 1½ million men over 25.

Two-thirds of the wartime excess labor force caused by the premature entrance of school- and college-age youths into civilian jobs or the armed forces has already disappeared. Further reductions in the number of young workers are expected within the next few years as the prewar trend toward staying in school longer is resumed. With favorable employment opportunities, however, the teen-age labor force may be expected to continue somewhat higher than a projection of prewar trends would indicate, because a greater number of students will probably take advantage of opportunities for part-time and summer work.

About 1½ million young women aged 20–34 years quit working during the first year of peace, chiefly because their husbands returned from the armed forces or they married returning veterans. The number of young women workers is now actually below the level expected from prewar trends because of the unusually large numbers of marriages and births since 1940. Continuation of a generally high rate of economic activity would keep the number of young women workers below the level anticipated by the normal projections because young women with family responsibilities would not have to work or seek work to the same extent as in 1940.

Among men over 25 years old and women over 35, the wartime expansion in the labor force was a response to a full-employment situation as well as to the Nation's war needs. Jobs were available to those who had previously been considered virtually unemployable and others who had previously preferred retirement or homemaking were brought into the labor market by the availability of attractive work at good pay. As long as employment opportunities remain substantially better than those of 1940, the number of workers in the middle and upper age groups is likely to exceed the level indicated by a projection of prewar trends, though not to the same extent as during the war.

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[10] For more complete discussions of the characteristics of extra wartime workers and the factors affecting their continued labor-market participation, see Sources of Wartime Labor Supply in the United States in Monthly Labor Review, August 1944; "Extra" Workers in the Postwar Labor Force, in Monthly Labor Review, November 1945; and The Labor Force in the First Year of Peace, in Monthly Labor Review, November 1946.

When the surplus of middle-aged and older workers is balanced against the deficit of young women workers, however, it is likely that the national labor force will not exceed normal by more than 1½ million, or 2 to 3 percent, in 1950. Thus, in most States, the carryover from the more complete utilization of labor supply during the war will probably be relatively small. In some States, however—especially those with a large proportion of older men and middle-aged women in the labor force—failure to take account of the extra workers remaining may result in a fairly significant understatement of the available labor supply.

INTERSTATE MIGRATION

The extent to which the rate of interstate population movement between 1940 and 1950 will differ from the 1935–40 rate assumed in the normal estimates presented here is far less predictable than the extent to which wartime extra workers will remain in the labor market. Although the *pattern* of wartime migration was very similar to that which had prevailed for some time before the war, the *volume* of 1940–45 civilian migration alone was considerably greater than that of total migration for the 5 prewar years used to compute the "normal" estimates.

The effect of this relatively heavy civilian migration in causing the labor force of each State to deviate from the assumed normal in 1945 is shown in table 3. The deviations from normal arising from migration are much more likely to persist through 1950 than are the deviations caused by the participation of extra workers during the war. Of course, there will be State variations in the extent to which gains and losses through "abnormal" migration are retained. Under certain circumstances the gains and losses may be not merely retained but increased. Whether deviations from normal because of migration are increased, retained, or decreased between 1945 and 1950 will depend on the net result of several opposing forces.

The pent-up migration plans of servicemen have been a major force exerting an upward pressure on the volume of postwar migration. The estimates of actual labor force in April 1945 (table 3) include armed forces in their State of origin, and there may have been considerable migration of ex-servicemen following demobilization. According to an Army survey in the summer of 1944, 1 out of every 10 servicemen did not intend to return to the State in which he lived before the war.[11] The survey further indicated that the migration of demobilized servicemen would be expected to follow the pattern of prewar and wartime movements of civilians.

If employment is maintained at the current high levels, migration will be further stimulated. There is typically more net interstate population movement in good times than in bad. The existence of opportunity elsewhere generally creates a stronger impetus for migration than the lack of opportunity at home. And in times of depression, the relative security of even a bare subsistence on a farm may be more attractive than the insecurity of going jobless in the city. Moreover, during depression periods there is considerable movement from cities back to farms which is against the prevailing direction of migration. This tends to hold down the net interchange of population between States. In view of the large volume of unemployment that existed during the period 1935–40, the volume of migration during that period (used as a basis for the "normal" estimates) is probably below par for more prosperous times.

On the other hand, migration between 1945 and 1950 may be slowed down by virtue of the large-scale movement during the first half of the decade. The capacity of certain areas to absorb in-migrants may be glutted, at least temporarily, by the tremendous inflows of population during the war. In addition, overexpansion of population in relation to postwar opportunities may cause some reverse migration. The occurrence of a severe depression would also retard the characteristic flow of population from farm to industrial areas.

On balance, if conditions of high employment prevail, the volume of migration between 1945 and 1950 will probably equal or exceed the volume assumed in the "normal" estimates. Even if the rate of migration were to fall below the "normal" rate, during the second half of the decade, the decline would probably not nearly offset the unusually large flow of migrants between 1940 and 1945. In either case, therefore, the volume of migration for the entire decade, 1940–50, would exceed that based on the prewar experience; allowance for this factor should be made when adjusting the "normal" labor-force estimates for 1950.

State Estimates of the Labor Force, 1950

As indicated in the introductory paragraphs of this article, the State estimates of normal labor-force growth and wartime deviations from normal will aid in evaluating the prospective labor supply in each State. The insight which this material provides, however, should be supplemented by other information that is available on the work force of the individual States.

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[11] See Postwar Migration Plans of Army Enlisted Men, in The Annals of the American Academy of Political and Social Science, March 1945.

Table 4 presents three separate estimates of the 1950 labor force in each State, based on the data presented in tables 1 and 3, but computed on the basis of varying assumptions as to future interstate migration movements. (See p. 20.)

In order to demonstrate the manner in which the data presented in tables 1 and 3 can be used to appraise the wartime experience and postwar prospects of the labor force in individual States, two States with substantially different labor-market characteristics have been selected for more detailed analysis. Assumption B, table 4, is used for purposes of illustration, but it is not necessarily the most reasonable assumption for the particular States involved.

IOWA

In 1940, approximately 992,000 Iowans were working or seeking work. Wartime pressures brought the labor force (including armed forces personnel from the State) to a total of 1,103,000 in April 1945—an 11-percent rise. Nevertheless, by 1950, the work force is expected to number less than 970,000—actually below the 1940 level.

The wartime expansion in Iowa's working population represented the net effect of several opposing forces. The main reason for the rise n the labor force was the increased participation of housewives, students, retired persons, and others normally not working. Approximately 167,000 of these "extra" wartime workers entered in response to unusual labor demands. This number was supplemented by about 42,000 entries that would have been expected from natural population growth and continuation of prewar trends in the percentage of the population that works or seeks work. The total inflow of 209,000 nto the labor market during the war was partially offset by a net migration from the State of 98,000 civilian workers who might otherwise have participated in Iowa's war effort. The end result was an ncrease of 111,000 in the labor force between 1940 and 1945.

There is reason to believe, however, that the effect of the wartime out-migration will be more lasting than that of the wartime accessions. Many who left the State during the war are unlikely to return, unless a severe depression should strike the areas to which they moved. Iowa, being a farm State, has customarily exported labor to the expanding industrial areas. Moreover, mechanization of farm processes has made it possible to plant and harvest larger crops with fewer workers. Between 1935 and 1940, the number of persons moving out of Iowa exceeded those moving in by 61,000, and between 1940 and 1945 the State sustained a net loss of an additional 228,000 civilians (including the 98,000 workers mentioned above). These figures do not include any members of the armed forces, originally from Iowa, who may have decided to settle in other States after their discharge. Iowa is likely to continue to lose population to other States, though to a lesser extent than during the war.

Most of the extra workers drawn into the labor force from the resident population of the State are likely to drop out by 1950. In the Nation as a whole, two-thirds of 8 million extra wartime workers quit the labor force during the first year of peace. It is likely that by 1950 those remaining will make up not more than 15 to 20 percent of the wartime total.

Normally, the labor force in Iowa would be expected to grow from the 1940 level of 992,000 to a total of 1,007,000 by 1950. It seems likely, however, in view of the considerations noted above, that the work force in 1950 will be approximately 970,000.

The tabulation which follows summarizes the derivation of the statistics used in the analysis of labor-force developments in Iowa.

	Number (in thousands)	*Source*
1940 labor force	992	Table 1.
1945 labor force	1,103	Table 3.
(1) normal labor force	1,002	Table 3.
(2) deviation from normal	101	Table 3.
(a) caused by participation of "extra" workers	167	Table 3.
(b) caused by "abnormal" migration	−66	Table 3.
1950 labor force	966	1+2 (below).
(1) normal labor force	1,007	Table 1.
(2) deviation from normal	−41	a+b (below).
(a) caused by participation of "extra" workers	25	Assumed to be 15 percent of 1945 extra workers (2a above).
(b) caused by "abnormal" migration	−66	Assumed same as in 1945[1] (see 2b above).

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[1] It is assumed that the net number of workers who move out of Iowa between 1945 and 1950 will be the same as would be expected on the basis of the 1935–40 experience.

WASHINGTON

In response to high wartime demands for labor, the working population of the State of Washington increased by 286,000 between 1940 and 1945 to a total of 1,028,000 (including armed forces personnel from the State). By 1950, the labor force is expected to number roughly 950,000, which is considerably above the 1940 level of 742,000, though short of the wartime peak.

Several factors combined to cause the wartime expansion in Washington's work force. Increased participation of housewives, students, retired persons, and others normally not working accounted for approximately 154,000 of the additional workers. In-migration of workers from other States resulted in a net gain of another 119,000.

The remaining increment of about 13,000 workers is the gain that normally would have been expected from natural population growth and continuation of prewar trends in the percentage of the population that works or seeks work.

It is likely that the great majority of the workers who moved to Washington during the war will remain in the State. Washington has typically been an importer of labor. Between 1935 and 1940, the number of persons moving into the State exceeded those moving out by 80,000. This movement was accelerated between 1940 and 1945 as the State gained an additional 273,000 civilians (including the 119,000 workers mentioned above) through in-migration. These figures do not include any members of the armed forces from other States who may have decided to settle in Washington after their discharge.

Judging from the national experience and prospects, added participation of workers normally outside the labor force will not account for more than 2 or 3 percent of the 1950 labor force in Washington.

On the basis of prewar trends, the labor force in Washington would have been expected to increase from 742,000 in 1940 to 843,000 in 1950. It seems likely, however, in view of the increase during the war that the 1950 labor force will be approximately 950,000.

The following tabulation outlines the derivation of the statistical material used in describing past and prospective labor-force changes in Washington.

	Number (in thousands)	*Source*
1940 labor force	742	Table 1.
1945 labor force	1, 028	Table 3.
(1) normal labor force	796	Table 3.
(2) deviation from normal	232	Table 3.
(a) caused by participation of "extra" workers	154	Table 3.
(b) caused by "abnormal" migration	78	Table 3.
1950 labor force	944	1+2 (below).
(1) normal labor force	843	Table 1.
(2) deviation from normal	101	a+b (below).
(a) caused by participation of "extra" workers	23	Assumed to be 15 percent of 1945 extra workers (2a above).
(b) caused by "abnormal" migration	78	Assumed same as in 1945[1] (see 2b above).

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[1] It is assumed that the net number of workers who move into Washington between 1945 and 1950 will be the same as would be expected on the basis of the 1935–40 experience.

TABLE 4.—*Estimated Labor Force, 1940 and 1945, and Projections, 1950, Under Three Assumptions as to Volume of Interstate Migration* [1]

[In thousands]

Region, division, and State	Estimated labor force		Projected labor force, 1950 [4]		
	1940 [2] (1)	1945 [3] (2)	Assumption A (3)	Assumption B (4)	Assumption C (5)
UNITED STATES	54,778	65,986	62,028	62,028	62,028
NORTH	32,627	38,619	35,732	35,395	35,455
New England	3,757	4,386	4,190	4,181	4,239
Maine	343	398	375	370	359
New Hampshire	215	229	230	234	224
Vermont	147	147	146	145	131
Massachusetts	1,917	2,225	2,120	2,098	2,132
Rhode Island	335	387	383	383	396
Connecticut	800	1,000	936	951	997
Middle Atlantic	12,249	14,069	13,281	13,202	13,118
New York	6,188	6,920	6,486	6,451	6,297
New Jersey	1,928	2,339	2,187	2,204	2,274
Pennsylvania	4,133	4,810	4,608	4,547	4,547
East North Central	11,203	13,883	12,644	12,655	12,913
Ohio	2,865	3,689	3,292	3,282	3,406
Indiana	1,379	1,776	1,578	1,589	1,618
Illinois	3,485	4,200	3,810	3,801	3,841
Michigan	2,202	2,747	2,599	2,637	2,735
Wisconsin	1,272	1,471	1,365	1,346	1,313
West North Central	5,418	6,281	5,617	5,357	5,185
Minnesota	1,142	1,308	1,176	1,164	1,078
Iowa	992	1,103	996	966	900
Missouri	1,579	1,865	1,683	1,634	1,626
North Dakota	244	254	232	201	182
South Dakota	248	257	238	209	192
Nebraska	519	602	536	479	479
Kansas	694	892	756	704	728
SOUTH	16,303	19,660	19,125	19,019	18,579
South Atlantic	7,249	8,868	8,810	8,918	8,864
Delaware	119	144	139	145	148
Maryland	797	1,087	1,016	1,050	1,132
District of Columbia	358	510	481	497	574
Virginia	1,072	1,399	1,356	1,382	1,434
West Virginia	657	800	743	731	673
North Carolina	1,388	1,574	1,626	1,616	1,495
South Carolina	763	884	910	902	840
Georgia	1,277	1,465	1,526	1,507	1,463
Florida	818	1,005	1,013	1,088	1,105
East South Central	4,050	4,705	4,600	4,507	4,282
Kentucky	1,037	1,162	1,111	1,087	978
Tennessee	1,114	1,349	1,300	1,280	1,208
Alabama	1,058	1,302	1,270	1,235	1,214
Mississippi	841	892	919	905	822
West South Central	5,004	6,087	5,715	5,594	5,433
Arkansas	704	826	739	708	626
Louisiana	919	1,054	1,083	1,086	1,075
Oklahoma	834	944	859	777	706
Texas	2,547	3,263	3,034	3,023	3,026

See footnotes at end of table.

TABLE 4.—*Estimated Labor Force, 1940 and 1945, and Projections, 1950, Under Three Assumptions as to Volume of Interstate Migration* [1]—Continued

[In thousands]

Region, division, and State	Estimated labor force		Projected labor force, 1950 [4]		
	1940 [2] (1)	1945 [3] (2)	Assumption A (3)	Assumption B (4)	Assumption C (5)
WEST	5,848	7,707	7,171	7,614	7,994
Mountain	1,580	1,848	1,796	1,827	1,770
Montana	233	247	220	215	184
Idaho	198	217	204	211	181
Wyoming	104	118	113	115	109
Colorado	437	493	477	481	466
New Mexico	184	202	209	217	188
Arizona	187	259	263	280	303
Utah	187	245	245	239	262
Nevada	50	67	65	69	77
Pacific	4,268	5,859	5,375	5,787	6,224
Washington	742	1,028	905	944	1,022
Oregon	470	624	566	603	636
California	3,056	4,207	3,904	4,240	4,566

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[1] Data presented in this table cover total labor force including armed forces. All data at April seasonal level. Annual average for total United States is about three-fourths of a million higher.

[2] From table 1, column (1).

[3] From table 3, column (1).

[4] All three projections assume that the 1950 labor force of each State will include some "extra" workers who would not be in the labor force on the basis of the prewar patterns of labor-market participation assumed in the "natural" and "normal" projections (table 1). Participation of "extra" workers in each State is assumed to be 15 percent of the wartime extra-worker total (table 3, column 5). All three projections take account of net civilian interstate migration between 1940 and 1945. None of the projections make allowance for migration from foreign countries between 1940 and 1950. Assumptions with respect to interstate migration between 1945 and 1950 are as follows (see Appendix A, section 8):

Assumption A. Whatever new interstate migration takes place between 1945 and 1950 will be offset by return of wartime migrants to their prewar States of residence so that interstate migration in the last half of this decade will have no net effect on the size of the labor force in each State.

Assumption B. The net number of workers who move between States during the period 1945–50 will be the same as would be expected on the basis of 1935–40 experience.

Assumption C. Net interstate migration of all workers between 1945 and 1950 will be equal to the net interstate migration of civilian workers between 1940 and 1945. Migration of workers on this scale during the second half of the decade could come about with a considerably smaller total population movement than occurred during the first half because wartime civilian migrants included large numbers of servicemen's dependents and a relatively small proportion of men of working age.

Appendix A.—Technical Notes on Estimating Procedures

The State labor-force estimates presented in this bulletin are consistent with current national totals from the Bureau of the Census Monthly Report on the Labor Force (MRLF) which are based on a revised interviewing procedure adopted in July 1945. The effects on the Census series resulting from the introduction of the new interviewing techniques are described in Bureau of the Census MRLF No. 39, September 20, 1945. National totals for April 1940 and April 1945 appearing in this bulletin are preliminary pending release of official revisions for these dates by the Bureau of the Census.

The methods used in deriving the estimates presented in tables 1 to 4 and in Appendix B, tables 1 and 2, are outlined below.

1. Labor Force, 1940. (Table 1 and Appendix B, tables 1 and 2.)

State labor force estimates for 1940 were based on the Sixteenth Census of the United States, 1940, Population, Vol. III, The Labor Force. These data by age and sex were adjusted to preliminary national labor-force figures for 1940 designed to be consistent with the revised MRLF series.

2. "Natural" Labor Force, 1950. (Table 1 and Appendix B, tables 1 and 2.)

a. 1940 State population figures by age and sex (and color for the South) were obtained from the Sixteenth Census of the United States, 1940, Population, Vol. II, Characteristics of the Population, Part 1, United States Summary, table 26; and Vol. IV, Characteristics by Age, Parts 2 to 4, table 1.

b. To obtain a 1950 population aged 14 years and over classified by age and sex (and color for the South), the 1940 population 4 years and over was aged by 10 years. Survival rates, based on Census life tables for 1939–41, were used to decrease the population by the number of deaths expected between 1940 and 1950.

c. 1940 State worker rates by age and sex (and color for the South)[1] were then applied to the corresponding 1950 population groups to obtain a 1950 labor force, unadjusted for trend.

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[1] 1940 worker rates, i. e., the proportion of labor force to population in given groups, were obtained from the Sixteenth Census of the United States, 1940, Population, Vol. III, The Labor Force.

d. Finally, these projected labor-force figures by State were adjusted to national "normal" labor-force estimates, by age and sex, for 1950 to take account of long-term trends in worker rates. The estimates of "normal" labor force were those of the Bureau of the Census[2] adjusted to be consistent with the current Census Monthly Report on the Labor Force series.

3. "NORMAL" LABOR FORCE, 1945 AND 1950. (Tables 1 and 3 and Appendix B, tables 1 and 2.)

a. For 1950, the base population figures by age and sex (and color for the South), assuming no migration, are those obtained in section 2*b*. The corresponding population figures for 1945 were derived in a similar manner by aging the 1940 population 9 years of age and over by 5 years.

b. Shifts through migration were accounted for by using the 1935–40 volume of net interstate migration by age and sex (and color for the South) for the 1940–45 period.[3] For the 10-year period 1940 to 1950, the figures were doubled.[4] Total populations by age and sex for the years 1945 and 1950, assuming migration, were obtained by adding the volume of assumed migration 1940–45 and 1940–50 to the survived populations in 1945 and 1950, respectively. While the procedure employed does not attempt to estimate the *actual magnitude* of migration changes during the current decade, it is consistent with the migration *pattern* that prevailed during the war and is likely to carry over into the postwar period. An analysis of wartime and prewar migration patterns by Shryock and Eldridge of the Bureau of the Census shows a close similarity between the war and prewar periods.[5] The correlation coefficients between annual average net interstate migration for the period 1940–45 and the corresponding annual averages for three earlier periods for which data are available are as follows:

1940–45 correlated with—	*Coefficient*
1935–40	.92
1930–40	.79
1920–30	.81

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[2] Bureau of the Census, Population, Special Reports, Series P-44, No. 12, Normal Growth of the Labor Force in the United States: 1940 to 1950, by John D. Durand and Loring Wood.

[3] Migration data obtained from Sixteenth Census of the United States, 1940, Population, Internal Migration, 1935 to 1940, Age of Migrants.

[4] This procedure is conceptually not the best that could be devised, inasmuch as the age composition of migrants who moved during a 5-year period would be expected to differ from that of migrants who moved during a 10-year period. Because of the approximate nature of the entire migration assumption, however, it was felt that the use of a more intricate and time-consuming method, which would have in turn involved additional assumptions as to the timing of migration over the 10-year period, would not be justified.

[5] Demographic Aspects of World War II: Migration. Paper delivered before the American Sociological Society (Cleveland, Ohio, Mar. 1, 1946).

c. The 1945 and 1950 normal labor forces, unadjusted for trend, were computed by applying 1940 State worker rates to the population estimates computed in section 2*b*.

d. The labor-force figures for each year were then adjusted to national normal labor-force totals by age and sex (see section 2*d*) for the corresponding years in order to adjust for trend.

4. ESTIMATED ACTUAL LABOR FORCE, APRIL 1945. (Table 3.)

An actual labor force for April 1945 by State was estimated by distributing preliminary estimates of the United States total (on the revised MRLF series basis) in the following manner:

a. MRLF nonagricultural wage and salary workers (except domestics).—Census State totals in 1940 were moved by the percentage change in the Bureau of Labor Statistics State estimates of nonagricultural employees for April 1940 to April 1945. The 1945 State distribution thereby derived was used to distribute the MRLF national total.

b. Nonagricultural self-employed, proprietors, domestic servants, and unpaid family workers.—The most recent distribution of this group by State is found in the 1940 census. In order to take account of subsequent changes it was assumed that the distribution would shift between 1940 and 1945 by only half as much as did the distribution of employees in nonagricultural establishments. The State distribution obtained was applied to the MRLF national figure.

c. Agricultural employment.—MRLF agricultural employment figures for family labor (self-employed plus unpaid family workers) and hired workers (wage and salary workers) in April 1945 were separately distributed by major geographic divisions. This was done by moving the 1940 census components for each geographic division by the rate of change in the corresponding Bureau of Agricultural Economics (BAE) components between 1940 and 1945 and applying the distribution obtained to April 1945 MRLF totals. Each division's family labor was, in turn, broken into State figures by the distribution of farms in 1945.[6] The two variables, when correlated from 1940 data, showed a very high relationship (.98887). Hired labor was distributed by State according to BAE State employment figures for hired labor in April 1942.

d. Unemployment.—MRLF unemployment figure for April 1945 was distributed by State according to the distribution of continued claims for unemployment compensation in April 1945.[7]

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[6] Bureau of the Census, Preliminary Compilation of Number of Farms and Acres in Farms in the United States, by Counties: 1945 Census of Agriculture (November 30, 1945).

[7] Social Security Board, Bureau of Employment Security, Employment Security Activities, Vol. 1, No. 5, May 1945.

e. Armed forces.—State figures for the armed forces in April 1945 were obtained by distributing the total for that month according to the distribution of inductions and enlistments from each State for the period April 1940 to July 1945 as shown in Bureau of the Census, Population, Special Reports, Series P–46, No. 3.

f. Total actual labor-force estimates for the States were derived by summing *a* through *e*.

5. DEVIATION OF ACTUAL FROM "NORMAL" LABOR FORCE CAUSED BY ABNORMAL MIGRATION, 1945. (Table 3.)

The difference between each State's normal labor force (section 3*d*) and actual labor force (section 4*f*) for April 1945 was divided into two parts: That due to extra participation of persons who normally would not work or seek work and that due to actual migration being greater or less than the assumed "normal" migration.

a. The deviation from normal attributable to migration was derived as follows:

(1) Estimated net interstate migration of the civilian population between 1940 and 1945 was adapted from Bureau of the Census, Population, Special Reports, Series P–46, No. 3. (See Appendix B, table 3.)

(2) An over-all "normal" worker rate for civilian migrants between 1940 and 1945 was computed as follows: The 1945 "normal" age- and sex-specific worker rates were applied to the age and sex distribution of all civilian interstate migrants for the period December 1941 to March 1945 [8] to obtain an estimate of civilian migrants who would normally be in the labor force.[9] The ratio of this figure to the total number of civilian migrants for the period gave an over-all normal worker rate for migrants.

(3) This over-all normal worker rate for civilian migrants was applied to the net civilian migration estimate for each State ((1) above) to obtain an estimate of the net number of civilian migrants to or from each State, 1940–45, who would normally be in the labor force.

(4) The net number of migrant workers included in the 1945 normal labor-force estimate for each State (i. e., computed on the basis of 1935–40 migration—see section 2) was subtracted from the figure for each State derived in step (3) to obtain the deviation of actual labor force from normal caused by "abnormal" migration between 1940 and 1945.

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[8] Bureau of the Census, Population, Special Reports, Series P–S, No. 5.

[9] Data from the 1940 Census of Population indicate that interstate migrants (1935–40) had the same worker rates age for age as nonmigrants. The worker rate for all interstate migrants 14 years of age and over exceeded that for the corresponding group of nonmigrants, but this was entirely attributable to differences in the age composition of the two groups.

b. The estimated deviation from normal due to participation of extra workers in each State was derived by subtracting the deviation due to migration from the total deviation.

6. "NATURAL" ACCESSIONS TO AND SEPARATIONS FROM THE MALE LABOR FORCE, 1940–50. (Table 2.)

The two basic sets of figures used in estimating accessions and separations were the 1940 male labor force by age and the "natural" 1950 male labor force by age for each State. (See sections 1 and 2*d.*)

a. Accessions.—All of the workers aged 14 to 23 in 1950, too young to have been counted in the labor force of 1940, were counted as accessions to the labor force between 1940 and 1950. Part of the 24- to 34-year-old labor force in 1950 was in the 1940 labor force as the 14- to 24-year-old group; the rest are new additions during the 10 years. Therefore, new labor-force entrants aged 14 to 34 in 1950 were obtained by subtracting the number of workers aged 14 to 24 in 1940 (adjusted for mortality between 1940 and 1950) from the labor force aged 14 to 34 in 1950. No allowance was made for new workers over 35 years of age in 1950, but their number is not significant.

b. Separations.—Separations from the labor force during the 10-year period are the sum of the expected deaths and retirements. They are computed in three parts:

(1) The major part of the separations occurs among workers who were 35 years and older in 1940. This is estimated as the difference between the 1950 labor force 45 years and over and the 1940 workers who were 35 years and over.

(2) For the group 14 to 24 in 1940, the estimated number of deaths is counted as total separations since there are very few retirements from the labor force among the young men in this group.

(3) There remains the group aged 25 to 34 in 1940. This is a very stable group so far as labor-market participation is concerned. Very few men enter the labor market after age 25 and very few are separated before age 44 except in case of death. Total separations were estimated by subtracting the estimated labor force aged 35 to 44 in 1950 from the labor force aged 25 to 34 in 1940. This procedure understates the number of separations by a small amount equal to the number of accessions after age 25. Thus in a few States the net separations were smaller than the expected number of deaths. In such cases the expected number of deaths were considered to be the total separations and the excess of deaths over net separations was added to accessions.

The sum of groups (1) to (3) comprises the total number of separations for each State.

c. Replacement rates.—The replacement rate is the number of accessions per 100 separations.

7. "NORMAL" ACCESSIONS TO AND SEPARATIONS FROM THE MALE LABOR FORCE, 1940–50. (Table 2.)

Accessions were considered to be composed of the 1940–50 in-migrants in a State's labor force as of 1950 plus the new entrants during the decade from the nonmigrant population; separations, the sum of the 1940–50 out-migrants who were in the State's 1940 labor force plus separations from the 1940 nonmigrant labor force during the decade.[10]

a. Migrants.—As previously indicated (section 3*b*) the number of interstate migrants in each age and sex group between 1940 and 1950 was assumed to be twice the corresponding number between 1935 and 1940.

b. In-migrant labor force, 1950.—The in-migrant male population by age for each State in 1950 was multiplied by age-specific worker rates to derive the in-migrant male labor force of each State as of 1950. These workers would be accessions to the State's labor force during the 10-year period.

c. Out-migrant labor force.—The number of 1940–50 out-migrants from each State who had been in the 1940 labor force was estimated by applying the 1940 age-specific worker rates to the out-migrant population. Since the out-migrants were distributed by their 1950 ages, worker rates for age groups 10 years younger were applied in order to estimate how many were in the 1940 labor force. For example, the 1940 worker rate for men aged 35 to 44 was applied to the group of out-migrants aged 45 to 54 as of 1950.

d. Nonmigrant labor force.—The 1940 out-migrant workers, by age (computed in 7*c* above), were subtracted from the corresponding age groups of the State's 1940 labor force to estimate the 1940 nonmigrant labor force.

e. The 1950 nonmigrant labor force was computed by subtracting from the State's projected 1950 labor force by age, assuming no migration (section 2*d*), the number of workers who would be expected to leave the State between 1940 and 1950. The estimate of total out-migrant workers was obtained by applying age-specific worker rates to the 1950 out-migrant population.

These two basic sets of figures on a nonmigrant basis were then used to obtain the accessions and separations from among nonmigrant workers. The same procedures as outlined for computing accessions to and separations from the total male labor force on the assumption of no migration were applied to these nonmigrant workers of 1940 and 1950.

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[10] Persons who would both enter and leave a given State's labor force during the decade are not counted either as accessions or separations for that State.

8. PROJECTED LABOR FORCE, 1950. (Table 4.)

a. All three projections assume that the 1950 labor force of each State will include some "extra" workers who would not be in the labor force on the basis of the prewar patterns of labor-market participation assumed in the "natural" and "normal" projections (table 1). Participation of extra workers in each State is assumed to be 15 percent of the wartime extra-worker total (i. e., 15 percent of column (5), table 3).

b. Assumption A.—To the natural labor-force projection for 1950 (table 1, column (2)) was added (1) the allowance for extra workers (section 8*a*), and (2) the net number of civilian migrants between 1940 and 1945 who would normally be in the labor force (section 5*a* (3)).

Thus, it was assumed that migration between 1945 and 1950 would have no net effect on the size of the labor force in each State.

c. Assumption B.—To the normal labor-force projection for 1950 (table 1, column (4)) was added (1) the allowance for extra workers (section 8*a*), and (2) the deviation of labor force from normal caused by abnormal migration between 1940 and 1945 (table 3, column (4)).

Thus the labor-force changes due to abnormal wartime migration were retained and it was assumed that interstate migration of workers between 1945 and 1950 would revert to the 1935–40 volume and pattern assumed in the normal projections.

d. Assumption C.—To the labor force obtained under Assumption B was added an amount equal to the deviation of labor force from normal caused by abnormal migration between 1940 and 1945 (table 3, column (4)). Thus, it was assumed that interstate migration of workers between 1945 and 1950 would be the same as between 1940 and 1945 (i. e., would exceed normal by the same amount as the 1940–45 volume).

Appendix B

TABLE 1.—*"Natural" and "Normal" Growth of the Male Labor Force, by State, 1940 to 1950* [1]

Region, division, and State	Labor force, 1940 [2] (in thousands) (1)	"Natural" labor-force projection, 1950 [3]		"Normal" labor-force projection, 1950 [4]	
		Number (in thousands) (2)	Percent change from 1940 (3)	Number (in thousands) (4)	Percent change from 1940 (5)
UNITED STATES	41, 036	43, 606	6. 3	43, 606	6. 3
NORTH	24, 222	25, 153	3. 8	24, 654	1. 8
New England	2, 618	2, 716	3. 7	2, 705	3. 3
Maine	253	268	5. 9	262	3. 6
New Hampshire	153	157	2. 6	161	5. 2
Vermont	113	118	4. 4	116	2. 7
Massachusetts	1, 314	1, 359	3. 4	1, 331	1. 3
Rhode Island	226	237	4. 9	238	5. 3
Connecticut	559	577	3. 2	597	6. 8
Middle Atlantic	8, 822	9, 153	3. 8	9, 028	2. 3
New York	4, 365	4, 437	1. 6	4, 372	. 2
New Jersey	1, 371	1, 415	3. 2	1, 437	4. 8
Pennsylvania	3, 086	3, 301	7. 0	3, 219	4. 3
East North Central	8, 540	8, 852	3. 7	8, 867	3. 8
Ohio	2, 183	2, 259	3. 5	2, 245	2. 8
Indiana	1, 079	1, 122	4. 0	1, 140	5. 7
Illinois	2, 571	2, 618	1. 8	2, 600	1. 1
Michigan	1, 713	1, 810	5. 7	1, 866	8. 9
Wisconsin	994	1, 043	4. 9	1, 016	2. 2
West North Central	4, 242	4, 432	4. 5	4, 054	−4. 4
Minnesota	885	924	4. 4	909	2. 7
Iowa	792	824	4. 0	779	−1. 6
Missouri	1, 200	1, 237	3. 1	1, 165	−2. 9
North Dakota	202	220	8. 9	173	−14. 4
South Dakota	201	218	8. 5	173	−13. 9
Nebraska	411	434	5. 6	355	−13. 6
Kansas	551	575	4. 4	500	−9. 3
SOUTH	12, 323	13, 897	12. 8	13, 761	11. 7
South Atlantic	5, 284	5, 950	12. 6	6, 127	16. 0
Delaware	87	90	3. 4	98	12. 6
Maryland	583	614	5. 3	665	14. 1
District of Columbia	217	214	−1. 4	231	6. 5
Virginia	817	914	11. 9	961	17. 6
West Virginia	539	625	16. 0	607	12. 6
North Carolina	1, 015	1, 207	18. 9	1, 199	18. 1
South Carolina	533	640	20. 1	630	18. 2
Georgia	918	1, 049	14. 3	1, 032	12. 4
Florida	575	597	3. 8	704	22. 4
East South Central	3, 132	3, 571	14. 0	3, 439	9. 8
Kentucky	846	958	13. 2	925	9. 3
Tennessee	855	964	12. 7	933	9. 1
Alabama	800	934	16. 8	884	10. 5
Mississippi	631	715	13. 3	697	10. 5
West South Central	3, 907	4, 376	12. 0	4, 195	7. 4
Arkansas	580	655	12. 9	607	4. 7
Louisiana	694	781	12. 5	789	13. 7
Oklahoma	666	752	12. 9	625	−6. 2
Texas	1, 967	2, 188	11. 2	2, 174	10. 5

See footnotes at end of table.

TABLE 1.—*"Natural" and "Normal" Growth of the Male Labor Force, by State, 1940 to 1950* [1]—Continued

Region, division, and State	Labor force, 1940 [2] (in thousands) (1)	"Natural" labor-force projection, 1950 [3]		"Normal" labor-force projection, 1950 [4]	
		Number (in thousands) (2)	Percent change from 1940 (3)	Number (in thousands) (4)	Percent change from 1940 (5)
WEST	4, 491	4, 556	1. 4	5, 191	15. 6
Mountain	1, 270	1, 385	9. 1	1, 432	12. 8
Montana	191	197	3. 1	190	−. 5
Idaho	166	180	8. 4	192	15. 7
Wyoming	86	92	7. 0	96	11. 6
Colorado	338	356	5. 3	361	6. 8
New Mexico	150	178	18. 7	189	26. 0
Arizona	147	165	12. 2	190	29. 3
Utah	151	177	17. 2	167	10. 6
Nevada	41	40	−2. 4	47	14. 6
Pacific	3, 221	3, 171	−1. 6	3, 759	16. 7
Washington	583	572	−1. 9	636	9. 1
Oregon	365	361	−1. 1	415	13. 7
California	2, 273	2, 238	−1. 5	2, 708	19. 1

[1] Data presented in this table cover total labor force including armed forces. All data at April seasonal level. Annual average for total United States is about 400,000 higher.

[2] Data from 1940 census have been revised upward for comparability with current census series. Preliminary pending release of official revision of United States total by Bureau of the Census. See Appendix A, section 1.

[3] This projection assumes (1) continuation of prewar trends in the percentage of the population that works or seeks work; (2) economic conditions in 1950 similar to those of 1940; (3) no interstate migration between 1940 and 1950. See Appendix A, section 2.

[4] Assumptions (1) and (2) same as above; (3) interstate migration between 1940 and 1950 assumed to be twice the 1935–40 volume. See Appendix A, section 3.

TABLE 2.—*"Natural" and "Normal" Growth of the Female Labor Force, by State, 1940 to 1950* [1]

Region, division, and State	Labor force, 1940 [2] (in thousands) (1)	"Natural" labor-force projection, 1950 [3]		"Normal" labor-force projection, 1950 [4]	
		Number (in thousands) (2)	Percent change from 1940 (3)	Number (in thousands) (4)	Percent change from 1940 (5)
UNITED STATES	13,742	17,224	25.3	17,224	25.3
NORTH	8,405	10,136	20.6	9,964	18.5
New England	1,139	1,366	19.9	1,357	19.1
Maine	90	116	28.9	111	23.3
New Hampshire	62	77	24.2	81	30.6
Vermont	34	43	26.5	41	20.6
Massachusetts	603	718	19.1	702	16.4
Rhode Island	109	129	18.3	129	18.3
Connecticut	241	283	17.4	293	21.6
Middle Atlantic	3,427	4,080	19.1	4,046	18.1
New York	1,823	2,134	17.1	2,129	16.8
New Jersey	557	650	16.7	661	18.7
Pennsylvania	1,047	1,296	23.8	1,256	20.0
East North Central	2,663	3,234	21.4	3,242	21.7
Ohio	682	830	21.7	826	21.1
Indiana	300	372	24.0	376	25.3
Illinois	914	1,079	18.1	1,077	17.8
Michigan	489	608	24.3	629	28.6
Wisconsin	278	345	24.1	334	20.1
West North Central	1,176	1,456	23.8	1,319	12.2
Minnesota	257	318	23.7	309	20.2
Iowa	200	245	22.5	228	14.0
Missouri	379	461	21.6	434	14.5
North Dakota	42	57	35.7	41	−2.4
South Dakota	47	61	29.8	48	2.1
Nebraska	108	135	25.0	108	.0
Kansas	143	179	25.2	151	5.6
SOUTH	3,980	5,417	36.1	5,343	34.2
South Atlantic	1,965	2,675	36.1	2,717	38.3
Delaware	32	38	18.8	42	31.2
Maryland	214	265	23.8	283	32.2
District of Columbia	141	166	17.7	182	29.1
Virginia	255	342	34.1	346	35.7
West Virginia	118	166	40.7	160	35.6
North Carolina	373	529	41.8	517	38.6
South Carolina	230	326	41.7	321	39.6
Georgia	359	528	47.1	506	40.9
Florida	243	315	29.6	360	48.1
East South Central	918	1,262	37.5	1,206	31.4
Kentucky	191	259	35.6	246	28.8
Tennessee	259	344	32.8	333	28.6
Alabama	258	366	41.9	345	33.7
Mississippi	210	293	39.5	282	34.3
West South Central	1,097	1,480	34.9	1,420	29.4
Arkansas	124	172	38.7	157	26.6
Louisiana	225	301	33.8	299	32.9
Oklahoma	168	231	37.5	195	16.1
Texas	580	776	33.8	769	32.6

See footnotes at end of table.

Table 2.—*"Natural" and "Normal" Growth of the Female Labor Force, by State, 1940 to 1950*[1]—Continued

Region, division, and State	Labor force, 1940[2] (in thousands) (1)	"Natural" labor-force projection, 1950[3]		"Normal" labor-force projection, 1950[4]	
		Number (in thousands) (2)	Percent change from 1940 (3)	Number (in thousands) (4)	Percent change from 1940 (5)
WEST	1, 357	1, 671	23. 1	1, 917	41. 3
Mountain	310	412	32. 9	424	36. 8
Montana	42	53	26. 2	50	19. 0
Idaho	32	43	34. 4	45	40. 6
Wyoming	18	23	27. 8	23	27. 8
Colorado	99	125	26. 3	128	29. 3
New Mexico	34	51	50. 0	54	58. 8
Arizona	40	57	42. 5	65	62. 5
Utah	36	49	36. 1	46	27. 8
Nevada	9	11	22. 2	13	44. 4
Pacific	1, 047	1, 259	20. 2	1, 493	42. 6
Washington	159	193	21. 4	207	30. 2
Oregon	105	126	20. 0	144	37. 1
California	783	940	20. 1	1, 142	45. 8

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[1] All data at April seasonal level. Annual average for total United States is about 300,000 higher.

[2] Data from 1940 census have been revised upward for comparability with current census series. Preliminary pending release of official revision of United States total by Bureau of the Census. See Appendix A, section 1.

[3] This projection assumes (1) continuation of prewar trends in the percentage of the population that works or seeks work; (2) economic conditions in 1950 similar to those of 1940; (3) no interstate migration between 1940 and 1950. See Appendix A, section 2.

[4] Assumptions (1) and (2) same as above; (3) interstate migration between 1940 and 1950 assumed to be twice the 1935–40 volume. See Appendix A, section 3.

TABLE 3.—*Net Interstate Migration, 1935–40 Compared With 1940–45*

Region, division, and State	Net interstate migration (in thousands)	
	1935–40 (total)	1940–45 (civilian)
UNITED STATES	0	0
NORTH	−615	−641
New England	−16	110
Maine	−9	−39
New Hampshire	6	−15
Vermont	−6	−39
Massachusetts	−32	27
Rhode Island	(1)	33
Connecticut	25	143
Middle Atlantic	−131	−383
New York	−56	−442
New Jersey	29	202
Pennsylvania	−104	−143
East North Central	41	632
Ohio	−10	271
Indiana	26	94
Illinois	−19	69
Michigan	76	320
Wisconsin	−32	−122
West North Central	−509	−1, 000
Minnesota	−18	−230
Iowa	−61	−228
Missouri	−85	−136
North Dakota	−66	−120
South Dakota	−61	−107
Nebraska	−107	−115
Kansas	−111	−64
SOUTH	−272	−1, 274
South Atlantic	193	134
Delaware	10	21
Maryland	61	274
SOUTH—Continued		
South Atlantic—Continued		
District of Columbia	22	220
Virginia	44	181
West Virginia	−27	−163
North Carolina	−15	−307
South Carolina	−16	−162
Georgia	−33	−149
Florida	147	219
East South Central	−195	−751
Kentucky	−55	−308
Tennessee	−39	−79
Alabama	−73	−134
Mississippi	−28	−230
West South Central	−270	−657
Arkansas	−75	−265
Louisiana	9	−19
Oklahoma	−184	−356
Texas	−20	−17
WEST	887	1, 915
Mountain	65	−69
Montana	−11	−84
Idaho	16	−54
Wyoming	3	−10
Colorado	9	−26
New Mexico	14	−53
Arizona	38	91
Utah	−12	38
Nevada	8	29
Pacific	822	1, 984
Washington	80	273
Oregon	77	160
California	665	1, 551

[1] Less than 500.

Sources: 1935–40—Sixteenth Census of the United States, 1940, Population, Internal Migration, 1935–1940, Color and Sex of Migrants; 1940–45—Bureau of the Census, Population, Special Reports, Series P–46, No. 3 (adjusted to exclude immigrants from other countries).

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UNITED STATES DEPARTMENT OF LABOR
L. B. Schwellenbach, *Secretary*

BUREAU OF LABOR STATISTICS
Ewan Clague, *Commissioner*

Activities of Credit Unions in 1945

Bulletin No. 894

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Letter of Transmittal

United States Department of Labor,
Bureau of Labor Statistics,
Washington, D. C., January 17, 1947.

The Secretary of Labor:

I have the honor to transmit herewith a report on the activities of credit unions in 1945, prepared by Florence E. Parker of the Bureau's Labor Economics Staff.

Ewan Clague, *Commissioner.*

Hon. L. B. Schwellenbach,
Secretary of Labor.

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Bulletin No. 894 of the
United States Bureau of Labor Statistics

[Reprinted from the Monthly Labor Review, December 1946, with additional data.]

Activities of Credit Unions in 1945

THE slight upward trend in business done by credit unions in the United States in 1944, after a serious decline during the war years, was continued in 1945, although the total of loans made was still more than 40 percent below the peak of 1941. This increase took place in spite of a slight reduction in number of loans made, indicating a rise in the average size of loan. Share capital and assets which (notwithstanding the otherwise adverse business experience of the credit unions during the war) have continued to rise steadily, maintained their upward pace in 1945, showing increases of 8.1 and 9.2 percent, respectively. Reserves fell somewhat, however, both in amount and in relation to loans outstanding, declining as regards the latter from 20.7 percent in 1944 to 19.4 percent in 1945.

Both net earnings and dividends paid on share capital increased as compared with 1944. For 1945, credit union members received nearly $5,900,000 in dividends on their shares.

Because 398 credit unions went out of existence (some of them undoubtedly in war plants now closed) and only 239 were newly chartered, the total number of associations fell from 9,041 at the end of 1944 to 8,882 at the end of 1945. Partly as a result of this, the total membership declined 3.3 percent.

The State-chartered credit unions fared better during the year than the Federal associations.[1] Their membership declined 0.5 percent, as against 6.7 percent for the Federal associations; they increased their business by 0.8 percent, whereas the loans made by the Federal credit unions fell 0.1 percent. The increases in assets of the two groups of associations were 11.0 and 6.1 percent, respectively.

Operations in 1944 and 1945

Data on membership and business of credit unions in 1944 and 1945 are given in table 1.

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[1] For the State-chartered associations the statistical data on which the present report is based were in most cases furnished to the Bureau of Labor Statistics by the State official—usually the Superintendent of Banks—charged with supervision of these associations. Reports were received from all States except Iowa. For that State and for certain items concerning which some States do not require the associations to report, estimates were made, based on the trend in other States and on the trend of the other items in the same State. All of the information for the Federal credit unions was supplied by the Credit Union Division of the Federal Deposit Insurance Corporation.

TABLE 1.—*Operations of credit unions in 1944 and 1945, by States*

[Some revisions in 1944 figures, on basis of later reports]

State, and type of charter	Year	Number of associations[1]		Number of members	Number of loans made during year	Amount of loans—	
		Total	Reporting			Made during year	Outstanding end of year
All States	1945	8,882	8.615	2,838,034	1,511,851	$210,885,783	$126,277,698
	[2] 1944	9,041	8,702	2,933,507	1,591,132	209,955,479	120,955,395
State associations	1945	4,923	4,858	1,621,409	909,922	132,616,939	91,122,284
	[2] 1944	4,993	4,907	1,629,706	926,518	131,621,582	86,551,928
Federal associations	1945	3,959	3,757	1,216,625	601,929	78,268,844	35,155,414
	1944	4,048	3,795	1,303,801	664,614	78,333,897	34,403,467
Alabama	1945	78	76	28,258	34,261	4,147,161	1,929,705
	[2] 1944	80	77	26,806	[3] 26,948	3,155,213	1,534,975
Arizona	1945	23	22	3,285	[3] 1,367	[3] 339,842	135,613
	1944	24	24	3,419	[3] 1,350	547,043	117,812
Arkansas	1945	25	25	3,059	1,824	194,567	113,615
	1944	27	26	2,862	1,685	163,980	86,860
California	1945	444	432	[3] 171,391	[3] 78,839	[3] 12,926,276	8,171,810
	1944	451	442	[3] 184,969	[3] 89,047	[3] 13,481,423	7,761,778
Colorado	1945	106	102	25,999	[3] 17,312	[3] 2,247,274	1,349,980
	1944	107	100	25,645	[3] 18,259	[3] 2,105,359	1,151,187
Connecticut [4]	1945	186	180	75,118	41,755	4,821,201	1,744,467
	1944	185	179	89,517	47,962	5,742,389	1,963,648
Delaware [4]	1945	10	9	2,126	1,003	132,166	71,371
	1944	10	9	2,114	1,148	139,085	67,574
District of Columbia	1945	112	108	62,095	[3] 33,236	3,825,016	1,976,325
	1944	114	106	66,099	[3] 38.052	3,881,868	2,065,336
Florida	1945	160	156	35,202	22,659	3,683,161	2,099,007
	1944	168	162	34,991	25,251	3,248,585	1,774,033
Georgia	1945	132	128	33,837	[3] 22,879	[3] 3,090,362	2,068,728
	1944	135	131	34,117	[3] 22,744	[3] 2,886,066	1,896,131
Hawaii [4]	1945	96	95	36,112	11,116	2,155,997	930,429
	1944	97	96	37,753	10,076	1,941,163	1,001,467
Idaho	1945	31	31	[3] 3,971	1,405	185,467	102,729
	1944	33	31	3,895	1,329	173,653	87,049
Illinois	1945	762	758	330,830	[3] 238,519	28,929,683	14,011,222
	1944	766	756	290,032	[3] 226,575	25,698,370	13,135,592
Indiana	1945	297	295	[3] 93,502	[3] 44,616	[3] 5,755,008	3,529,359
	[2] 1944	299	294	[3] 97,967	[3] 51,326	[3] 6,278,072	3,378,962
Iowa	[3] 1945	195	195	40,779	18,446	2,397,601	1,771,508
	1944	201	196	41,395	18,921	2,420,443	1,825,666
Kansas	1945	112	110	25,068	13,056	1,971,470	1,082,077
	[2] 1944	117	111	27,914	[3] 14,423	[3] 1,952,696	1,071,793
Kentucky	1945	104	103	[3] 24,582	[3] 16,209	[3] 1,841,919	[3] 1,366,101
	1944	108	107	[3] 26,649	[3] 15,214	[3] 1,752,616	1,366,019
Louisiana	1945	131	125	[3] 32,405	[3] 17,008	[3] 2,158,785	1,066.420
	[2] 1944	139	132	[3] 32,241	[3] 17,270	[3] 2,143,350	[3] 1,037,703
Maine	1945	38	35	9,273	3,672	450,641	261,743
	1944	44	35	9,080	3,987	441,178	237,840
Maryland	1945	64	60	25,109	[3] 17,395	[3] 1,942,507	804,623
	1944	65	60	26,748	[3] 17,458	[3] 1,883,517	784,897
Massachusetts	1945	539	535	255,007	[3] 122,570	22,917,547	16,436,055
	1944	537	532	257,260	[3] 122,591	22,654,669	15,466,050
Michigan	1945	248	240	108,633	50,172	8,683,432	6,389,549
	[3] 1944	253	241	114,320	[3] 51,950	[3] 8,437,474	5,981,086
Minnesota	1945	325	324	65,734	28,713	4,598,703	5,808,028
	[2] 1944	332	329	66,696	[3] 33,389	[3] 3,662,418	5,451,077
Mississippi	1945	26	23	[3] 5,553	[3] 4,787	[3] 462,150	191,042
	1944	27	24	6,640	[3] 5,784	[3] 530,087	226,352
Missouri	1945	369	340	88,761	[3] 41,887	[3] 4,868,432	3,116,292
	1944	378	359	90,834	[3] 44,328	[3] 5,432,884	3,185,792
Montana	1945	40	37	7,175	[3] 2,952	[3] 440,493	261,103
	1944	40	37	6,382	[3] 2,284	[3] 373,912	201,345
Nebraska	1945	89	87	19,381	8,795	1,253,906	730,378
	1944	96	88	20,595	9,882	1,320.588	717,155
Nevada [4]	1945	4	4	584	108	16,185	9,386
	1944	4	4	562	104	13,004	7,169
New Hampshire	1945	16	14	5,698	[3] 3,017	[3] 760.720	640,080
	1944	15	14	6,151	[3] 3,557	[3] 788,041	653,906
New Jersey	1945	247	237	99,042	50,390	5,809,257	2,416,596
	1944	240	233	114,225	63,925	6,382,951	2,632,417
New Mexico [5]	1945	14	13	1,304	333	46,262	25,220
	1944	14	14	1,324	589	63,358	28,217
New York	1945	753	721	258,397	[3] 127,090	[3] 20,785.191	12,608,773
	1944	763	729	279,116	[3] 144,310	[3] 23,601.108	12,898,928
North Carolina	1945	195	168	35,471	[3] 17,801	[3] 2,078,429	1,934,614
	1944	173	151	29,387	17,822	2,088,966	1,256,073

See footnotes at end of table.

TABLE 1.—*Operations of credit unions in 1944 and 1945, by States*—Continued

State, and type of charter	Year	Number of associations [1]		Number of members	Number of loans made during year	Amount of loans—	
		Total	Reporting			Made during year	Outstanding end of year
North Dakota	1945	93	87	11, 766	3, 300	$1, 115, 835	$805, 445
	1944	97	80	10, 589	3, 241	738, 280	486, 812
Ohio	1945	583	567	188, 522	84, 927	11, 896, 005	6, 012, 876
	1944	589	575	214, 099	97, 508	12, 317, 470	6, 311, 501
Oklahoma	1945	71	66	[3] 16, 225	[3] 7, 760	[3] 1, 330, 282	864, 512
	1944	75	72	16, 513	[3] 7, 737	[3] 1, 238, 328	[3] 710, 019
Oregon	1945	71	68	12, 491	4, 420	749, 837	531, 506
	1944	75	71	13, 053	5, 135	811, 167	544, 424
Pennsylvania	1945	586	571	213, 503	106, 331	13, 435, 747	6, 326, 211
	1944	587	560	224, 151	111, 023	13, 406, 338	6, 296, 028
Rhode Island	1945	36	35	26, 648	6, 275	2, 445, 642	4, 510, 639
	1944	37	34	25, 792	7, 062	2, 023, 922	3, 781, 404
South Carolina	1945	35	29	6, 922	5, 651	416, 753	204, 162
	1944	39	31	7, 688	5, 346	427, 749	190, 507
South Dakota [4]	1945	32	32	4, 818	1, 970	236, 954	99, 457
	1944	32	32	5, 176	2, 547	273, 901	119, 880
Tennessee	1945	117	115	33, 903	[3] 26, 412	[3] 3, 788, 965	1, 578, 663
	1944	127	124	34, 567	[3] 27, 298	[3] 3, 581, 047	1, 428, 126
Texas	1945	334	319	76, 217	[3] 44, 953	[3] 6, 133, 740	3, 229, 896
	1944	350	328	77, 952	[3] 45, 870	[3] 5, 763, 109	3, 063, 612
Utah	1945	64	62	11, 375	[3] 10, 152	[3] 1, 328, 692	637, 293
	1944	66	65	11, 577	[3] 7, 625	[3] 1, 204, 492	567, 092
Vermont	1945	10	9	1, 692	[3] 1, 108	[3] 76, 395	27, 389
	1944	9	9	1, 562	1, 265	74, 947	27, 554
Virginia	1945	86	83	23, 391	16, 519	1, 619, 262	843, 257
	1944	91	86	25, 396	14, 366	1, 462, 221	901, 198
Washington	1945	178	174	35, 404	[3] 15, 846	[3] 1, 947, 710	1, 234, 717
	1944	188	180	37, 739	[3] 18, 999	2, 428, 191	[3] 1, 280, 285
West Virginia	1945	63	59	15, 318	9, 839	1, 026, 200	510, 424
	1944	67	60	15, 857	[3] 7, 983	[3] 764, 907	452, 887
Wisconsin	1945	534	534	144, 594	70, 319	7, 265, 449	3, 625, 734
	1944	551	548	151, 509	77, 640	7, 885, 115	3, 655, 518
Wyoming [4]	1945	18	17	2, 504	877	155, 504	81, 569
	1944	19	18	2, 582	947	168, 766	86, 660

[1] Most of the difference between the total number of associations and the number reporting is accounted for by associations chartered but not in operation by the end of the year and associations in liquidation which had not relinquished their charters.

[2] Revised.

[3] Partly estimated.

[4] Federal associations only; no State-chartered associations in this State.

[5] Federal associations only; although State permissive legislation was passed in 1945 no associations had yet been formed under it.

Fifteen States (Alabama, Arkansas, Colorado, Delaware, Florida, Idaho, Illinois, Louisiana, Maine, Montana, Nevada, North Carolina, North Dakota, Rhode Island, and Vermont) showed a membership increase. Their slight gains, however, were not sufficient to overcome the losses in members in the other States.

The prewar level of business was reached or exceeded in 1945 by both State and Federal associations in Alabama, Montana, and Vermont, by the State-chartered associations in Rhode Island, and by the Federal credit unions in Utah.

Data on the financial status of credit unions, by States, is given in table 2.

TABLE 2.—*Assets and earnings of credit unions, 1944 and 1945, by States*

State, and type of charter	Year	Number of associations [1]		Paid-in share capital	Reserves (guaranty fund, general reserve, etc.)	Total assets	Net earnings	Dividends on shares
		Total	Reporting					
All States	1945	8,882	8,615	$366,201,586	$24,506,019	$434,627,135	$7,839,810	$5,888,412
	1944	9,041	8,702	338,713,383	25,081,703	397,929,814	5,716,736	5,122,454
State associations	1945	4,923	4,858	225,587,624	19,595,211	281,524,015	5,278,300	3,781,036
	1944	4,993	4,907	205,127,236	17,023,389	253,663,658	3,507,152	3,368,794
Federal associations	1945	3,959	3,757	140,613,962	4,910,808	153,103,120	2,561,510	2,107,376
	1944	4,048	3,795	133,586,147	8,058,314	144,266,156	2,209,584	1,753,660
Alabama	1945	78	76	3,490,315	331,965	3,908,510	94,715	76,509
	1944	80	77	2,753,163	275,891	3,081,166	82,859	62,830
Arizona	1945	23	22	340,278	16,331	370,860	7,580	4,908
	1944	24	24	318,418	24,464	349,497	[2] 4,908	[2] 4,455
Arkansas	1945	24	24	280,647	19,108	314,409	6,194	5,841
	1944	28	26	219,261	17,720	232,625	4,932	3.896
California	1945	444	432	23,072,165	1,192,163	26,986,463	[2] 408,543	[2] 286,432
	1944	451	442	22,313,274	1,487,572	25,910,483	[2] 407,721	[2] 250,641
Colorado	1945	106	102	3,534,312	193,990	4,017,658	[2] 77,060	[2] 53,773
	1944	108	100	2,898,805	229,402	3,354,663	[2] 72,654	[2] 51,381
Connecticut [3]	1945	186	180	10,886,299	323,390	12,517,942	246,542	170,143
	1944	185	179	12,849,767	548,399	13,575.000	207,095	158,189
Delaware [3]	1945	10	9	177,527	9,824	192,605	4,463	4,169
	1944	10	9	161,965	13,305	176,276	3,391	3,208
Dist. of Columbia	1945	112	108	5,851,332	500,025	6,613,620	202,550	115,011
	1944	113	106	5,472,271	527,168	6,203,746	170,029	111,651
Florida	1945	160	156	5,742,807	228,720	6,191,836	122,329	89,530
	1944	170	162	4,629,791	278,735	5,014,622	[2] 104,471	73,180
Georgia	1945	132	128	1,599,847	475,877	5,339,232	[2] 104,657	[2] 70,387
	1944	138	131	1,425,875	396,375	4,778,774	[2] 100,237	[2] 63,359
Hawaii	1945	96	95	9,920,711	245,751	10,558,538	173,028	136,026
	1944	97	96	8,785,479	399,350	9,253,563	158,711	112,905
Idaho	1945	31	31	362,180	12,587	382,466	5,009	4,152
	1944	33	31	292,498	17,595	312,947	3,709	3,824
Illinois	1945	762	758	47,144,644	2,931,533	51,250,789	938,364	778,743
	1944	766	756	42,522,556	2,924,278	46,666,917	322,849	645,723
Indiana	1945	297	295	12,893,396	605,425	14,099,255	[2] 173,438	[2] 134,715
	1944	297	294	12,106,052	869,698	13,217,602	[2] 161,751	[2] 114,888
Iowa	[2] 1945	195	195	5,278,339	282,273	6,082,772	70,904	45,410
	1944	201	196	5,172,242	281,504	6,037,066	88,595	93,051
Kansas	1945	112	110	3,104,637	125,397	3,372,538	[2] 45,765	[2] 31,846
	1944	118	111	2,805,222	143,798	3,059,167	[2] 48,959	[2] 31,585
Kentucky	1945	104	103	1,603,451	237,313	3,777,484	[2] 43,203	[2] 28,979
	1944	108	107	2,865,077	215,170	3,304,051	[2] 42,401	[2] 28,474
Louisiana	1945	131	125	3,135,173	229,695	3,468,822	[2] 62,663	[2] 49,444
	1944	145	132	2,775,840	281,554	3,081,504	60,209	40,808
Maine	1945	38	35	905,029	80,954	1,021,718	10,333	12,092
	1944	44	35	735,914	82,502	889,104	8,287	10,526
Maryland	1945	64	60	2,143,396	234,146	2,522,736	64,802	47,013
	1944	66	60	2,029,995	230,933	2,370,134	56,182	40,431
Massachusetts	1945	539	535	34,835,929	4,094,449	48,036,635	1,170,221	[4] 812,162
	1944	537	532	30,893,107	3,176,049	42,322,457	379,626	609,262
Michigan	1945	248	240	1,897,722	866,627	21,265,393	306,032	291,839
	1944	253	241	17,420,056	826,662	19,622,464	320,972	246,189
Minnesota	1945	325	324	10,445,037	547,621	14,132,049	195,008	203,950
	1944	365	329	8,995,484	547,967	12,231,282	[5] 4,745	170,283
Mississippi	1945	26	23	394,429	23,759	619,069	21,793	8,361
	1944	27	24	508,580	53,008	589,365	14,262	6,356
Missouri	1945	369	340	12,350,600	[2] 554,521	13,550,872	[2] 162,124	[2] 97,497
	1944	378	359	10,490,289	[2] 601,875	11,592,194	[2] 160,978	[2] 95,154
Montana	1945	40	37	631,187	18,386	679,020	14,370	10,049
	1944	42	37	460,586	23,642	495,219	8,565	6,486
Nebraska	1945	89	87	2,258,249	119,160	2,806,406	39,891	[2] 29,888
	1944	91	88	2,042,738	135,202	2,567,729	44,475	24,207
Nevada [3]	1945	4	4	30,220	1,412	32,588	487	456
	1944	4	4	25,011	1,741	26,764	119	287
New Hampshire	1945	16	14	521,102	89,449	1,352,729	32,026	9,896
	1944	15	14	490,954	85,489	1,114,147	28,528	9,966
New Jersey	1945	247	237	11,997,931	526,189	13,734,068	268,184	196,245
	1944	241	233	12,027,205	579,566	13,166,766	202,493	171,265
New Mexico [6]	1945	14	13	97,912	5,057	104,125	623	816
	1944	14	14	80,794	6,582	87,586	872	862
New York	1945	753	721	32,051,449	3,381,877	36,700,864	770,253	558,692
	1944	764	729	31,673,401	3,132,182	36,573,853	682,279	542,878
North Carolina	1945	195	168	4,390,565	168,470	6,012,566	32,680	[2] 23,266
	1944	173	151	2,796,132	159,545	3,571,806	82,861	[2] 37,969

See footnotes at end of table.

TABLE 2.—*Assets and earnings of credit unions, 1944 and 1945, by States*—Continued

State, and type of charter	Year	Number of associations [1]		Paid-in share capital	Reserves (guaranty fund, general reserve, etc.)	Total assets	Net earnings	Dividends on shares
		Total	Reporting					
North Dakota	1945	93	87	$2, 153, 649	$38, 597	$2, 233, 424	$29, 759	$16, 756
	1944	95	80	1, 560, 501	29, 867	1, 617, 913	17, 366	10, 325
Ohio	1945	583	567	22, 665, 272	788, 602	24, 223, 640	321, 372	278, 563
	1944	589	575	22, 554, 131	1, 009, 014	24. 336, 012	288, 882	242, 121
Oklahoma	1945	71	66	954, 852	79, 711	2, 246, 601	[2] 43, 115	[2] 31, 315
	1944	75	72	764, 011	86, 153	1, 812, 545	26, 130	19, 521
Oregon	1945	71	68	1, 657, 161	91, 957	1, 819, 237	27, 014	24, 054
	1944	75	71	1, 585, 523	99, 714	1, 749, 892	26, 027	21, 137
Pennsylvania	1945	586	571	22, 109, 027	831, 494	24, 033, 969	451, 817	381, 417
	1944	587	560	19, 976, 363	1, 255, 130	22, 065, 186	380, 534	331, 854
Rhode Island	1945	36	35	4, 160, 685	430, 473	10, 904, 433	149, 536	85, 942
	1944	37	34	3, 713, 056	369, 780	9, 134, 996	129, 433	75, 431
South Carolina	1945	35	29	475, 998	30, 274	537, 129	8, 278	8, 058
	1944	39	31	492, 980	44, 716	561, 540	8, 053	6, 947
South Dakota [3]	1945	32	32	495, 777	19, 794	531, 688	8, 402	8, 422
	1944	32	32	432, 363	34, 466	467, 914	7, 420	7, 302
Tennessee	1945	117	115	4, 285, 476	509, 368	4, 939, 793	120, 941	97, 514
	1944	127	124	3, 613, 033	367, 724	4, 253, 506	57, 534	76, 779
Texas	1945	334	319	10, 680, 407	705, 052	11, 795, 192	205, 521	168, 980
	1944	354	328	9, 565, 633	839, 769	10, 634, 060	[2] 221, 783	[2] 160, 116
Utah	1945	64	62	1, 441, 870	72, 840	1, 612, 069	[2] 34, 015	[2] 23, 674
	1944	66	65	1, 291, 712	80, 718	1, 444, 259	[2] 32, 706	[2] 21, 081
Vermont	1945	10	9	67, 859	2, 250	81, 164	1, 019	448
	1944	9	9	72, 201	2, 584	75, 826	735	398
Virginia	1945	86	83	1, 623, 534	213, 237	2, 082, 280	39, 775	36, 130
	1944	91	86	1, 629, 188	316, 819	2, 159, 086	41, 094	31, 496
Washington	1945	178	174	4, 354, 530	348, 999	4, 776, 410	95, 303	80, 769
	1944	200	180	4, 074, 313	371, 762	4, 467, 146	56, 318	44, 981
West Virginia	1945	63	59	1, 185, 546	109, 095	1, 413, 816	25, 913	22, 998
	1944	67	60	1, 009, 311	129, 608	1, 201, 774	24, 446	22, 913
Wisconsin	1945	534	534	17, 144, 895	1, 546, 123	19, 065, 759	395, 744	229, 798
	1944	551	548	15, 110, 319	1, 453, 581	16, 871, 283	361, 551	219, 135
Wyoming [3]	1945	18	17	292, 789	9, 141	309, 246	6, 428	5, 334
	1944	19	18	230, 943	15, 375	246, 337	5, 489	4, 808

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[1] Most of the difference between the total number of associations and the number reporting is accounted for by associations chartered but not in operation by the end of the year and associations in process of liquidation which had not relinquished their charters.

[2] Partly estimated.

[3] Federal associations only; no State-chartered associations in this State.

[4] Includes interest paid on deposits by State-chartered associations.

[5] Loss.

[6] Federal associations only; although State permissive legislation was passed in 1945, no associations had yet been formed under it.

Trend in Formation of Associations in 1945

Table 3 shows, by States, the number of associations formed and dissolved in 1945, and the total and number reporting at the end of the year.

TABLE 3.—*Trend of formation and dissolution of credit unions in 1945*

State and type of association	Number of credit unions					State and type of association	Number of credit unions				
	End of 1944	Chartered in 1945	Canceled in 1945	End of 1945			End of 1944	Chartered in 1945	Canceled in 1945	End of 1945	
				Total	Reporting					Total	Reporting
All States	9,041	239	398	8,882	8,615	Mississippi	27	3	4	26	23
State assns	[1] 4,993	143	213	4,923	4,858	Missouri	378	8	17	369	340
Federal assns	4,048	96	185	3,959	3,757	Montana	40	------	------	40	37
						Nebraska	96	3	10	89	87
Alabama	80	2	4	78	76	Nevada	4	------	------	4	4
Arizona	24	------	1	23	22	New Hampshire	15	1	------	16	14
Arkansas	27	------	3	24	24	New Jersey	240	11	4	247	237
California [2]	451	7	14	444	432	New Mexico	14	------	------	14	13
Colorado	107	3	4	106	59	New York	763	14	24	753	721
Connecticut	185	7	6	186	180	North Carolina [2]	173	29	7	195	168
Delaware	10	------	------	10	9	North Dakota	97	4	8	93	87
						Ohio	589	15	21	583	567
District of Columbia	114	2	4	112	108	Oklahoma	75	------	4	71	66
Florida	168	3	11	160	156	Oregon	75	1	5	71	68
Georgia	135	3	6	132	128	Pennsylvania	587	15	16	586	571
Hawaii	97	1	2	96	95	Rhode Island	37	------	1	36	35
Idaho	33	------	2	31	31	South Carolina	39	1	5	35	29
Illinois	766	27	31	762	758	South Dakota	32	1	1	32	32
Indiana	299	4	6	297	295	Tennessee	127	2	12	117	115
Iowa [2]	201	------	6	195	195	Texas	350	8	24	334	319
Kansas	117	4	9	112	110	Utah	66	1	3	64	62
Kentucky	108	3	7	104	103	Vermont	9	1	------	10	9
Louisiana	139	2	10	131	125	Virginia	91	1	6	86	83
Maine	44	2	8	38	35	Washington	188	26	36	178	174
Maryland	65	1	2	64	60	West Virginia	67	1	5	63	59
Massachusetts	537	12	10	539	535	Wisconsin	551	3	20	534	534
Michigan	253	6	11	248	240	Wyoming	19	------	1	18	17
Minnesota	332	1	8	325	324						

[1] Some revisions, on basis of later information.
[2] Partly estimated.

State Legislation

California.—Several measures were enacted affecting the credit unions. Chapter 1262 eliminated the requirement that the number of persons in the field of membership be specified when a credit union is organized, and limited votes to one per member in all associations organized on or after September 15, 1945. Chapter 651 raised the maximum amount permissible for a secured loan to $3,000 or 10 percent of the credit union's capital, whichever is greater (but in no case to exceed $10,000); and provided that on loans over $3,000 the excess must be secured by real and/or personal property. No loans may be made to directors or committee members in excess of their investment; henceforth a borrower may be elected as director or committee member, but will forfeit his office in case of default on repayment of his loan. Under chapter 438, formal meetings of the credit committee are apparently no longer required, the former provision being amended to require only that loans be approved in writing by a majority of the committee.

The duties of the supervisory committee now include the mandatory requirement that the committee make an annual audit of the books and records (ch. 1262).

A range of examination charges is established, varying according to assets of the credit union (ch. 1318), the Commissioner of Corporations being authorized to make certain adjustments in these, to suspend or revoke the licenses of associations failing to pay such charges before the end of the year, and to make extra charges for special services rendered by his office. Chapter 475 gives him certain powers over credit unions operating on an unsound basis or with impaired capital; provides that if three-fourths of the directors vote to recommend the dissolution of an association, liquidation may be carried out on vote of a majority of members; and specifies procedures for liquidation. It likewise provides for mergers of credit unions with "like community interests," upon majority affirmative vote of the directors and a three-fourths vote of the members.

Annual reports must be made to the commissioner within 90 days of the close of the calendar year, failing which an association may have its charter suspended (ch. 437). Chapter 467 permits any credit union to take out group life insurance for its members.

Colorado.—An amendment (ch. 113) permits members of the immediate family of a credit-union member to join the association and to have joint accounts with him; permits members withdrawing from the field of membership to leave in their shares and deposits, if so provided by the bylaws, but they are prohibited thereafter from borrowing from the credit union amounts in excess of their holdings; requires that 20 percent of annual earnings shall be set aside in the reserve fund until the latter equals 15 percent of loans outstanding, and thereafter 15 percent until the reserve equals 20 percent of outstanding loans; authorizes the directors (instead of membership meeting) to declare dividends; and authorizes the formation of a central credit union.

Connecticut.—This State passed a credit-union law in 1939, but no association was ever formed under it. The 1945 legislature made several liberalizing amendments to the act. By chapter 192b the previous license fee of $50 was reduced to $20 and the filing fee was set at $10. Associations formed under the act may use either the name "credit union" or "mutual benefit association," but must specify "in detail" in their articles of incorporation the proposed field of membership. Shares may be $5 or a multiple thereof. Copies of the bylaws must be supplied to members on request. The amendment permits credit associations to take out insurance on the lives of borrowers (to safeguard their loans) and to invest in bonds legal for savings banks and (not to exceed 10 percent of assets) in building and loan associations in the State. Annual meetings may vote to pay the officers compensation for their services. A new provision prohibits proxy voting at meetings.

The limit on unsecured loans was raised from $100 to $300 and on the individual member's shareholdings from $1,000 to $3,000 (but no more than $1,000 of this to be added in any calendar year).

Officers other than president, vice president, treasurer, and secretary may be provided for in the bylaws, and the manner of their election (whether by members or directors) may also be specified. The directors must meet at least once a month. A fidelity bond must be provided by the treasurer before entering upon his duties.

Florida.—Act No. 499 (ch. 23013) reduced the voting requirement for dissolution of an association from four-fifths of the members to a majority.

Indiana.—The 1945 amendment (ch. 198) reduces the total reserves required from 20 to 10 percent of the paid-in capital (after this amount is reached no further set-asides are required), permits credit unions to carry an undivided profits account, sets January 31 and July 31 as the dates for reports to the State Department of Financial Institutions, and provides that credit unions shall be subject to the same taxes as savings banks.

Maryland.—Chapter 409 authorizes credit unions to make first-mortgage loans up to $1,500 (but not exceeding 50 percent of the appraised value of the property), at a rate of interest not over 6 percent, amortized over a period not greater than 20 years; all such loans must have the approval of the Bank Commissioner. The proportion of annual earnings to be set aside in reserves was reduced from 25 to 20 percent (ch. 665); after the reserves are equal to 20 percent of the paid-in share capital, only such sums shall be required to be set aside as are necessary to keep the reserve fund at that level.

Credit unions may hereafter borrow from any source (including other credit unions) amounts not exceeding 25 percent of their assets for not longer than 90 days, but this may be extended for a like period on approval of the commissioner. A credit union may also make loans to another credit union (ch. 315). It may also, upon approval, invest its surplus capital in insured building and loan associations (ch. 666). Chapter 515 imposes a $10 franchise fee.

Massachusetts.—Chapter 37 authorizes savings banks, cooperative banks (building and loan associations), trust companies, and credit unions holding a first mortgage on real estate to take, in substitution therefore from a bona fide purchaser, a first mortgage in an amount not exceeding that due on the existing first mortgage and accumulated interest, taxes, municipal liens, and other proper charges due thereon. The same organizations are authorized (1) by chapter 46 for a period of 5 years after the termination of the war to make loans to veterans, and all limitations on the loans of such organizations are suspended as regards veterans' loans, and (2) by chapter 66 to make housing loans. Chapter 81 authorizes and prescribes conditions for trustee accounts in credit unions.

Chapter 82 amends chapter 102 of 1941 to provide that credit unions with assets of not more than $75,000 may invest not over 50 percent and those with assets of over that amount 70 percent of their shares, deposits, and guaranty fund in real-estate mortgages; however, the total liability of any member upon loans so secured shall not exceed 5 percent of the credit union assets nor $8,000. The terms upon which such loans may be made are also prescribed.

Minnesota.—By the terms of chapter 540, credit unions in Minnesota, chartered by either the State or the Federal Government, are permitted to become members of other credit unions. Annual reports are required to be filed with the Commissioner of Banks on or before January 15 of each year. The aggregate amount of borrowings of any credit union may not exceed 35 percent of its unimpaired assets. In the case of a loan to a director or committee member which exceeds the amount of his investment in the credit union, the loan must be approved by a joint meeting of the board and both committees.

Nebraska.—Extensive revisions of the credit-union law by chapter 41 require a member to own a fully paid share in order to be eligible for a loan or to vote at meetings, remove the previous limit on the maximum loan to any member and authorize the board of directors to fix the limit, permit loans to directors and committee members in excess of their holdings if approved by the credit committee and a majority of the supervisory committee in the absence of the borrower concerned, authorize the credit committee to require a borrower to pledge his shares as security, and permit the application of the shares of a defaulting borrower or withdrawing member toward payment of his loan. The directors are authorized to determine (instead of recommend, as previously) the rate of dividend on shares; this may be done on the basis of the share and loan balances as of December 15, instead of the end of the association's fiscal year, if the board chooses. It may also fix the treasurer's compensation (previously done by membership meeting). The payment of patronage refunds to borrowers is hereafter permitted, as is also the verification of passbooks by mailed notice to the member, confirmed by the member himself.

New Mexico.—A new credit-union law (ch. 129) was enacted in this State. It places the credit unions under the supervision of the State Bank Examiner, provides a filing fee of $5 for articles of incorporation and bylaws, and reserves the name "credit union" to associations formed under the act. Such an association is authorized to accept savings either as shares or as deposits, to make loans to members (who may be other credit unions as well as individual persons), to invest in any investment legal for savings or trust funds and not over 25 percent of its capital in paid-up shares of building and loan associations and in other credit unions, to borrow money aggregating not over 25 percent of its assets, and to become a member of a central credit union.

Individual membership in any credit union is limited to persons with a common bond or occupation or association or to groups within a well-defined neighborhood, community or rural district, and the members of their immediate family (but special limitations on the rights and privileges may be imposed on this latter group). Organizations of substantially the same group as the credit union membership may also be admitted, as well as other credit unions and their officers and committee members. Members leaving the sphere of operation of the association may leave in their shares and deposits if permitted by the bylaws, but may not thereafter borrow from it in amounts exceeding these holdings. Joint accounts are permitted.

The fiscal year shall end December 31 and the annual meeting must be held within the next 45 days. Special meetings may be called and held as specified in the bylaws. At all meetings each member shall have only one vote; proxy voting is prohibited except that member associations may cast their vote through a delegate.

The board of directors (not less than 5 members), the credit committee (not less than 3), and the supervisory committee (3) are to be elected at the annual meeting for such terms as the bylaws provide.

Officers—president, vice president, treasurer, and clerk (secretary)—are to be elected by the directors from their own number. The board is authorized to act upon membership applications, fix bonds for all persons handling money, determine rates of interest on loans and deposits, declare dividends, fill vacancies in the board and credit committee, set maximum shares and loans allowed per member, and have charge of all investments other than loans.

The treasurer is designated as the general manager of the association. This office may be combined with that of the clerk. No director or committee member shall be compensated as such.

The credit committee has supervision of all loans and it is to prepare the application form for loans, which must set forth the purpose for which the loan is desired, the security (if any) offered, and any other information required by the committee. For the granting of a loan, the unanimous approval of the committee members present (who must constitute a majority of the total committee) is required. Assignment of shares or deposits or the endorsement of a comaker may be regarded as security.

The supervisory committee is required to examine the books at least quarterly, as well as annually, and submit a report to the annual meeting and to such other meetings as it may regard as necessary. By unanimous vote it may suspend any director, officer, or committee member and call a membership meeting to take such action upon the suspension as the meeting may see fit.

Loans may be made only for provident or productive purposes. No director, officer, or committee member may borrow in excess of his investment in the credit union nor act as endorser for any borrower. Interest on loans is set at not over 1 percent per month on unpaid balances. No credit union may lend an amount exceeding 10 percent of its assets to another credit union.

At the end of the fiscal year, 20 percent of net earnings, plus all entrance fees (25 cents each) and fines, are required to be set aside in a reserve fund until such fund equals 10 percent of the total outstanding loans. Thereafter, only such amounts shall be set aside as are required to keep the fund at the 10-percent level. The reserve is to be used as a reserve against bad debts and losses. It may not be distributed except in case of liquidation of the association. From the net earnings remaining after appropriation for reserve the directors may declare a dividend, not to exceed 6 percent, on all shares outstanding at the end of the year, with proportional payments on shares which became paid up during the year.

A member may withdraw from membership at any time, but notice may be required. A member may be expelled by two-thirds vote of a special meeting of members. Upon withdrawal or expulsion, the holdings of such persons plus any dividend or interest due, minus any amounts owed to the association, shall be paid as funds become available. For withdrawal of funds, notice of 60 days in case of shares and of 30 days in case of deposits may be required.

Procedure for voluntary dissolution is specified, but requires that dissolution can take place only upon a four-fifths vote of the entire membership at a special meeting the purpose of which is set forth in the notice of the meeting.

Credit unions formed under the act are exempt (as institutions for savings) from all taxation except on property owned and from any stock-transfer tax.

Associations are required to file annual reports with the State Bank Examiner on or before January 20 of each year, upon penalty of fine of $5 for each day of delinquency. Their accounts are subject to audit by him (except that for associations with assets of less than $25,000 he may accept the audit of a certified accountant), at fees ranging from $25 upward.

New York.—Chapter 145 codifies previous enactments, with a considerable number of amendments. These amendments place a maximum of 15 upon the number of directors, permit the election of more than one vice president, and prohibit a member of the supervisory committee from also serving as a member of the board of directors. New members of a credit union which has been in existence for more than a year may not vote until they have been shareholders for at least 90 days. Credit unions may no longer accept deposits. Dividends from the previous year's earnings may be declared by the board during the first 3 months of the year, but the directors are held jointly and severally liable for any amount of dividend voted which exceeds the amount available for dividend. Changes in loan procedure require endorsed notes when a mortgage on real estate is taken, prevent the withdrawal of any shares pledged as security for loans (except those in excess of the amount of loan) unless approved by a majority of the credit committee, prohibit loans to another credit union in excess of 15 percent of the capital of either association, and limit the association's total investment in shares of other credit unions to 25 percent of its capital. Credit unions, however, may not hereafter invest in obligations of certain school districts or railroads, nor (except associations with assets of more than $3,000,000) in bonds of public utilities.

The term "surplus account" is to be used hereafter instead of "guaranty fund." Amounts in this account which exceed 20 percent of total liabilities may be transferred to undivided profits upon approval by the Superintendent of Banks. Associations are given permission to act as agents in selling money orders and travel checks.

North Dakota.—Chapter 143 creates a State Credit Union Board, consisting of the Bank Examiner and two members with at least 3 years' experience, chosen by the Governor from a list of 5 persons submitted by the State Credit Union League.

South Carolina.—Act No. 134 exempts from annual license fees all credit unions of State or Federal employees and building and loan associations doing a "strictly mutual business."

Texas.—Chapter 282 of the Acts of 1945 modifies the previous limitation (15 percent of capital and surplus) on borrowings of credit unions by providing that such associations may borrow up to 50 percent of their combined capital and surplus if such loans are secured by Government securities owned by the association. The 2-year limitation on credit-union loans was removed as regards those made under the Servicemen's Readjustment Act of 1944. The annual required set-aside for the guaranty fund was reduced from 20 to 10 percent of net income. The annual meeting may increase this proportion on recommendation of the directors or may decrease it whenever the fund equals or exceeds 10 percent of paid-in share capital Dividends on shares are limited to 6 percent.

Utah.—Chapter 15 codifies, under the title "cooperative banks fo personal credits," the previous enactments which had consisted o scattered provisions in the corporation, banking, and small-loan law of the State. Only a few minor changes were obtained, but it was the opinion of a Utah Credit Union League official that desirable amendments would be facilitated in the future by having all the credit union provisions in one chapter.

Wisconsin.—By chapter 58 the annual set-aside for the guaranty fund was changed from 20 percent of net income to 15 percent of gross income and the previous limitation on expenses (50 percent of income) was removed; the name of the auditing committee was changed to "examining committee" and its required examinations reduced from once every 2 months to twice a year. Articles of incorporation may be amended, at a meeting called for the purpose, by a two-thirds vote of those present (instead of two-thirds of all members). Voluntary dissolution is permitted upon unanimous vote of directors and two-thirds membership vote by ballot (previously, approval by two-thirds of entire membership present at meeting), provided not more than 10 members object.

Yearly examinations are required to be made by the State Banking Commission. The examination fees charged by the commission, which had previously ranged from $5 to $50 or more were lowered to 25 cents per $100 of assets or the actual hourly cost of examination, whichever is less.

New provisions added by chapter 58 require detailed annual reports to the Banking Commission by February 1, on penalty of fine of $1 to $10 per day of default; authorize the commission to prescribe bookkeeping and accounting methods, which must be followed by the credit unions on pain of fine not to exceed $10 per day; empower the commission to take over (subject to appeal) for liquidation any credit union violating the law, having its capital impaired, or operating in an unsound manner, and to prescribe the procedure in such cases; and specify procedures for the consolidation or merger of credit unions.

Other enactments regulate the manner of termination of bonds of officers or employees of credit unions (ch. 228) and permit the destruction of obsolete records, upon written consent of the Banking Commission (ch. 315).

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EMPLOYMENT OUTLOOK IN

MACHINE SHOP OCCUPATIONS

Job prospects
Duties
Training
Earnings
Working conditions

NITED STATES DEPARTMENT OF LABOR • BUREAU OF LABOR STATISTICS
OCCUPATIONAL OUTLOOK SERIES • BULLETIN No. 895

Cover picture.—Machinist using a micrometer to measure a part being machined on an engine lathe. Working to close tolerances is an important part of a machinist's job.

NATIONAL ARCHIVES PHOTO.

UNITED STATES DEPARTMENT OF LABOR
L. B. Schwellenbach, *Secretary*
BUREAU OF LABOR STATISTICS
Ewan Clague, *Commissioner*

EMPLOYMENT OUTLOOK IN MACHINE SHOP OCCUPATIONS

Bulletin No. 895

For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.
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LETTER OF TRANSMITTAL

United States Department of Labor,
Bureau of Labor Statistics,
Washington, D. C., March 27, 1947.

The Secretary of Labor:

I have the honor to transmit herewith a report on the employment outlook in machine shop occupations. This is one of a series of occupational studies prepared in the Bureau's Occupational Outlook Division for use in vocational counseling of veterans, young people in schools, and others considering the choice of an occupation. The present study was prepared by Richard H. Lewis and Calman R. Winegarden with the assistance of Abraham Ringel. The Bureau wishes to acknowledge the cooperation received from other Government agencies and from unions, trade associations, trade periodicals, and companies in the machine shop field.

Ewan Clague, *Commissioner.*

Hon. L. B. Schwellenbach,
Secretary of Labor.

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EMPLOYMENT OUTLOOK IN MACHINE SHOP OCCUPATIONS

Introduction

Machine shop work represents an important ield to a young person interested in the choice of n occupation. Because of the size of the field—vell over a million workers were employed at the vartime peak in 1943—opportunities arise for nany men to enter each year. Machine shop jobs re the largest single group of skilled jobs in man-facturing, and therefore offer many workers the hance to earn better-than-average wages. Furhermore, machine shops are widespread throughut the country, and are found in many different ndustries, so that openings occur in every State.

The machine shop worker is a key figure in this ge of metal. His work is essential in the manuacture of automobiles, railway cars, airplanes, arm machinery, and a thousand other products. n addition, he makes and repairs machinery used o manufacture these products, and even the mahine tools which make all other machines. It is asy to see the critical importance of machine shop orkers in our economy.

Machining is one of the five principal methods f shaping metal; the others are casting, forging, olling, and stamping. Casting, one of the oldest nethods, consists of pouring molten metal into a nold and letting it harden into the shape of the nold. Forging, once done by the old-time blackmith with his hammer and anvil but now more ommonly done by a forging machine, involves eating the metal to soften it and then pounding into shape. Metal is made into sheets or bars y rolling or squeezing it between large rolls, as done in a steel rolling mill. Sheet metal can be further formed by stamping it with a die shaped like the final products.

Machining differs from these other methods in that it involves cutting, shaving, or grinding a piece of metal down to the desired shape, or drilling holes in it. To machine hard metals is not easy; and the process is an expensive one, because it takes so much time. But the advantage of machining is that it can be very precise; and where each thousandth of an inch counts, machining is the method most commonly used. In the manufacture of many metal products, machining begins where casting, forging, or rolling leaves off: the piece of metal is first shaped roughly by one of these methods, and then finished to precise measurements by machining. Metal objects which must fit together exactly, as in the moving parts of an engine, must usually be machined.

The place of machining among metalworking processes is shown by the way an automobile is made. The body and fenders are *stamped* out of *rolled* sheet metal. The engine, chassis, and transmission system have many parts which are first *cast*, such as the cylinder block, or *forged*, such as the axles, and then finished off by *machining*. Many other parts of the engine and frame are machined from rolled steel. Finally, the rolling mill which makes the steel sheets and bars, the drop-hammer which forges the axle blanks, the dies which stamp the fenders and body, the molding machine used in the foundry where cylinder blocks are cast—all of these contain parts which have been machined.

Machine Shops and Machine Shop Work

Nature of Machine Shop Work

Machining is done by machine tools, and a machine shop is simply a workplace in which machine tools are used. A machine tool is a power-driven machine which firmly holds both the piece of metal to be shaped and a cutting instrument, or "tool," and brings them together so that the metal is cut, shaved, ground, or drilled. In some, the tool is moved and the metal held stationary; in others, the metal is moved against a stationary tool.

The most common kinds of machine tools include the engine lathe, turret lathe, grinding machine, boring mill, drilling machine, milling machine, screw machine, shaper, and planer. The operation of lathes is known as "turning." The piece of metal being cut is rotated against the cutting tool held in the machine. Boring mills and drilling machines are among the machines that make holes in metal. Grinding machines remove metal with a power-driven abrasive wheel. Milling machines shape metal with a saw-toothed cutting tool. Planers and shapers are used to plane flat surfaces. A screw machine is a type of lathe.

Some machine shops manufacture metal products and others do maintenance work—making or repairing metal parts for equipment in use. The manufacturing shops are of two main types—job shops and production shops—depending upon the way their production is organized.

In job shops, the earliest developed, a wide variety of products may be made, with relatively few of each kind. Some job shops produce parts to order for a number of different manufacturers

General view of a small job machine shop. Before the war this plant made dairy and milk plant equipment. In this wartime scene, the shop is turning out submarine valves and aircraft parts.

NATIONAL ARCHIVES PHOTO

or use in their products. In other cases, the job hop is a department of a plant making finished roducts, such as certain types of machinery, hich either are custom-made or of which a wide ange of models must be produced to meet the pecial needs of the users. For example, a comany manufacturing pumping equipment may ave an order from a city for six specially designed umps in connection with a sewage disposal roject. The machining needed in the making of hese pumps would be done in a job shop.

Production shops, on the other hand, make large uantities of identical parts. Very commonly heir output goes into products such as automobiles r household appliances, of which large numbers f units of the same model are sold. In this way, he machine shop of an automobile parts manufacurer may be called upon to turn out thousands pon thousands of gears of the same design, or a ompany making radios will have its machine shop roduce a great many of a particular radio part. production shop, like a job shop, may be an inependent concern which sells to other companies r may be a department of a plant manufacturing etal products.

There is also an intermediate type of shop, in hich the quantities of identical parts made are reater than in job shops and smaller than in rictly production shops. Many plants manufacuring machine tools have shops of this kind.

Maintenance shops make or repair parts for etal equipment and are usually operated in conection with the business that uses the equipment. hus, a large textile mill or a cigarette factory is kely to have a machine shop which makes relacement parts for the machinery in the plant. ost maintenance shops are departments of manfacturing firms; but they are also found in every ind of business that uses metal equipment, as, r example, in railroad repair shops, electric ower plants, and large office buildings.

Whether a shop is a job, production, or mainteance shop has a lot to do with the way its work carried on and the duties of its employees. Beuse of the variety of the work in job shops, most the machine tool operators must know how to do number of different types of work. They must ow the working properties of different metals d how to adjust the machine tools to make parts many different shapes and sizes. Moreover, b shops are usually small, and this, together with the frequently changing nature of the work, means that their workers are often called upon to shift from one type of machine to another. In some cases an individual worker may carry through to completion all the machining operations on one part. For these reasons, the job shop must employ a number of men who are all-round workers—able to operate all the standard types of machine tools, and having a broad knowledge of machine-shop practices. Maintenance shops are similiar to job shops in their operation and may employ an even higher proportion of all-round workers.

Production shops, because of the large quantities of identical parts produced, are able to use many workers who can do only simple, repetitive operations on one machine. The work is planned in such a way as to limit the skill and responsibility required of the operator.

Many production shops employ skilled specialized workers to set up the machine tools (adjust the controls and set the cutting tools in place for proper machining of a desired object), which is the most complicated part of the job. When a job has been set up for him, the operator merely has to place the rough metal bars or castings into the machine, watch its operation, and check the dimensions of the work. Very often production shops use a number of "special purpose machines," which are designed to perform only one certain operation and therefore do not need special adjustments. These machines are highly automatic and the operators need little skill. As a result of the simplified methods possible in production shops, the proportion of skilled workers with wide experience is much smaller than in job and maintenance shops, where versatility and individual skills are important.

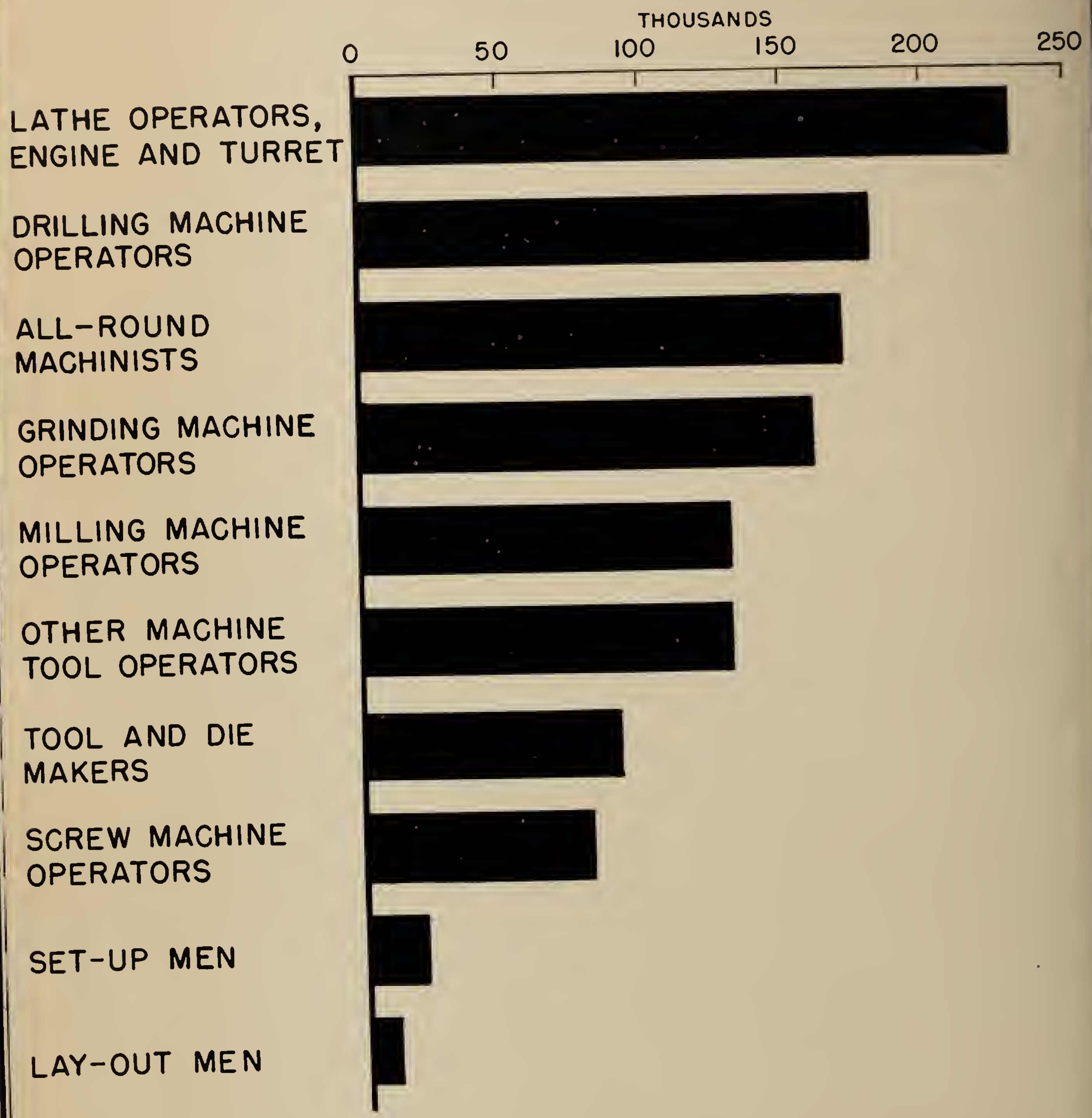
Number and Kinds of Machine Shop Jobs

Machine shop workers are the largest occupational group in metalworking and one of the most important groups in all industry. At the peak of war employment, in December 1943, about 1,200,000 workers were employed in the skilled and semiskilled machining occupations. In addition, there are many thousands of other workers, such as inspectors, helpers, and laborers, who are also employed in machine shops. Estimated employment as of December 1943 for the occupations most directly involved in machining operations is shown in chart 1.

CHART I

EMPLOYMENT IN MACHINE SHOP OCCUPATIONS

DECEMBER 1943



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Of these workers, tool and die makers are the ost skilled. Tool makers build the cutting tools hich are used in machine tools, the jigs and fix-ures which hold the work while machining opera-ons are performed, gages for measuring the work, nd various special attachments. Die makers uild the dies used in forging, stamping, die cast-g, and plastics molding.

The basic machine shop job is that of the all-und machinist. Machinists are employed mainly here workers are needed who are qualified to per-rm any of the operations in a machine shop ther than to work on only one type of machine. hus, jobs for machinists are found mainly in bbing and maintenance shops, relatively few eing found in production shops.

The specialized operators of machine tools make p the bulk of the workers in machine shops. hese workers may be either relatively skilled men ho can handle a variety of work on one type of achine, including the making of adjustments on e machine, or they may be less-skilled operators hose duties are confined principally to placing the orkpiece in the machine and watching its peration.

Two other specialized jobs found in many ma-ine shops, particularly production shops, are ose of set-up men and lay-out men. Set-up men djust and prepare the machine tools for operation y less-skilled employees. Lay-out men mark uide lines on metal so that operators can know here to machine and how much material to move.

Where Machine Shop Workers Are Employed

Because of their importance in making metal roducts, machine shop workers are employed incipally in the metalworking industries. early every industry, however, employs some achine shop workers in maintenance work. In 40, a fairly typical peacetime year, about 70 rcent of all the workers in the machine shop cupations had jobs in metal industries like achinery, automobiles, and iron and steel. From art 2 it can be seen that in 1940 the largest gle group of these workers, within the metal-rking industries, was in plants manufacturing achinery and similar products, which employed out 27 percent of the total. Second in importance was the group of industries making iron and steel and iron and steel products (such as plumbing and heating equipment, castings, and hardware), accounting for 15 percent. The automobile industry, with 12 percent, and electrical machinery plants, with 7 percent, were the next largest employers of machine shop workers.

Most of the remaining machine shop workers were found in the maintenance shops of a large number of nonmetalworking industries, including, for example, railroads, public utilities, and plants making such products as cotton textiles, paper, cigarettes, chemicals, and food. Even though the number of machine shop workers in most nonmetal industries is small, these industries, taken together, are important as a source of employment for machine shop workers since they provided almost a third of the jobs for them in 1940. Moreover, in many cases the machine shop jobs rate among the better job opportunities in the plant and its locality, as, for example, in many textile mills in southern towns.

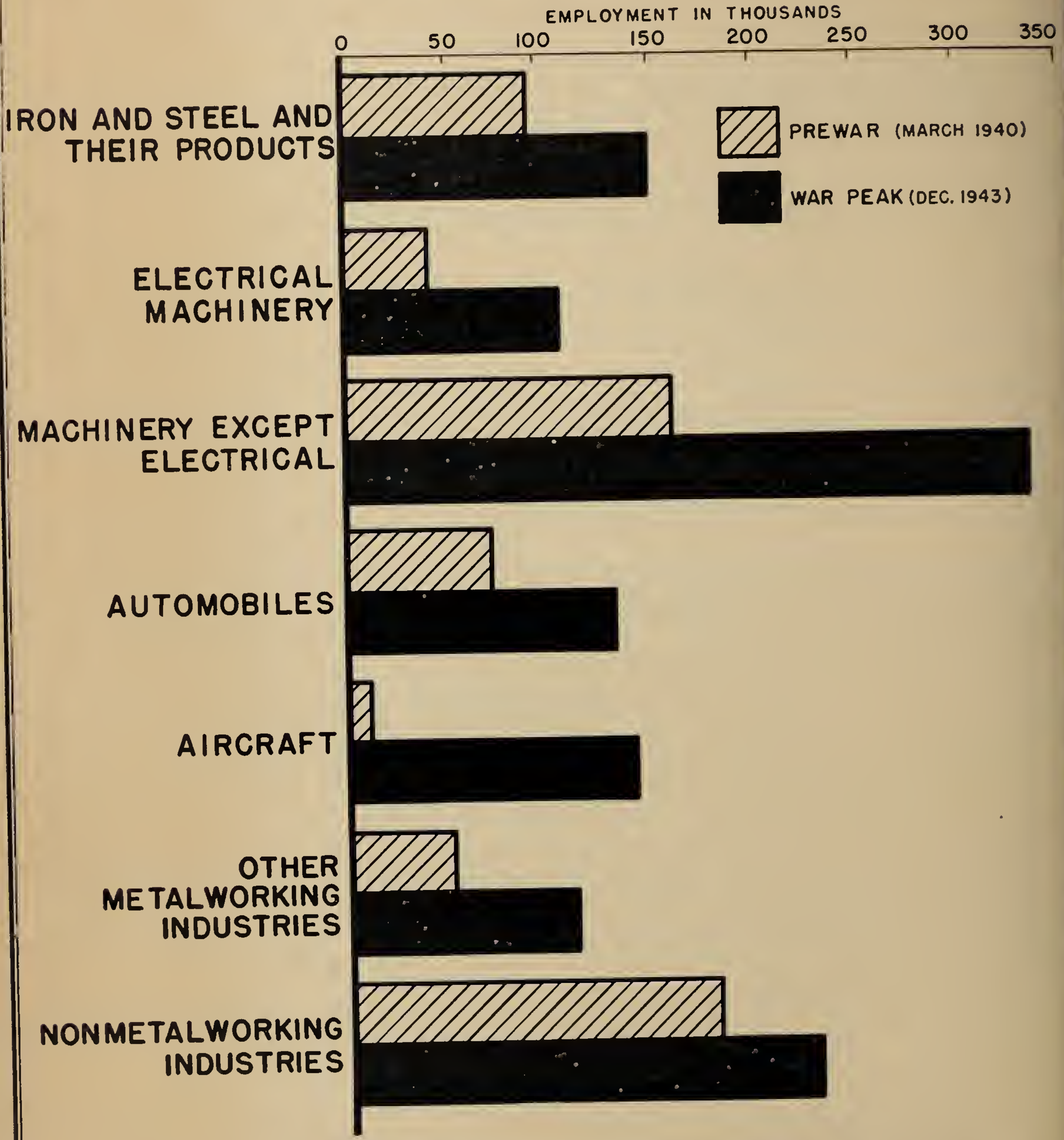
The wartime demand for munitions resulted in a great expansion of employment in metalworking industries. The number of machine shop workers doubled, and the proportion of total machine shop workers who were employed in these industries increased from 70 percent in March 1940 to over 80 percent in December 1943. Chart 2 shows that the largest relative gain in employment of machine shop workers occurred in aircraft plants. There was also a sharp increase in the automobile industry, which during the war produced a large quantity of aircraft engines, tanks, and other munitions, as well as trucks for military use. The number of machine shop jobs in the machinery and electrical machinery industries more than doubled, most of this rise occurring in plants converted to war production. The iron and steel industry group also increased substantially its employment of machine shop workers, largely in newly built ordnance plants and in plants converted to ordnance manufacture.

The ending of the war has tended to restore the prewar status of the industries in terms of their relative importance as sources of jobs for machine shop workers. The production of aircraft, ships, and ordnance has fallen to a fraction of the wartime output, while employment gains have been made by many of the nonmetal industries whose activities were restricted during the war.

CHART 2

EMPLOYMENT OF MACHINE SHOP WORKERS BY INDUSTRY

PREWAR AND WAR PEAK



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PLANTS, OTHER THAN NEW PLANTS, ARE CLASSIFIED BY INDUSTRY ACCORDING TO THEIR PRINCIPAL PRODUCTS IN 1939

Percent of machinists and tool and die makers employed in each region and State, March 1940 [1]

Region and State	Percent of total
nited States	100. 0
ew England	12. 6
Maine	. 6
New Hampshire	. 5
Vermont	. 3
Massachusetts	6. 1
Rhode Island	1. 3
Connecticut	3. 8
iddle Atlantic	25. 9
New York	10. 7
New Jersey	5. 5
Pennsylvania	9. 7
ast North Central	37. 2
Ohio	10. 1
Indiana	3. 8
Illinois	9. 1
Michigan	10. 6
Wisconsin	3. 6
est North Central	4. 7
Minnesota	1. 0
Iowa	1. 2
Missouri	1. 6
North Dakota	. 1
South Dakota	. 1
Nebraska	. 2
Kansas	. 5
uth Atlantic	6. 9
Delaware	. 3
Maryland	1. 7
District of Columbia	. 5
South Atlantic—Continued	
Virginia	1. 4
West Virginia	. 8
North Carolina	. 7
South Carolina	. 3
Georgia	. 7
Florida	. 5
East South Central	2. 6
Kentucky	. 9
Tennessee	. 8
Alabama	. 7
Mississippi	. 2
West South Central	2. 7
Arkansas	. 2
Louisiana	. 4
Oklahoma	. 4
Texas	1. 7
Mountain	1. 2
Montana	. 2
Idaho	. 1
Wyoming	. 1
Colorado	. 3
New Mexico	. 1
Arizona	. 1
Utah	. 2
Nevada	. 1
Pacific	6. 2
Washington	. 9
Oregon	. 4
California	4. 9

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[1] Sixteenth Census of the United States, 1940, Population, Volume III, The Labor Force, Reports by States, Parts 2 to 5. Based on the number of males orting themselves employed as machinists, die makers, or tool makers. Excludes those employed on public emergency work.

Because so many machine shops are in metalworking industries, the bulk of them are found in the northeastern and middle western sections of the country, where these industries are concentrated. Some machine shop employment, however, is scattered throughout the country in railroad repair shops and the maintenance shops of other industries. There are machine shop jobs in every State. From the table on p. 7 one can get an idea of where the job opportunities are located.

Working Conditions

What It's Like To Work in a Machine Shop

Machine shop work cannot be described by painting a simple picture of a typical machine shop. If you think about the many industries that have machine shops and the different types of machine shops, you can see that one machine shop can be very different from the next, depending upon its size, whether it is a job shop, maintenance shop, or production shop, and what kinds of products it makes.

Shops can range from the large modern shop with long rows of machine tools busily chewing into metal, to the small maintenance shop occupying a little corner of the factory floor in which a few standard machine tools have been placed. In general, the work surroundings compare favorably with those in other types of metalworking activities.

Most machine shops are relatively clean and free from dust, compared with many steel mills and iron foundries. However, some machine shops are dirty and hot, because they are near the heat-treating or casting departments of a plant. There is usually considerable noise in a large shop. Most machine shops are well-ventilated, and good lighting is provided to aid in achieving the accuracy which is so important in machining operations. Large establishments, particularly production shops, often have overhead cranes or other materials-conveying devices.

Great physical strength is not required for machine shop work. The workers, however, usually must stand at their jobs most of the day, and be able to move about freely. Since continuous attention is required when the machine is in operation, the work may often be rather tedious, especially on simple and repetitive machining jobs. Where the work is varied and complex, and the standards of accuracy high, the worker can consider himself a real craftsman and experience the satisfaction that this feeling gives to the conscientious and capable person. Because the work is not physically strenuous, many women are employed as machine tool operators. However, most of them are employed in some of the less-skilled machining operations, practically none being found among the tool and die makers and all-round machinists and relatively few among the skilled machine tool operators.

Hazards in Machine Shop Work

The danger of serious accident in machine shops is relatively small. Workers are sometimes injured by flying chips of metal or by the sharp points of cutting tools. In cleaning away metal chips or shavings from the machine it is possible for the worker to be hurt if he is not careful. However, ordinary safety precautions are usually sufficient to keep the machine tool operator from harm. The industries in which machine shop workers are employed generally have average or better-than-average safety records, in comparison with manufacturing industries in general.

Other Conditions Affecting the Work

The great majority of machine shop workers are members of unions. There are a number of labor organizations in this field, some of the more important of which are the International Association of Machinists (independent), the United Electrical, Radio and Machine Workers of America (CIO), the United Automobile, Aircraft, and Agricultural Implement Workers of America (CIO), and the Mechanics Educational Society o America (independent).

The extent to which seasonal lay-offs can affect the employment of machine shop workers i largely dependent upon the type of industry Maintenance workers usually tend, however, t have relatively steady employment no matte which industry they are in. The automobile industry is an example of one that has usually ha marked variation in activity at different times o the year. In addition to affecting workers in th utomobile industry itself, these changes also influence the regularity of the employment in many tool and die jobbing shops which supply special dies and jigs to automobile plants.

Outlook for Machine Shop Employment

The number of jobs for machine shop workers n the future depends upon the production trends of the industries in which they are employed and also upon the effects of technological changes.

Trends in Metalworking Industries

Since metalworking industries employ by far he bulk of the machine shop workers it is to these ndustries that we must look for the chief indication of what is likely to happen to machine shop employment. Metalworking industries have many machine shop workers in maintenance jobs, but he greater number are in production jobs. The number of jobs for these workers is affected directly by the demand for the industries' products.

Prospects are favorable for a high level of activity over the next several years in the metalworking industries. Although somewhat below he wartime production peaks, the volume of output expected will be considerably above the totals n the years immediately preceding the war. Despite the fact that progress in restoring civilian production has been somewhat retarded by materials shortages and labor disputes, employment has thus far been maintained fairly well.

Many of the most important metalworking industries currently have particularly strong demands for their products. The accumulated demand for automobiles should mean that this industry, one of the largest employers of machine shop workers, will have a high volume of production for several years. The manufacturers of machinery, both electrical and nonelectrical, have a large volume of orders from companies which are expanding their productive capacity or replacing existing equipment with more efficient machinery. As construction activity continues to gain there will be heavy demands for many types of metal products used in construction. Plumbing and heating equipment is just one important example. The needs for many types of consumer goods such as electrical appliances, refrigerators, radios, and vacuum cleaners will help to keep metalworking activity at a high point over the next several years, unless a sudden drop in general business activity occurs.

Favorable employment conditions in these industries for the next several years should help to provide opportunities to get into the machine shop field, but in considering the desirability of entering this field, the long-run prospects for the employing industries are more significant. This is particularly true because many of the occupations require as much as a 3- to 5-year learning period. The conditions prevailing after the end of this training period are more important in deciding whether to begin machine shop training than are the conditions at the time of entrance into training. The long-run trends of activity in metalworking industries are related more to the basic nature of the demands for metal goods than to the temporary accumulation of demand, which is the important factor in the immediate future.

Metal goods are more durable than most other types of goods. This means that they can be used longer and that purchase of new goods to replace the old can often be postponed. A large proportion of metal products is machinery and other industrial equipment. When the business outlook appears favorable, manufacturers often buy additional equipment; when things look bad they may even hold off buying needed replacements. Because metal goods are durable and much of the demand for them is so strongly influenced by general business conditions, there have often been great variations from year to year in the quantity produced.

The trend of metal products output, although marked by extreme ups and downs, has been generally upward for many decades. Between 1899 and 1914 there was a substantial increase in activity in metalworking industries, as shown by employment trends in chart 3. During World War I there was a great jump in employment in these industries, with the big gain in shipbuilding the most important factor. After the drop in the depressed postwar year of 1921, employment in the group, stimulated partly by the strong demands for automobiles and other consumer goods, rose again until it approached 3 million in 1929.

The extremely sharp fluctuations in the trend in metalworking activity between prosperous and depressed periods are shown in chart 3 by the substantial dip in employment that occurred between the high level of 1929 and the bottom of the depression in 1932 and 1933. By 1937, employment in these industries had risen until it slightly exceeded the 1929 mark. The trend was again sharply downward in 1938, but by 1940 the long-run upward movement was resumed.

The Second World War, bringing its almost insatiable demands for production, affected all parts of the American economy, but nowhere was its influence greater than on the metalworking industries. The military machine needed vast quantities of metal munitions—ammunition, aircraft, ships, tanks, and transport vehicles. The result, as chart 3 shows, was that employment in the metalworking industries more than doubled from 1940 to 1943.

The first big jump came in 1941, when the defense program was getting into full swing, but the rise continued at an undiminished rate in 1942 and 1943 as entry into the war brought the country into a full-scale armament program.

Increases in employment occurred in all of the metalworking industry groups, but the greatest gains were made by the producers of ships and aircraft. These two industries employed a total of 155,000 production workers in January 1940; by December 1943 well over 2 million were needed to staff the aircraft plants and shipyards.

The last months of 1943 marked the high point of the war as far as employment in the metal industries was concerned. Some of the first cutbacks in munitions production, combined with the effects of drafting workers into the armed forces, caused a gradual decline in employment in these industries during 1944 and the first 6 months of 1945. With the end of hostilities in Germany and Japan, employment took a sharp dip in the fall of 1945. Since then, employment in the metal industries tended, except for the period of major strikes in early 1946, to increase slowly but steadily through the first 10 month of 1946 even though employment in aircraft and shipbuilding continued to decline.

The picture we thus have of the long-run trends in the metalworking industries is one of generally steady growth between 1899 and 1929; depressed conditions during much of the thirties, but with a high measure of recovery toward the end of that

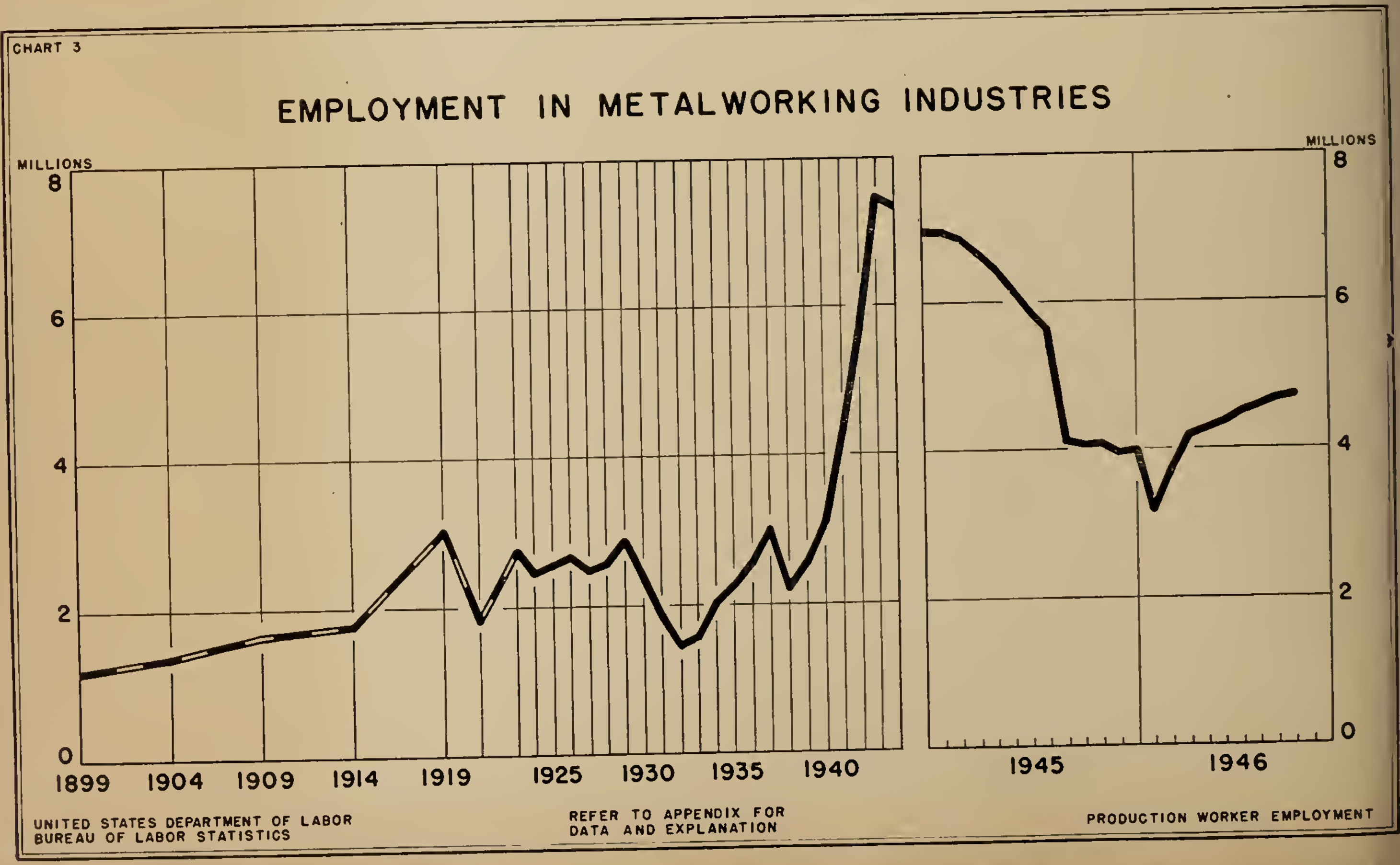
CHART 3

EMPLOYMENT IN METALWORKING INDUSTRIES

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REFER TO APPENDIX FOR DATA AND EXPLANATION

PRODUCTION WORKER EMPLOYMENT

lecade; a phenomenal expansion during World Var II; and some postwar reduction that still eaves employment considerably above what it vas in the prewar years.

In looking at the future of metalworking it eems likely that with continued growth of popuation and national income, and development of ew products, a long-range upward trend in the olume of output is in prospect. Metal products vill continue to be an important part of total ndustrial production, and there is nothing to inlicate that the upward trend in metalworking acivity has reached its limits. New uses for metal re constantly being found, and the mechanizaion of industry (which requires metal equipment) s continuing. Some of the substitutes for metal roducts, such as plastics, compete effectively with netal only for certain uses. It must be rememered, however, that, as shown in chart 3, the netal industries have been severely affected by usiness depressions.

Outlook for Machine Shop Workers in Nonmetal Industries

Although only a relatively few machine shop vorkers are employed in any single nonmetal acivity, such as textile manufacturing, oil refining, voodworking, or trade and service, taken as a vhole these fields provide a substantial number of nachining jobs. Since the machine shop workers n these industries are engaged in maintenance vork, repairing and replacing parts of machines nd other equipment, the number employed in a articular industry does not necessarily vary diectly with its output. Machine shop workers are sually only a very small part of the total emloyment in a nonmetalworking industry. In eneral, employment of maintenance workers in n industry tends to remain fairly constant over hort periods but moves upward or downward with ubstantial changes in the volume of production. n most industries, a certain number of mainteance workers is needed even when production alls to very low levels.

There are some nonmetal industries whose needs or machine shop workers are closely related to he volume of production. An example of this is lastics fabricating, which uses machine shop workers to make the molds in which many plastic products are formed.

Prospects are good for a rise in machine shop jobs in nonmetal industries in the next several years. Many of these industries are increasing their output to take care of the strong demands for their products, as the consuming public, with employment and pay-rolls at high levels, rushes to the stores to buy food, clothing, shoes, and other nonmetal goods. In addition, many industries were unable to keep enough machine shop workers during the war and will try to hire more to have the number needed for efficient operation.

An important point affecting the long-run requirements for machine shop workers in these industries is that increased mechanization of plants, although tending to reduce the needs for other employees, creates more jobs for maintenance workers. The nonmetal industries also tend to be more stable in their rate of production, and maintenance has a fixed importance in their operation. This means that these industries will continue to offer regular employment to a large number of machine shop workers.

Effects of Technological Changes on Machine Shop Employment

It is characteristic of industrial operations that there is a continual striving to find ways of increasing efficiency and thereby reducing production costs. This effort leads to better ways of organizing production and to the introduction of new machines which are faster, larger, and more automatic in their operation. Thus the tendency in all manufacturing operations is to cut the amount of labor time needed to produce a given part.

These improvements, while reducing the employment required for a certain volume of output, do not necessarily result in a lowering of total employment needs. Very often by reducing costs and, in turn, prices, it has been possible to reach a wider market of potential consumers, and thus increase production more than enough to offset the reductions in labor requirements. In this way, although many products take fewer man-hours per unit to produce than they did years ago, many more people are now employed in their manufacture.

Technological changes cannot, however, be ignored in considering the prospects for employment in any particular industry or occupation. This is because they affect the amount of employment which will result from a given volume of production in the future. In the case of machining processes, there have been many recent technical changes which may have an important effect on the number of jobs there will be for machine shop workers. During the war, under the necessity of increasing rapidly the output of metal products, the development of new machines and techniques was intensified and hastened. Many of these developments should carry over into the future with even greater force.

The greatest reductions in labor costs usually come through the introduction of new types of machinery. In the machine shop field, increasing use has been made of highly automatic, special purpose machines. These machines are designed to perform one particular operation, and are used when large quantities of parts are needed. In addition to providing for high speed and efficient operation they usually eliminate much of the skill needed by the operator.

Another important technical development which is greatly influencing the number of man-hours needed in machining processes is the growing use of high-speed carbide cutting tools. Because these cutting tools are harder, it is possible to machine metal with them at much higher speeds than formerly were possible. Consequently the rate at which machine tools dig into metal has been increased in many cases as much as from 3 to 5 times. This has resulted in substantial reduction of the time required to machine many parts. Many of the older machine tools are unable to operate effectively at the high speed made possible by the development of these new cutting tools, but new machine tools, which are heavier and stronger than the older ones, will make it possible to utilize more fully the new higher speeds.

Among the other changes in machine tools which may affect the time required for many machining operations or the skills required of the operator are the use of electronic controls and hydraulic mechanisms.

Greater use may be made in the future of profiling attachments. When these are used the movement of the cutting tool is guided by a rod which as it moves along follows the shape of a model of the desired object. On these machines intricate objects can be shaped by partially skilled operators, and one operator can control a number of machines simultaneously.

In addition to changes in machinery, changes in the organization of machine shop processes can also influence the number of workers and the types of workers required. One important innovation has been to use set-up men to adjust machine tools, turning over the rest of the operation to semiskilled operators. In other ways, jobs have been subdivided so that the difficult parts can be done by skilled operators, while the more routine steps can be performed by less-skilled operators. Another method by which machining time can be reduced is to begin the machining operation on pieces of metal that are already close to the dimensions of the part being made. This can be done by working from a casting or forging of the part, rather than from a rough bar or block of metal. Technological advances in casting and forging, making these processes more precise or economical, would encourage their use in some cases where rolled shapes have previously been used. In addition, when castings or forgings are made with greater precision, the amount of machining required to turn out the finished part is reduced.

Still another way that technological changes can affect machine shop employment needs is through the substitution of other processes in fabricating operations which have usually been done by machining. This can come about through the greater use of stampings, die castings, or plastic parts in place of machined parts. There is also some possibility that powder metallurgy, by which metal products are pressed into shape from powdered metal, may become more important Since machining is an expensive process, industries can be expected to continue the attempt to obtain precision parts by the use of other methods.

Future Trends in Machine Shop Employment

Taking into account the production prospect of the industries which employ machine shop workers and the probable effects of continuing technological changes it would appear that the numbe of machine shop jobs should be maintained at o slightly above the present high levels for severa years. Looking further into the future the indi tions are for an employment trend below both the gh points of the war period and the levels that ould prevail in 1947, but employment should main considerably higher than the prewar levels. ventually, the general long-run upward move- ent of metalworking activity should be resumed, d this would tend to raise machine shop em- oyment. Because the machine shop field is so osely related to metalworking, however, employ- ent in machine shops is likely to be especially rd hit by severe business depressions.

The incentives to reduce the costs of producing unit of product will be no less strong in the ture than in the past. Current and prospective chnological changes will bring about further lative reductions in the number of man-hours quired for machining. Not only will the amount labor required to machine a given part be less, but the present tendency to utilize a larger proportion of less-skilled operators instead of skilled all-round workers will continue with even greater effect.

The generally favorable trend of employment in machine shops means that qualified new workers should be able to enter the field without much difficulty in the next several years and be assured of continuing employment. Before deciding whether to go into machine shop work, it is necessary to get a complete picture of the opportunities in this field in order to have an idea of the relative prospects of the individual occupations. For this reason the outlook for each of the significant occupations in machine shops is presented in detail in the following sections of this report, along with a discussion of duties, qualifications, training, earnings, and other information on the occupation.

Opportunities in Individual Occupations

All-Round Machinists

The job of all-round machinist requires a knowl- lge of all the machine shop skills necessary to ake and repair metal parts for all kinds of ma- iinery and metal equipment. Historically, this aft is the basic and original machine shop occu- ition; as division of labor progressed in some pes of shops, workers began to specialize in one another of the tasks of the all-round machinist, d the other machine shop occupations developed.

At the peak of wartime employment, in De- mber 1943, about 170,000 men were working as l-round machinists. There were, in addition, ousands of men with training as all-round achinists but employed in other machine shop cupations, such as set-up man, lay-out man, and achine tool operator.

Duties

Variety is the main feature of the all-round achinist's work. His training enables him to an and carry through all operations needed in rning out a machined product and to switch adily from one kind of product to another. He iows how to work from blueprints and written ecifications, can select the proper tools and ma- rials required for each job, and can plan the oper sequence of cutting and finishing operations. When necessary, he lays out the work by marking the surface of the metal to show where machining is needed and to indicate the shape and depth of the cuts. In laying out work he uses a number of marking tools and measuring instruments, including the scriber, center punch, surface gage, protractor, and calipers.

In general, he is able to set up and operate such standard machine tools as lathes, planers, milling machines, grinders, shapers, boring mills, and drilling machines. In setting up machine tools for operation, the machinist must be expert in a number of details relating to both the machines and the cutting tools. He selects the proper cutting tools necessary for each cut he is to make, fastens the cutting tools and the work in proper relation to each other, and sets controls which determine the sequence of cutting tools if there are more than one, the speed at which the tool or work moves, and the depth of the cut with each motion. When the machine is ready to be operated, he makes a sample cut and checks the accuracy of the set-up with such precision measuring devices as gages and micrometers. After machining, he may finish his work by hand, using files and scrapers, and may assemble the parts by welding. His knowledge of shop practice, of the working properties of such metals as steel, cast iron, aluminum, and brass, and of what the various machine tools do makes it possible for him to turn a block of metal into an intricate, precise part.

Training

The machinist trade can be learned in two ways. According to most authorities, a formal apprenticeship, usually covering 4 years, is the best way to learn the job. On the other hand, many have qualified without an apprenticeship, picking up the machinist trade over a number of years of varied shop experience and home study. However, this takes a longer time than apprenticeship and the training may be incomplete.

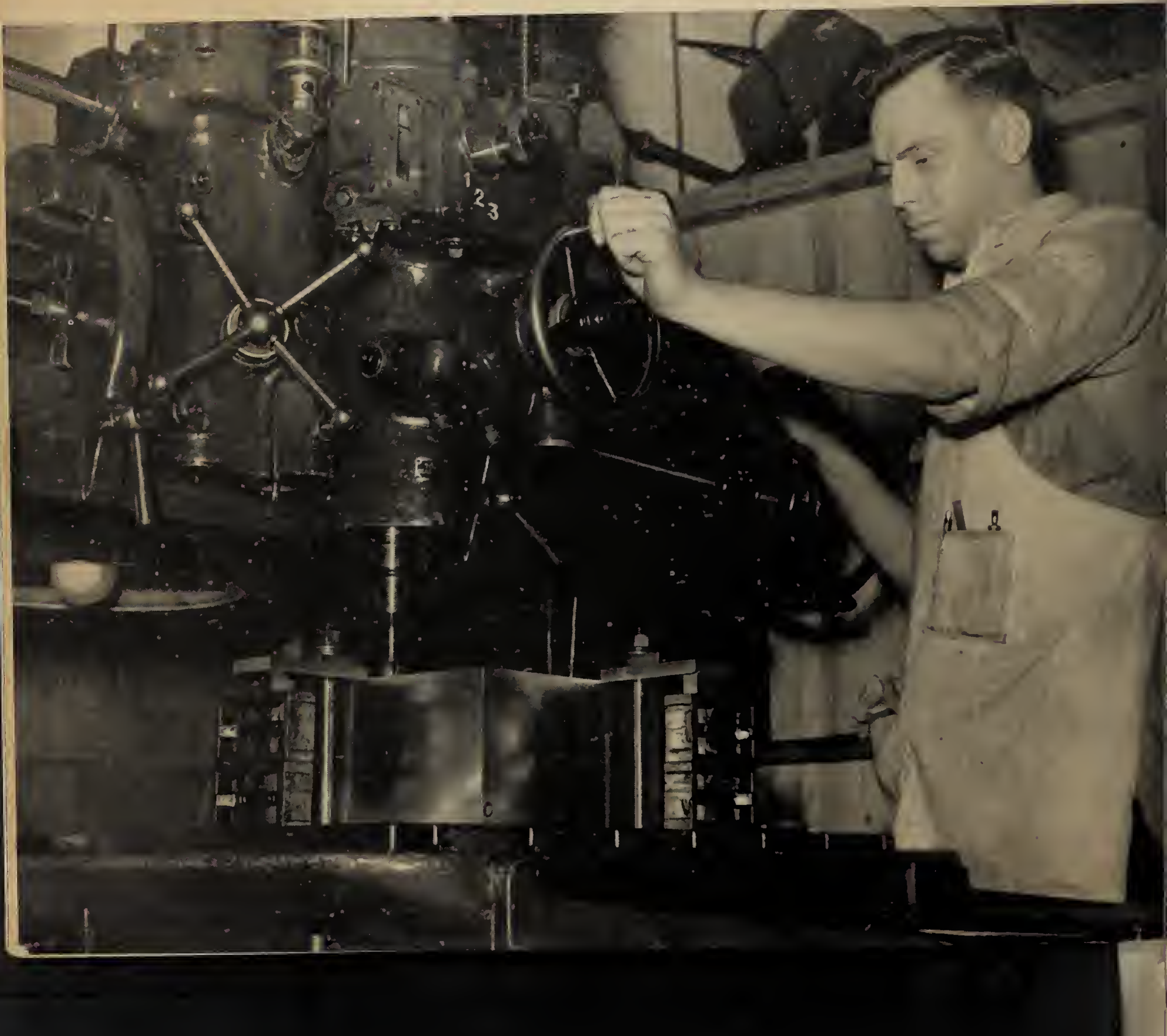
An apprentice must be mechanically inclined and be temperamentally suited to very careful and exact work; otherwise he will be handicapped in his training. Another important aptitude necessary to become a machinist is an ability to visualize the finished product from a rough drawing or blueprint. A high school or trade school education is desirable preparation for machinist training, and some employers require such preparation.

Where Employed

The majority of all-round machinist jobs are in maintenance shops in plants which use machinery in the manufacture of their products, such as textile mills, automobile factories, oil refineries, and

Machinist using a boring mill to machine a hole in a gear box. The boring mill is one of a number of machine tools which an all-round machinist can operate.

DEPARTMENT OF LABOR PHOTO



inting plants. Many of these all-round jobs are so found in manufacturing shops (including b and production shops) which make machinery id metal parts, such as machine tools, tractors, id railroad equipment. In general, work in job id maintenance shops is more diversified and quires greater all-round skill.

In production shops such as those found in the tomobile and electrical appliance industries, ere are large numbers of men trained as all-und machinists but not usually employed as ch; these men specialize in a single machine shop nction, such as lay-out, set-up, or operation of ie type of machine tool. As a result, they may time partly lose the other skills which they had quired in becoming machinists. However, they e still much more versatile than those without achinist training, and if necessary, they can adily relearn that which was lost through lack practice.

Employment Outlook

The number of all-round machinist jobs during e next few years should equal, or even exceed, e wartime peak, because of the increased need r machinists in maintenance shops, where the ilk of these jobs are found. Many nonmetalorking industries were affected by wartime curilment of production or by labor shortages id consequently did not employ as many machins in their maintenance shops as might otherwise ve been expected. Since some of the largest of ese industries, such as textiles, have very favorle postwar prospects, they should be taking on achinists for several years. In manufacturing ops as a whole, there will be somewhat fewer l-round machinist jobs than during the war. owever, these shops will need additional men th machinist qualifications to work as skilled, ecialized machine tool operators and as set-up en. They will also hire all-round men to prode for their future needs for supervisory orkers.

Openings for apprentice machinists should be merous during the next 2 or 3 years although any have already begun training. It must be reembered, however, that in the metalworking instries many of these apprentices, after they comete their training, will be placed in specialized bs where they will work on only one type of achine.

Employers will be taking on apprentices because they realize that many new men must be trained if even the present number of machinists is to be maintained. Owing to the depressed condition of industry before the war and the difficulties in training apprentices in wartime, relatively few entered the trade over a period of many years. Now there are many all-round machinists closely approaching the age when death or retirement will take them from their jobs. To provide for their replacement, it is conservatively estimated, over 40,000 new machinists must be trained during the next decade.

Apart from job prospects for the immediate future, there are longer-run employment trends to be considered. In manufacturing shops the number of jobs requiring all-round machinists to fill them may be expected to show a slight, gradual decline after the next several years. Continuing technical changes will reduce the skill needed in many machining operations, permitting the substitution of less-trained men for machinists. Machinist training will continue, however, to offer considerable advantage to men going into these shops. Machinists are generally preferred for the specialized machine tool operator jobs, which often pay as well or better than all-round jobs. They also will have many chances to get jobs setting up machines for groups of semiskilled operators. Moreover, all-round machine shop workers must continue to be hired in order to supply the necessary supervisory staffs—the lead men and foremen—which are extremely important in the modern mass-production shops where there is a large proportion of workers with a narrow range of skill.

In maintenance shops, the number of all-round machinist jobs should remain fairly steady, and may even show some growth over a period of many years. The increasing mechanization of industry will expand the need for men to keep production equipment in good working order, and this may mean more jobs for maintenance machinists.

Earnings

Although the pay of all-round machinists compares favorably with that of other machine shop workers, it is often lower than the earnings of highly skilled machine tool operators, many of whom work on an incentive basis. In January

1945, average straight time hourly earnings of production machinists in some of the major metalworking industries were as follows: Machine tools, $1.13; tool and die jobbing shops, $1.22; other machinery (except electrical machinery) industries, $1.19. Maintenance machinists earned about the same, or slightly more. Since that date, there have been substantial wage increases in many industries employing machinists. For example, in early 1946, hourly rates in some of the largest automobile companies were raised 18 or 18½ cents.

Chances for Advancement

The promotional opportunities for all-round machinists are good. Many advance to foreman of a section in the shop, or to other supervisory jobs. With additional training some develop into tool and die makers. Highly skilled and experienced machinists sometimes have the chance to start small machine shops of their own.

Tool and Die Makers

Tool and die makers are essentially highly trained machinists who specialize on tool or die work. Theirs is the most skilled job in machine shops and is also one of the larger skilled fields in metalworking—about 90,000 were employed at the wartime peak in December 1943.

Duties

The function of tool makers is to make the cutting tools used on machine tools, and the jigs, fixtures, and other accessories which hold the work while it is being machined. They also make the gages and other measuring devices needed for precision work. Die makers construct the dies which are used in such metal-forming operations as forging, stamping, and pressing, and they also make the metal molds used in die-casting metal and molding plastics. Tool and die makers must have the broad knowledge of the all-round machinist, including blueprint reading, laying out work, setting up and operating machine tools, using precision measuring instruments, understanding the working properties of common metals and alloys, and making shop computations. In addition, they must be able to work to closer tolerances than those usually required of machinists and mus do a greater amount of precise hand work. These requirements, plus specialization on tools and dies distinguish tool and die makers from all-round machinists.

Apprentice tool and die maker using a shaper to form a die part. Tool and die makers know how to operate all standard machine tools.

DEPARTMENT OF LABOR PHOTO.

Training

To learn this work requires rounded and varied machine shop experience, usually obtained through formal apprenticeship or the equivalent in othe types of on-the-job training. A tool and die apprentice ordinarily covers 4 or 5 years, includin mainly shop training in various parts of the job In addition, during the apprenticeship, course such as shop arithmetic and blueprint reading ar usually given in vocational schools. After apprenticeship, a number of years of experience a a journeyman is often considered necessary t qualify for the more difficult tool and die work.

Since tool and die making is the most exactin type of machine shop job, persons planning to enter the trade should have a great deal of mechanica ability and a liking for painstaking work.

Where Employed

Although tool and die makers are employed i many different metalworking industries, a larg proportion of the jobs are concentrated in a relatively few industries. Of these, the automobi industry is the most important. Also very important, both because of the number employe and because of the high level of skill required o the workers, are tool and die jobbing shops. The ops, which usually are small, make tools, dies, gs, and fixtures, and other machine tool acces- ories for other companies on individual order; e tool and die makers in these shops must be ble to take on almost any kind of job. Many ol and die makers are employed in other machin- y industries, including those making electrical achinery. During the war the aircraft indus- y hired many tool and die makers. Among the onmetalworking industries that use these work- s is the fabricated plastic products industry, hich employs die makers to make the molds in hich plastic products are formed.

Employment Outlook

The biggest factor in the job outlook for tool d die makers, in view of the fact that the auto- obile industry is the most important single em- oyer of these workers, is the expected large vol- e of automobile production. High output of tomobiles will also tend to maintain employment tool and die jobbing shops, many of which serve e automobile industry and which are another ajor source of jobs in this occupation. In many her peacetime industries—such as the refrigera- r, electrical appliance, and agricultural machin- y industries—production prospects are good, d this will contribute to the demand for tool d die makers. Moreover, the tooling up for the w products which numerous firms are planning manufacture will provide tool and die maker bs, since new dies, jigs, fixtures, and gages will required.

In spite of the upward trend of employment many industries using tool and die makers, the tual number of jobs in the occupation may be higher than the wartime total. The reason for is is the dropping off of aircraft and ordnance oduction, which during the war provided jobs many tool and die makers. Nevertheless, op- rtunities in tool and die making should be good, cause there has been little increase in the supply fully qualified tool and die makers in recent ars and because replacement needs have been owing in importance.

During the war the number of tool and die akers increased, but not as rapidly as some other etalworking jobs, partly because it was not pos- ble to train qualified tool and die makers in the ort time available. As a substitute, much tool and die work was broken down into simpler jobs which less-experienced workers could do under the supervision of tool and die makers. At the same time, working hours were greatly increased. However, although these were useful wartime expedients, most employers do not consider them satisfactory for peacetime and strongly prefer using fully qualified men, working a standard week. As a result, there is a demand for trained tool and die makers in many plants. Although many apprentices have been taken on since the end of the war, openings should continue to be fairly numerous for several years.

Replacement needs are an important factor, because many tool and die makers are approaching ages at which they are increasingly likely to drop out of the labor force because of death or retirement. During the next 10 years, such drop-outs may create upward of 20,000 openings for new workers.

After several years, the accumulated demand for automobiles, electrical appliances, and similar consumer goods will have been met and the employment of tool and die makers will probably drop slightly from its high postwar level. However, large numbers of these workers will still be needed, not only to repair and replace the tools and dies normally used by industry, but also to retool plants for new models and new products. Moreover, although improved metalworking equipment will tend gradually to cut down the number of machine shop jobs, tool and die makers, because of their role in making the tools and dies needed to produce and use this equipment, will be less affected than other machine shop workers. It is also unlikely that technical advances will very much reduce the skill needed in this occupation. Finally, the trends toward greater use of die casting, stamping, and plastics molding will tend to increase die maker employment in connection with these processes. These factors, as well as continuing replacement demand, make it reasonably certain that those who enter the trade during the next several years will find good employment opportunities for many years to come.

Even in the event of a general business depression, with machine shop employment temporarily falling to a low level, experienced tool and die makers, because of their all-round skills, would have fairly good chances to get lower-rated machine shop jobs. Thus, from the point of job security, they may have a considerable advantage over other machine shop workers.

Earnings

Tool and die makers are the highest-paid machine shop workers. In January 1945 their average straight time hourly earnings were $1.55 in tool and die jobbing shops, where skill requirements tend to be highest but where employment often varies greatly from season to season. In the machine tool industry during the same period, they averaged $1.35 an hour. Tool and die makers employed in plants making other types of machinery were earning $1.29 an hour, straight time. Wages in these industries have been increased since the date mentioned.

The earnings of tool and die makers vary widely among areas. For example, those employed in tool and die jobbing shops in the Detroit area were averaging approximately $1.75 an hour in January 1945.

Chances for Advancement

Tool and die makers often rise to better jobs. Many have advanced to shop superintendent or other responsible supervisory work, or to such positions as tool designer. Another avenue of opportunity is the opening of small tool and die jobbing shops.

Shipyard worker using a drilling machine to make holes in a steel bar. The work is typical of some of the less-skilled machine tool operating jobs.

OWI PHOTO BY HOLLEM.

Machine Tool Operators

By far the greatest number of machine shop workers are employed as machine tool operators. Their employment at the wartime peak reached an estimated 910,000, or more than 75 percent of the total in machine shop occupations. Unlike the all-round machinists with whom they are often confused, machine tool operators usually work on a single type of machine tool, such as a lathe, milling machine, planer, or shaper, and most of them cannot carry a job through all its different stages.

Duties

Machine tool operating jobs may be divided into two main classes, according to the skill required. The skilled machine tool operator does widely varying kinds of machining. Working from blueprints or lay-outs, he sets up his machine for each machining operation, adjusts the feed and speed controls, and measures the finished work to see if it meets specifications. He knows how to sharpen cutting tools when they become dull and understands the machining qualities of various metals. In brief, his work is very much like that of the all-round machinist, except that it is limited to a single type of machine tool.

The majority of machine tool operators are much less skilled than the machine tool specialists described above and do work which is repetitive, rather than varied. A typical job of one of these workers consists mainly of placing rough metal stock into an automatic machine tool, watching the machining operation for signs of trouble, and measuring the finished work with specially prepared gages which simplify measurement. He may make minor adjustments to keep the machine tool in operation, but must usually look to more-skilled men for any major adjustments that may be needed. For each machining operation, a skilled machine tool specialist, set-up man, or machinist installs the cutting tools and sets the controls, and after a trial cut turns over the actual running of the machine tool to the operator. Some operators have slightly more responsible jobs in that their work is less repetitive and greater accuracy is required of them.

Machine tool operators, skilled and semiskilled alike, are designated according to the kind of mahine tool which they operate—for example, en- ine lathe operator, turret lathe operator, drilling nachine operator, grinding machine operator, nilling machine operator. There are many other inds of machine tool specialists, each of whom nows his particular machine tool.

As shown in chart 1, the various machine tool ccupations differ greatly in the number of work- rs employed. Among the more important of hese occupations are lathe operators, grinding nachine operators, drilling machine operators, nilling machine operators, and screw machine op- rators. The operation of other types of machine ools—such as boring mills, shapers, planers, and ear cutters—constitutes a smaller field of em- loyment. There are also differences in the pro- ortion of skilled jobs, as against semiskilled, ound in connection with the various kinds of ma- hines. For example, a relatively large number of ngine lathe operators are classed as skilled. In ontrast, relatively few grinding machine opera- ors are so designated.

Training

As one would expect, the training of the two nain classes of machine tool operators differs reatly. The skilled machine tool specialist is rained on the job, although formal apprentice- hips are not provided in this occupation. It is sual to begin as a learner in a machine shop and o spend from 1½ to 3 years on a particular nachine tool. In addition to machine work, train- ng may include instruction in blueprint reading, hop arithmetic, and similar subjects. Many em- loyers take only high school or technical school raduates as learners. Although the training of he specialist is shorter and much less varied than hat of the all-round machinist, the trained special- st is able to operate a single type of machine tool s well as any machinist. Unlike the machinist, f course, he has experience on only one type of nachine. However, many men who completed nachinist apprenticeships are employed as skilled nachine tool operators.

On the other hand it is much quicker to learn to e a semiskilled machine tool operator. Although high school or trade school education is con- idered desirable, it is not essential. In general, n-the-job training of not more than 6 months s sufficient to qualify for this kind of work.

Where Employed

Although skilled machine tool specialists are employed in all types of machine shops, most of them work in production shops. The proportion of these specialists varies greatly among production shops, however, depending on the extent of job break-down and the kind of machining done. They form a smaller percentage of the workers in job and maintenance shops, where an all-round knowledge of machine shop practice is generally preferred. Nevertheless, a substantial number of skilled operators are employed in these shops, working under the guidance of all-round machinists.

The employment of semiskilled machine tool operators is confined mainly to production shops and is concentrated particularly in such mass production industries as automobiles and radios. Because of their limited training, few can be used in either job or maintenance shops. In production shops, under close supervision, they can efficiently do routine work and free more-skilled men for the complex work.

Employment Outlook

In the next few years, job prospects for skilled machine tool specialists are likely to be good. The number trained in this work during the war is not large compared to the needs of the expanding peacetime industries, such as automobiles and electrical appliances. Possible shortages of all-round machinists may also tend to create openings for skilled specialists. In addition, some employers will continue to train specialists in preference to training all-round men, because it costs less. As a result of these factors, there should be opportunities for beginners to learn the work.

Over a longer period, the growth of specialization in machine shop work, a development greatly speeded by the war, will surely continue. This trend may offset technical advances which otherwise would reduce the need for skilled operators.

The employment outlook for the semiskilled operator is less favorable. Peacetime employment of these workers will be high, but it is hardly expected to approach the level of the war years, when large numbers were hired by metalworking industries and hurriedly trained. Many of these wartime workers were women who have since returned to their kitchens and teen-agers who have gone back to school. However, in most areas there are likely to be more experienced workers than jobs of this type and, therefore, few openings for trainees.

Those who do get jobs as semiskilled operators have fairly good prospects for continued employment in the future. The gradual simplification of machine tool work through greater use of automatic machines may widen their field of employment. On the other hand, technical advances which increase the efficiency of machine tools will tend to hold down the total number of jobs in this occupation.

Earnings

Many machine tool operators, especially the less-skilled operators, are paid on an incentive basis and hence often earn as much as machine shop workers of greater skill. In January 1945, average straight time hourly earnings of men working as first class (A) operators in the machinery industries (excluding tool and die shops and plants making electrical machinery or machine tools) were as follows, by type of machine tool: Engine lathe and milling machine, $1.16; grinding machine, $1.20; and turret lathe, $1.17. Second class (B) operators of these machines averaged from 4 to 13 cents an hour less. Third class (C) operators earned, on the average, from 9 to 15 cents an hour less than second class.

Chances for Advancement

Skilled machine tool specialists may be promoted to such jobs as set-up man or supervisor (on machines on which they have specialized). If they can get experience on several different kinds of machine tools, they also can develop into all-round machinists. Semiskilled operators generally have little chance for advancement since they are employed mainly in production shops, where the work is very repetitive and where there are few opportunities to develop additional skills.

Set-up Men

The set-up man is a skilled specialist employed in machine shops which carry on large-volume production. His job is to install cutting tools and adjust the controls of machine tools so that they can be run by semiskilled operators. This is one of the smaller machine shop occupations—about 20,000 were employed as set-up men at the wartime peak in December 1943.

The usual practice is to assign a set-up man to a number of machine tools, which are often of one type, such as the turret lathe. The set-up man works from blueprints, written specifications, or job lay-outs in order to set the cutting tools in place and to adjust, for each machining operation, the guides, speed and feed controls, working tables, and other parts of machine tools. After setting up and adjusting a machine, he makes a trial run to see if it is working properly, and then turns it over to the regular operator. During the machining operation he makes all important adjustments needed for accurate production.

In order to become a set-up man, it is usually necessary to qualify first as an all-round machinist or as a skilled machine tool specialist, since the job requires a good background in machine shop practice as well as a thorough knowledge of the operation of at least one type of machine tool. In many cases, a man obtains the needed experience through working in job shops and then gets a set-up job in a production shop.

The employment outlook for set-up men is favorable for the next few years, because of the expected high production of metal products and because of the shortage of operators qualified to set up their own machines. Over a longer period, the trend toward specialization in machine shop work will tend to provide continued employment.

Earnings in this occupation compare favorably with those of all-round machinists. In January 1945 average straight-time hourly earnings of set-up men in some of the important industries employing them were as follows: Machine tools. $1.34; tool and die jobbing shops, $1.13; other machinery industries, $1.17.

Lay-Out Men

The lay-out man is a highly skilled specialist whose job is to make guide marks on metal before it is machined to indicate to the machine operators the kind of machining needed. This is not a large occupation; at the peak of wartime employment there were only about 10,000 jobs of this type.

Working from blueprints or written specifications, the lay-out man marks guide lines, reference points, and other instructions to operators on rough castings, forgings, or metal stock. He uses a wide assortment of instruments, including the scriber, with which he marks lines on the surface of the metal; the center punch, used to indicate the centers on the ends of metal pieces to be machined or drilled; the keyseat or box rule, used

or drawing lines and laying off distances on
urved surfaces; dividers, for transferring and
omparing distances; L- or T-squares for deter-
ining right angles; and calipers and micrometers
or accurate measurement.

Not only must the lay-out man work with ex-
reme accuracy, but he has also to be familiar with
he operations and uses of each of the standard
achine tools. In general, it takes from 6 to 10
ears to develop this skill, including the machinist
pprenticeship or equivalent training needed to
arn the fundamentals of machine shop practice.
high-school education, including courses in
eometry, trigonometry, and mechanical drawing
often required; additional preparation in a trade
r technical school is considered desirable.

Like other specialized machine shop workers,
y-out men are employed mainly in production
hops. Some are also found in job and mainte-
ance shops, particularly in the former.

Employment opportunities for lay-out men are
kely to be very good for a long time to come.
he trend toward employing skilled lay-out men
conjunction with semiskilled machine tool op-
rators in production shops is expected to continue,
articularly in view of a possible shortage of ma-
hine shop workers able to make their own
ay-outs.

DEPARTMENT OF LABOR PHOTO.

Laying out a flange. This job requires blueprint reading, a broad knowledge of machine shop work, and the skillful use of marking and measuring instruments.

Getting a Machine Shop Job

Opportunities for Training in Machine Shop Work

The necessary training for machine shop jobs can be obtained in several different ways. The method used depends on which particular occupation is the goal and on the kind of training available in the community.

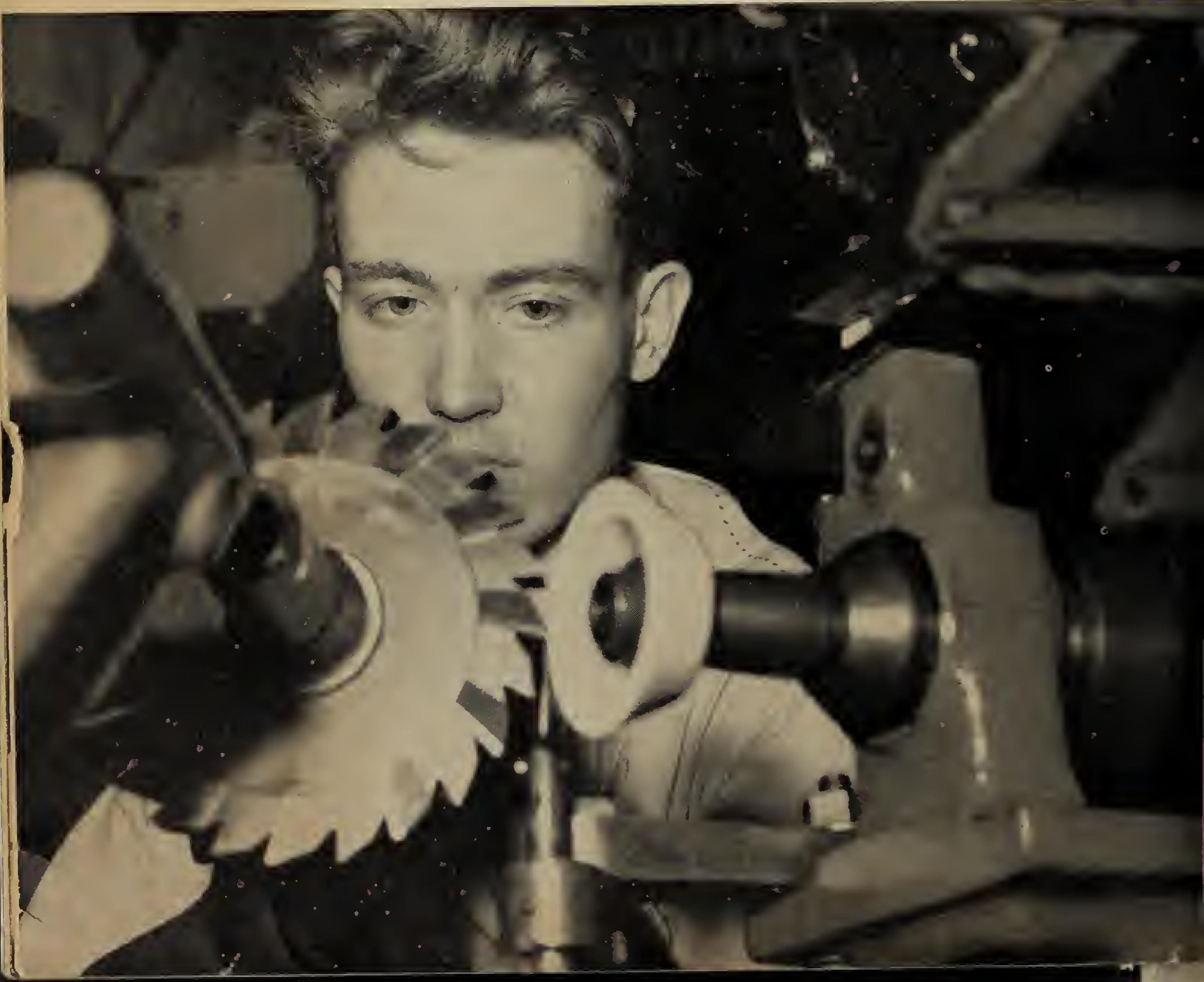
Apprenticeship

The main route to skilled jobs in machine shops is apprenticeship, in which a young man is hired with the purpose of teaching him a trade through working along with, and under the guidance of, experienced craftsmen. In a formal apprenticeship, a written agreement is made between an employer and an apprentice providing that the apprentice receive thorough training in the trade and setting forth the conditions of the apprenticeship.

Typical agreements specify a term of apprenticeship for machinists of not less than 8,000 hours

Apprentice machinist sharpening a milling cutter on a grinder. Learning to sharpen cutting tools is one part of the varied training given apprentices.

DEPARTMENT OF LABOR PHOTO.



f employment—usually extending over 4 years—nd of 10,000 hours, or 5 years, for tool and die akers. The first 1,000 hours of employment are sually a try-out period during which the agree- ient may be canceled at the request of either party.

The standards of apprenticeship are usually set p by representatives of employers and employees ho are familiar with the minimum training that s necessary in the occupation. In setting up a raining schedule, consideration is given to the ype of work being done in the shop in which the pprentice is employed and the facilities available or training. A typical work program for ma- hinist apprentices involves up to 2,000 hours of ork on lathes, and up to 1,000 hours on each of uch machine tools as the grinder, boring mill, and illing machine. It also includes lay-out work, ssembly, heat treating, and welding. Tool and ie apprenticeships are similar, but in addition equire considerable work on dies or cutting tools.

Apprenticeship agreements also provide for bout 12 hours a month of classroom instruction in elated technical subjects, such as mechanical rawing, shop mathematics, and properties of etals. This instruction may be given within the lant where the apprentice works or in a local rade school.

Although the usual term of apprenticeship is or 5 years, the period can be shortened under cer- ain conditions. Men working in lower-grade achine shop occupations, such as that of machin- st helper, can sometimes transfer to an apprentice lassification and have their experience credited oward completion of the apprenticeship. Vet- rans may be able to get similar credit for machine hop experience in the armed forces. In some ases, trade school courses also may be used in this ay.

In selecting young men for apprenticeships, em- loyers take account of their records in school, heir physical condition, and their moral character. raduation from high school is often required, nd courses in high school mathematics, physics, nd machine shop work are considered desirable reparation. Usually the minimum age for ap- rentice jobs is 16, and the maximum, 23. How- ver, this maximum age limit does not gen- rally apply to veterans. Sons of machinists or ool and die makers frequently receive preference or apprentice openings.

Earnings of apprentices usually start at from one-fourth to one-half the journeyman rate. In the course of training, their wages are periodically increased, provided progress in learning the trade is considered satisfactory. Veterans in training under the GI Bill of Rights receive, in addition to their apprentice pay, a monthly allowance from the Government of up to $65, if they have no dependents, or up to $90 if they have dependents. Combined pay and allowances, however, may not exceed the journeyman rate and may not be more than $200 a month for men with dependents or $175 a month for men without dependents. The allowance may continue for as long as 4 years. Disabled veterans can get similar assistance under the Vocational Rehabilitation Act.

Upon successfully completing his training, the apprentice is rated as a journeyman and is usually given a certificate showing this. In many cases, his employer presents him with a set of hand tools or with a cash bonus of as much as $200.

Since not all apprenticeships provide adequate training, it may be helpful for a young man considering such a job to find out if the shop making the offer has registered its program with the appropriate agency in the State or with the Apprentice Training Service of the U. S. Department of Labor. Apart from formal apprenticeships, proper training as a machinist or tool and die maker may be obtained through the programs for all-round learners provided by some companies.

Other On-the-Job Training

On-the-job instruction, other than apprenticeship, is used to train machine tool operators. In this type of training, the purpose is to produce specialists on particular machines, rather than all-round workers. Usually no formal agreement is made between the employer and the learner, as the trainee is usually called.

A learner is assigned to a single type of machine tool, say an engine lathe or milling machine. At first he works under the close supervision of an experienced operator or of a machinist, beginning with very simple tasks and gradually taking on a little more responsibility. If the learner is to be a semiskilled operator, his training period is usually over within 6 months. If, on the other hand, he is headed for the job of skilled specialist, training continues for an additional year or two and includes such subjects as laying out work and setting up a machine tool.

Learners generally get higher wages than first-year apprentices. Veterans in learner jobs may qualify for monthly allowances from the Government.

Persons without previous machine shop experience may be hired directly as learners, or lower-grade machine shop workers may be upgraded to this work. Men whose lack of education or whose age disqualifies them for apprenticeship can often get into machine shop work through learner jobs, particularly those for semiskilled operators. The requirements for trainees in the skilled machine tool specialist's work often closely approach those for apprentices.

Trade or Vocational Schools

There are many trade schools, public and private, which offer a 1- or 2-year course in machine shop work. These courses cannot qualify men as machinists, tool and diemakers, or machine tool operators. However, many employers, in filling apprentice or trainee jobs, give preference to graduates of a good trade school. In some cases, those who have completed a trade school course may be allowed to go through apprenticeship or other on-the-job training in less than the usual time. Before enrolling in one of these schools, the prospective student should find out if the courses are considered satisfactory by employers and unions in his town and if the school is properly accredited. (See: How to Get More Information About Machine Shop Jobs, p. 25.)

Choosing a Machine Shop Occupation

As we have seen, a man who wants to get into machine shop work may be able to choose among several different routes into the field. Of course, there are a number of factors, such as individual aptitudes, which have to be taken into account in deciding what kind of job a person should seek. In addition, the availabilty of each type of work in a particular commmunity has to be considered. These problems cannot be solved here, but what can be done is to compare the various possibilities with respect to employment prospects, earnings, opportunities for promotion, and job security.

In many ways, the job of learning to be a semiskilled machine tool operator has the least to offer. For one thing, there are likely to be few openings for trainees during the next several years. Moreover, although the earnings of experienced operators are not far below those of more-skilled machine shop workers, their promotional opportunities are much more limited, and their chances of being among the first to be laid off when business is declining are greater. On the other hand, operators after a few months on the job generally earn more than first- or second-year apprentices. There is also the possibility, in some cases, of a man beginning as an operator and taking an apprenticeship at a later date. Finally, it should be remembered that, although there are disadvantages to this occupation compared with other machine shop jobs, the necessary investment of time and effort in learning the work is relatively small. Thus, a machine tool operator who left machine shops for another line of work would lose less than would a highly trained man.

Trainee jobs leading to the occupation of skilled machine tool specialist generally provide much better opportunities. There should be many openings, in the period immediately ahead, for inexperienced men to begin specialist training Trainees' earnings are often higher than those o apprentices and the learning period is shorter Experienced specialists often receive about as much pay as all-round machinists, and in some cases more. They have fairly good chances for promotion, although their opportunities are more limited than those of journeymen, and favorable prospects for continued employment in the future.

In general, a machinist or tool and die make apprenticeship is the most desirable course. As w have seen, getting equivalent training any othe way is difficult. It is true that apprentices' pa is relatively low at the start (except for veteran receiving allowances under the GI bill) and tha journeymen often earn no more than less-skille men. In the long run, however, those who complete an apprenticeship are likely to fare bette than other machine shop workers. For one thin a wider range of jobs is open to them. A journeyman machinist, for example, can not only work a an all-round machinist but can also qualify as set-up man or skilled operator on any standar machine tool. Because of this ability to do diffe ent kinds of work, journeymen have the be chances to get and to keep jobs. They also ca transfer more readily than less-skilled men fro one plant to another. Moreover, there is the fa that most supervisory jobs in machine shops a ed by promoting experienced journeymen. uring the next few years, there should be many enings for apprentices.

There is one other way of going into the machine op field which has not been previously consid- d here. This has to do with the opportunities engineering school graduates. Many employ- take on these college trained men, give them a r or two of experience in machine shop jobs, l then, if the men show promise, assign them to gineering, sales, or supervisory positions. It is ieved by many in the field that this combination engineering education and practical shop ex- rience gives a man the best chance to rise to an ecutive job in metalworking industry.

To sum up, it would seem that the best advice to oung man planning to go into machine shop rk is that he seek the highest level of skill which abilities permit and available openings allow.

ow To Get More Information About Machine Shop Jobs

There are many sources of information about chine shop jobs and training. Young men erested in apprenticeships or trainee openings y consult the nearest local office of their State ployment service. They may also write to or it the local headquarters of unions having chine shop workers among their members. Vet- ns may get information, especially about Gov- ment financial aid, at the nearest office of the terans' Administration or Veterans' Informa- n Center. Information about trade school rses can be obtained from local public school tems or the State superintendent of public in- uction. Questions regarding the standing of vate trade schools may also be sent to the Na- nal Council of Technical Schools, 839 Seven- nth Street NW., Washington 6, D. C., or to the erican Vocational Association, 1010 Vermont enue NW., Washington 5, D. C. The addresses nachine shops in one's community can be found he classified section of the local telephone book, under such headings as "machine shops," "die makers," "machinery," "railroad companies," and "automobile manufacturing companies."

Additional Bureau of Labor Statistics Information on Machine Shop Work

Employment and pay-rolls.—The Employment Statistics Division of the Bureau of Labor Statistics provides monthly estimates of employment, hours, earnings, and labor turn-over for each of a large number of individual industries, including the various metalworking industries which employ the bulk of machine shop workers. This information is published in the Monthly Labor Review[1] and in free mimeographed releases each month.

Occupational wage rates.—Detailed information on wage rates in machine shop occupations in many industries is contained in publications of the Bureau's Wage Analysis Branch. Also included are data on such related subjects as unionization, incentive pay, bonuses, and vacations. Recent studies include Wage Structure of the Machinery Industries, January 1945; Wage Structure of the Machine Tool Industry, January 1945; and Wage Structure of the Machine Tool Accessories Industry, January 1945. Mimeographed copies of these studies will be furnished free upon request.

For January 1945, there are also local summaries covering each city of 100,000 population or more. Information of this type for October 1946 or January 1947 will be available in the near future.

Industrial hazards.—Statistics on work injuries in each of a large number of industries, including many metalworking industries, are collected by the Bureau's Industrial Hazards Division and appear in the Monthly Labor Review and in free mimeographed releases.

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[1] The Monthly Labor Review is for sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. Price: 30¢ per copy, $3.50 per year.

Appendix

Employment in metalworking industries,[1] 1899 to October 1946 [2]

	Production worker employment (in thousands)
1899	1, 173
1900	(3)
1901	(3)
1902	(3)
1903	(3)
1904	1, 364
1905	(3)
1906	(3)
1907	(3)
1908	(3)
1909	1, 656
1910	(3)
1911	(3)
1912	(3)
1913	(3)
1914	1, 789
1915	(3)
1916	(3)
1917	(3)
1918	(3)
1919	3, 023
1920	(3)
1921	1, 850
1922	(3)
1923	2, 726
1924	2, 464
1925	2, 560
1926	2, 664
1927	2, 493
1928	2, 565
1929	2, 856
1930	2, 370
1931	1, 849
1932	1, 455
1933	1, 565
1934	2, 034
1935	2, 233
1936	2, 547
1937	2, 980
1938	2, 203
1939	2, 569
1940	3, 076
1941	4, 258
1942	5, 686
1943	7, 466
1944	7, 306
1945:	
January	6, 972
February	6, 95
March	6, 852
April	6, 684
May	6, 46
June	6, 19
July	5, 88
August	5, 60
September	4, 11
October	4, 04
November	4, 06
December	3, 94
1946:	
January	3, 99
February	3, 18
March	3, 73
April	4, 17
May	4, 26
June	4, 34
July	4, 46
August	4, 58
September	4, 66
October	4, 68

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[1] Metalworking industries included are iron and steel and their products; electrical machinery; machinery, except electrical; transportation equipment, except automobiles; automobiles; and nonferrous metals and their products.

[2] Sources: Published employment series of the Bureau of Labor Statistics were used for the period, 1929 to October 1946. Preliminary employment estimates for 1923 to 1928 were derived from unpublished Bureau data, and are not entirely comparable with the estimates for later years. The seri covering 1899 to 1921 are based on Employment in Manufacturing, 1899–193 by Solomon Fabricant (National Bureau of Economic Research, Inc., 1942 Fabricant's data were adjusted to the 1929 level of the Bureau of Lab Statistics series.

[3] Data are not available.

Occupational Outlook Publications of the Bureau of Labor Statistics

Studies of employment trends and opportunities in the various occupations and professions are made by the Occupational Outlook Service of the Bureau of Labor Statistics.

Reports are prepared for use in the vocational guidance of veterans, young people in schools, and others considering the choice of an occupation. Schools concerned with vocational training and employers and trade-unions interested in on-the-job training have also found the reports helpful in planning programs in line with prospective employment opportunities.

Occupational Outlook reports are issued as bulletins of the Bureau of Labor Statistics; sometimes they are also published in the Monthly Labor Review (subscription price per year $3.50; single copy, 30 cents). Both the Monthly Labor Review and the bulletins may be purchased from the Superintendent of Documents, Washington 25, D. C.

Two types of reports are issued:

Occupational Outlook Bulletins describe the long-run outlook for employment in each occupation and give information on earnings, working conditions, and the training required.

Special Bulletins are issued from time to time on such subjects as the general employment outlook, trends in the various States, and occupational mobility.

Occupational Outlook Bulletins

Employment Opportunities for Diesel-Engine Mechanics.
Bulletin No. 813 (1945), price 5 cents. (Monthly Labor Review, February 1945.)

Employment Opportunities in Aviation Occupations, Part I.—Postwar Employment Outlook.
Bulletin No. 837–1 (1945), price 10 cents. (Monthly Labor Review, April and June 1945.)

Employment Opportunities in Aviation Occupations, Part II.—Duties, Qualifications, Earnings, and Working Conditions.
Bulletin No. 837–2 (1946), price 20 cents. (Monthly Labor Review, August 1946.)

Employment Outlook for Automobile Mechanics.
Bulletin No. 842 (1945), price 10 cents. (Monthly Labor Review, February 1946.)

Employment Opportunities for Welders.
Bulletin No. 844 (1945), price 10 cents. (Monthly Labor Review, September 1945.)

Postwar Outlook for Physicians.
Bulletin No. 863 (1946), price 10 cents. (Monthly Labor Review, December 1945.)

Employment Outlook in Foundry Occupations.
Bulletin No. 880 (1946), price 15 cents. (Monthly Labor Review, December 1945 and April 1946.)

Postwar Employment Prospects for Women in the Hosiery Industry.
Bulletin No. 835 (1945), price 5 cents. (Monthly Labor Review, May 1945.)

Employment Outlook for Business Machine Servicemen.
Bulletin No. 892 (1947), price 15 cents.

Employment Outlook in Printing Occupations.
Bulletin No. 902 (1947). (In press.)

Special Bulletins

Occupational Data for Counselors, A Handbook of Census Information Selected for Use in Guidance.
Bulletin No. 817 (1945), price 10 cents. (Prepared jointly with the Occupational Information and Guidance Service, U. S. Office of Education.)

Factors Affecting Earnings in Chemistry and Chemical Engineering.
Bulletin No. 881 (1946), price 10 cents. (Monthly Labor Review, June 1946.)

State and Regional Variations in Prospective Labor Supply.
Bulletin No. 893 (1947). (In press.)

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Nonprofit Housing Projects
in the
United States

Bulletin No. 896

UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS

Bureau of Labor Statistics Reports on Cooperatives

Bulletins [1]

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No. 890. Operations of consumers' cooperatives in 1945. Price 10 cents.
No. 859. Developments in the consumers' cooperative movement in 1945. Price 10 cents.
No. 858. Organization and management of cooperative and mutual housing associations. Price 20 cents.
No. 770. Cooperative associations in Europe and their possibilities for postwar reconstruction. Price 35 cents.
No. 740. Student cooperatives in the United States, 1941. Price 10 cents.
No. 665. Organization and management of consumers' cooperatives and buying clubs. Price 15 cents.
No. 606. Organization and management of cooperative oil associations. Price 5 cents.

Reprint pamphlets [2]

Serial No. R. 1483. The cooperative movement and the war.
Serial No. R. 1660. International aspects of the cooperative movement. (Reprint of a section of Part 1 of Bulletin No. 770.)
Serial No. R. 1216. Operations of cooperative burial associations, 1939.
Serial No. R. 793. Consumers' cooperation in the United States, 1920 to 1936.
Serial No. R. 671. Cooperative telephone associations. (Reprint from Bulletin No. 659.)

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[1] For sale by Superintendent of Documents at prices indicated. Address order to Superintendent of Documents, Government Printing Office, Washington 25, D. C., with remittance in check or money order (currency sent at sender's risk); postage stamps not acceptable.

[2] Copies free on application to Bureau of Labor Statistics, Washington 25, D. C., as long as supply lasts.

UNITED STATES DEPARTMENT OF LABOR
L. B. Schwellenbach, *Secretary*

BUREAU OF LABOR STATISTICS
Ewan Clague, *Commissioner*

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Nonprofit Housing Projects in the United States

Bulletin No. 896

For sale by the Superintendent of Documents, U. S. Government Printing Office
Washington 25, D. C. - Price 25 cents

Letter of Transmittal

UNITED STATES DEPARTMENT OF LABOR,
BUREAU OF LABOR STATISTICS,
Washington, D. C., March 20, 1947.

THE SECRETARY OF LABOR:

I have the honor to transmit herewith a report giving a detailed description of 20 housing projects in which self-help or cooperative methods were used. They are given here as a means of practical assistance to similar projects elsewhere.

The report was prepared by Florence E. Parker of the Bureau's Labor Economics Staff. The Bureau also wishes to acknowledge with thanks the cooperation of the many persons connected with the projects here described, who gave freely of their time and information.

EWAN CLAGUE,
Commissioner.

HON. L. B. SCHWELLENBACH,
Secretary of Labor.

Bulletin No. 896 of the
United States Bureau of Labor Statistics

Preface

The present report is a revision of an earlier one (now long out of
rint), with additional material on later developments and procedures.
The 20 nonprofit housing projects here described were selected as
epresentative of varying methods of sponsorship, of techniques of
nancing, or of other procedures, or because they illustrated mistakes
be avoided. The dwellings provided in these projects ranged
prewar prices) all the way from a $500 structure, 24 by 24 feet, with
modern conveniences except running water, through a modest
3,500 to $4,000 dwelling, to terrace apartments and housing costing
to $6,500.

In all except two cases each association has actually provided living
arters for its members. The exceptions were included because they
ere examples of (1) cooperative action under an urban redevelop-
ent law, and (2) unusual membership arrangements.

It is hoped that the presentation will be helpful to groups interested
the joint provision of housing on a nonprofit basis. The methods
ed in the projects which form the subject matter of this report are
aptable to other projects, but interested groups should consider them
om the point of view of their own needs and circumstances.
though some consideration is here given to methods of financing
d sources of funds, the treatment of these matters is by no means
mplete, and the reader is urged to study also the National Housing
gency's manual, entitled "Mutual Housing—A Veteran's Guide," ob-
nable from the Superintendent of Documents, Government Printing
fice, Washington 25 D. C., at 15 cents a copy. Other points to be
nsidered are possible unpaid taxes, liens, or special assessments
ainst the property, and building-code restrictions regulating the
pe and cost of buildings in the area considered.

Proper procedures in establishing a housing cooperative are set forth
U. S. Bureau of Labor Statistics Bulletin No. 858 (Organization and
nagement of Cooperative and Mutual Housing Association), obtain-
e from the Superintendent of Documents at 20 cents per copy. This

pamphlet covers considerations regarding selection of land, architect, building plans, and contractor, as well as the financing and operation of the completed project. Appendixes give model by-laws, sample share-subscription agreement, model lease, citations of cooperative and housing laws, etc.

The extent to which the cooperative approach is used is optional with the members; cooperation may begin and end at any point they choose. The members may combine for the purchase and/or division of the land only, after which each member carries on for himself. They may also furnish themselves community facilities, architectural service, and even title insurance. They may decide upon joint purchase of materials and contracting for construction, or joint action through the entire construction stage, hiring the work done or doing some or all of the work themselves either by the exchange of labor or by each member working on his own home. They may decide that, having cooperated at certain points, they will stop there, giving each member title to his dwelling and unrestricted control of it thenceforward.

In some cases cooperative activity may begin only after the completion of the project. The members who will occupy the dwellings may participate actively in every step from the very beginning in some projects, while in others they may benefit passively by the activities of the sponsoring organization, in which (up to the time of their taking occupancy) they had little voice.

Some hardy groups are willing to follow the cooperative method in all the steps up to and including that final test—joint permanent ownership of the project by the cooperative association. Others have started on that basis, but were defeated by inability to obtain financing or by the lack of thoroughgoing acceptance of the cooperative methoc by members who desired to own and control their domiciles individually.

In some cases cooperation is carried on informally, in others throug the medium of a regularly incorporated association which may b continued indefinitely or dissolved when its purpose has been served

It will be apparent, from this report, that housing is a complicate process which calls for much patience, good technical advice and assis ance, and competent management at all stages. Innumerable facto will call for a succession of decisions by the membership, upon th wisdom of which the success of the entire project may depend. A regards site, unimproved low-cost land may turn out to be very expe sive after the cost of installation of utilities is included. Means ar cost of transportation and convenient access to shopping facilities a other factors which should be considered. The probable cost of th completed dwellings should be predetermined with some accuracy, so that the prospective member may consider it in relation to his family income, resources, and prospects. Some stability of prices is essential here. In times, like the present, when prices are either rising rapidly or show indications of a sudden fall, the group should proceed cautiously or postpone action.

Above all, the housing association should not undertake too large a burden, especially at first, of luxury items or of community amenities (such as auditorium, gymnasium, swimming pool, stores, nursery, etc.), and so avoid getting in over its head. If space is left, these can be provided at a later time when resources are available and the association has proved itself financially. Many a group has eventually lost its equity by undertaking more than its members had the financial ability to carry through.

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Cover picture: Courtyard scene at Amalgamated Housing Project, New York City.

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Nonprofit Housing Projects in the United States

Chapter I.—Introduction

Until comparatively recently, cooperative housing in the United States was limited almost entirely to apartment houses which had been built or purchased by cooperative associations. During the few years preceding World War II, several cooperative developments providing single-family dwellings were launched, and many more are now being planned; some of the latter have acquired land, but few (except those of veterans) have been able to secure the necessary authorizations to enable them to start construction. A recent development has been the formation of mutual home-ownership associations to purchase and operate housing built by the Federal Government for war workers but designated for mutual ownership at time of construction. In other cases veterans' cooperatives have bid in projects put up for sale by the Federal Public Housing Authority.

Together, these projects form a significant development in the field of low-cost nonprofit housing. The present report describes 20 of these, selected as illustrative of procedures which are applicable to other projects or of mistakes to be avoided. Four projects illustrate all-the-way cooperative housing, the cooperative being responsible for all the steps through completion of the dwellings, and retaining permanent title to the property. In two, the association had no hand in the preliminaries or in construction, but took over a finished project. Self-help was the significant feature in four, with the members doing a considerable part of the construction labor themselves and receiving title to their properties on completion of the project or of payment. The others involve the development of a new community, complete with streets and public utilities; varying degrees of participation by labor organizations; a building-guild experiment to provide annual earnings to building-trades workers as well as houses for the members; and certain rather uncommon financing methods.

It is believed that the value of the report lies in its detailed description of varying procedures and techniques—all capable of use in other projects.

Sponsorship of Projects

The projects described were carried on under various types of sponsorship. Four were sponsored by one or more labor organizations. In one case the sponsor was a clothing-trade union, in two a textile union, and in the fourth the unions belonging to the city building-trades council. In three cases, some union funds were used for varying periods; in the fourth, the labor organization advanced no money, but it did act as sponsor and guarantor of the building project.

Cooperative associations without any outside sponsorship carried through five of the projects, and the same procedure is expected in a sixth. In other projects a university employees' association, a city housing commission, a religious service organization, a private citizen, a United States Senator, and a foundation acted as sponsors.

Membership Considerations

Housing associations have sometimes been criticised on the ground that they usually have restrictions on membership. A few associations have admitted only members of the sponsoring group. Generally, however, at the start membership is open to all persons interested in providing themselves with dwellings on a nonprofit basis. It is closed only after the project is finished and the dwellings are occupied; thereafter membership is limited to the member-owners. This is done for practical reasons. The activities of most associations have been limited to one project. Once this is completed, the chief function thereafter is the management of the project and possibly of collateral cooperative activities (store, tea room, nursery, etc.). Nonresidents are not generally interested in becoming members of an association which provides them no benefits and, even if they were, the residents probably would not welcome nonresident participation in running their community.

An arrangement, whereby resident control of dwellings as well as open membership in the cooperative is assured, has been worked out in one project. There any person interested in cooperative housing may join the parent association, which is a sponsoring and development organization. In each project developed by it, the residents are members of a separate community organization through which they operate and control the property, at the same time retaining their membership in the parent association.

Financing

Several of the projects illustrate financial participation by public authorities at Federal, city, and county levels.

One was the first building project of the Federal Public Works Administration after its establishment in 1934: this was a self-liquidating arrangement.

In the mutual home-ownership projects all the steps of land acquisition, community lay-out, and construction were carried out by the

Federal Government, using funds provided by Congressional appropriations. The cooperatives entered the picture only at the end of World War II, when the Government began to dispose of war housing. No subsidy was involved, as "economic" rentals were paid by the residents during Federal operation, and the property was purchased by the cooperatives at sums fixed by appraisers as representing its current value.

A different type of Federal financing was represented in one project. In that case the remainder of Federal funds that had been provided under the various relief acts, for the assistance of self-help activities carried on by the unemployed during the depression, were turned over to a State agency. The housing loans, made by the State agency from this money to the cooperative members, were also self-liquidating. Although self-help projects of various kinds were carried on in many States, with grants from Federal, State, and sometimes county and municipal funds, this project is the only one to the Bureau's knowledge in which loans were made for housing.

City assistance in various forms is involved in one case, in which apartments are being constructed under the New York State Redevelopment Companies Act.[1] For the purpose of encouraging slum clearance and the construction of good, low-cost housing, the act offers organizations which meet its requirements (rentals not to exceed specified amounts and limited return on investment) the advantages of land prices reduced through condemnation and the exemption of all improvements from taxes for a period of 25 years. In this particular project the city will also assist by widening adjoining streets and by improving and enlarging two neighborhood playgrounds and a nearby public school.

The one instance of city and county participation in the financing of housing in this country, which has come to the attention of the Bureau, was a project carried on some 20 years ago. Under a State law which is still on the statute books, city and county authorities invested funds under their control in the preferred stock of the housing enterprise. No element of public subsidy was involved, however, for nterest was paid on the stock, which was retired as the tenant-owners paid for common stock to replace it. This method of financing housng has been rather common in Europe.

Nonprofit Aspects

Practically all of the projects here described were on a nonprofit basis. Leaders and sponsors contributed their time at all stages. Some architects reduced their charges in consideration of the size of the job, others because they were in sympathy with the aims in view. Contractors worked either on a flat fee or a percentage and some on a profit-sharing arrangement. Materials, equipment, and even furniture were bought at substantial savings.

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[1] Similar legislation has been enacted in some 20 States.

Much work was done by the members themselves. Clearing and grading the land, cutting the streets, excavating for basement and septic tank, pouring concrete, making building blocks, quarrying and shaping building stone, laying subfloors, making interior trim, other inside carpentry, laying the sheathing for the roof, interior and exterior painting—these were some of the processes done by the members.

As the occupants of the dwellings benefited from all of these factors in terms of both money and quality of materials and workmanship, it would be expected that they would take steps to insure the continuance of the nonprofit feature.

In associations adhering strictly to cooperative principle the member is given not a title to an individual dwelling but stock in the association or a certificate of indebtedness. A withdrawing member turns his stock back to the association either at par or an amount arrived at by appraisal which takes into consideration depreciation and current market conditions. This central-ownership arrangement has the disadvantage that no member can dissociate himself from the project unless he is prepared to withdraw from membership altogether. All sink or swim together and, unless a sufficient prepayment or reserve has been built up, this may be fatal in times of depression when a large proportion of the members are unable to meet their payments. Under good, far-sighted management, however, the central-ownership arrangement has the advantage that the cooperative community is preserved, group control prevents neighborhood deterioration, and no member can cash in on the previously donated work of others or on unusual market conditions—a situation almost impossible to control if fee-simple title is granted, as has been amply demonstrated in the experience of the projects here covered.

In a majority of the projects the agreement between the housing association and the member carried a limitation on the member's right to dispose of the dwelling occupied by him. In most instances a member desiring to withdraw and dispose of his holdings was required to give the association an opportunity to redeem his equity. If it failed to do so within a specified time, he was at liberty to transfer it to a purchaser acceptable to the association.

In some cases the provision was a dead letter, because the association had no funds with which to redeem the member's equity. In others, the association had given the member fee-simple title to his dwelling and could not enforce the withdrawal provisions.

The war years of extreme labor mobility, high prices, and scarcity of housing put a severe strain on the members' acceptance of the nonprofit principle. Often the temptation to profit by selling out at high prices proved to be more than they could withstand. Thus, in St. Paul, according to a late report, giving of title "left the door wide open for speculation." Some houses were sold three or four times, each time at a higher figure. The cooperative spirit in which the homes were undertaken disappeared. The housing association is still (December 1946) in existence, but is dormant, and the former president states that it plans no further construction. Other cooperative activities which were tried could not thrive in this atmosphere and also died of inanition.

In Penn-Craft (Pa.), although it was expected that the isolation of the community would limit the sale of properties at high levels, experience demonstrated the advisability of restrictions. Some restrictions were therefore incorporated in the lease, requiring approval by the association of any sales. In Watsonville (Calif.), by 1946 there had been almost complete turn-over of occupancy—the process having been hastened by the original residents' fear of possible bombardment by Japanese submarines (Watsonville is a coastal town) and by wartime employment opportunities elsewhere. At Front Royal (Va.), almost before the houses were completed one dwelling had been sold by a member, at a $2,000 profit. Among the described associations in which individual title rests with the member, Crestwood (Wis.) appears to have been most successful in retaining its original group intact. Several houses had been sold but none, it is said, at disproportionate prices; those houses the asking prices for which were regarded as exorbitant remained unsold as a result of adverse community opinion.

As would be expected, projects of the apartment-house or multifamily type have made most use of the lease-stock arrangement because of the difficulty of giving title to a single apartment or dwelling unit. During the depression, most of the genuine apartment-house cooperatives (including many not described here) weathered the storm successfully. Others, however, lost their buildings through foreclosure and in still others, which either had no restrictive provisions or did not enforce them, there was a considerable turn-over of membership through transfer of shares. The lease arrangement is a feature of the mutual plans at Dayton (Ohio) and South Bend (Ind.), which are both of such recent origin as to make appraisal of ultimate success impossible. The Amalgamated group, with an experience covering some 20 years, has been outstanding in its financing, management, and preservation of cooperative principle and spirit.

Member's Financial Interest

In the Amalgamated buildings, where the cost averaged about $1,500 per room, the member had to make a down payment of $500 per room. In the East River Cooperative Apartments, the member's required equity is also $500 per room, or about 20 percent; and in Group Housing Cooperative, it is expected to be 15 to 20 percent. In most of the projects here described, however, each member was required to have an initial equity amounting to about 10 percent. This is the minimum proportion required for FHA insurance (utilized in at least five of the projects). The same requirement was imposed at Front Royal, as well as in the Milwaukee project (which long antedated FHA insurance). One leader believes that 10 percent is the very minimum for safety and for insuring sufficient member interest in making the project a going concern. Some confirmation of his opinion is found in the experience of the United Workers' project (New York City) and in other associations not here described. From United Workers members, only $250 per room was required—$125 at time of joining and $125 within a year. This underfinanced association was never able to meet its obligations and the project was finally taken over by the creditors.

In the Wagner-Ellender-Taft housing bill, which was considered in the 79th Congress but failed to pass, mortgage insurance on 95-percent loans was proposed for mutual-ownership projects, with the members providing only 5 percent of the total cost. For housing built under the Lanham Act and designated for mutual home ownership, no down payment of any kind was required. However, under the latter plan, the amortization amounts included in the rents paid during the 2-year probational period were credited as down payment when the contract of purchase was entered into at the end of that period. In a sense, therefore, although no cash payment is required of the member, when the home-ownership corporation takes over the property from the Federal Government he has already (through his monthly rental) made some payment on principal. Some observers, however, question whether this is a sufficient investment to make him work very hard for the survival of the project as a cooperative.

Protective Measures for Association and Members

One of the best protections is the building up of mortgage prepayments. Such prepayments provide a cushion against disasters. This has been done by several of the associations here described. The mutual housing associations have an arrangement under which the individual members pay off their indebtedness at a faster rate than the association itself, thus building up reserves in the treasury of the latter which can be drawn upon when needed. In one self-help project the agreement between member and association relates the monthly payments to the family income. In prosperous times the family pays its loan as fast as it can; in hard times, when income falls, its payments (subject to a prescribed minimum) may be sharply reduced.

Various types of insurance—formal and informal—have been used also, to protect the participating families and incidentally the whole project. In one case, group insurance was obtained, covering the obligations of families whose breadwinner died or was totally disabled before completing payment. Another had a "widows' insurance"—an informal plan under which each member made a yearly contribution proportioned to his unpaid obligation. In a third case, all the members voluntarily contributed to a fund from which to pay all or part of the monthly payments of families in distress or of drafted men.

Cooperative Accomplishments

Among the accomplishments of cooperative action in the projects here described were the following, each of which resulted in substantial savings for the membership:

1. Land acquisition, provision of public utilities, and complete community planning.
2. Integrated architectural and contractual services. In this way 2 percent on construction was saved in two cases, 1 percent in another.
3. Title insurance, and use of a master title to land.
4. Bulk purchase of materials and furniture and/or equipment. On the former, savings were estimated at about $200 per house in one case; on the latter, two associations saved 25 percent.
5. House construction on contract or by exchange of labor. This saving cannot be evaluated, but is known to be great.
6. Permanent operation and maintenance of some or all of the property. Mutual-ownership projects are notable for their economy of operation.
7. Tax savings, made possible by group operation under urban redevelopments acts or under limited-dividend statutes, resulting in a saving of $30,000 per year in one case.
8. Interest savings by collective bargaining, resulting in savings of $97,865 in one case, $900 per year in another. and over $2,700 per year in a third.

In one case, it was estimated that savings on land, wholesale purchase of materials. effective use of labor, and elimination of speculative profit saved as much as $1,500 per house.

Present Cooperative Sources of Assistance

TECHNICAL ASSISTANCE

The National Cooperative-Mutual Housing Association was formed on the authorization of a conference of local housing associations, held in May 1946. It was represented at the Congress of the Cooperative League, in September 1946.

Although the association is still in its infancy, its plans cover a wide range of activities, including the provision of technical service, accounting, the training of project managers, etc. Structurally, it will probably be a federation of regional associations, which will in turn be composed of State federations of local associations.

Already one regional organization has been formed: the North Central States Housing Association, organized in November 1946. It plans to provide assistance on "legal questions, site planning, promotion, and education," in its territory—Indiana, Michigan, and Minnesota. The consensus of the meeting that established the organization was that purchases of building materials should be made through regional cooperative wholesales wherever possible; also that housing associations should help to finance the production of such materials by National Cooperatives (the national commodity organization).

Very few of the cooperative wholesales offer technical advice or assistance. Among these few are Eastern Cooperative Wholesale, which has a full-time housing adviser who is himself an architect; Associated Cooperatives of California which provides advice on organization procedure, legal questions, and land surveys; Midland Cooperative Wholesale which offers assistance in organizing; and Consumers Cooperative Association which provides building plans and specifications, advice on building materials, and legal assistance.

It is evident from the above that the distributive cooperative movement has hardly made a beginning in this much-needed service. However, with the development of the central housing federations, it is probable that most of the technical assistance will be provided by the latter.

BUILDING SUPPLIES

The Cooperative Congress in September 1946 by resolution urged National Cooperatives to establish "a strong division for the procurement of housing materials and supplies." The latter organization has for some years handled galvanized and asphalt roofing, cedar shingles, and nails. Since the 1946 Congress, it has been exploring the possibilities of prefabricated houses, millwork, steel shafts, wall board, bathroom tile, and numerous other items. The expansion and coordination of existing productive facilities is also being considered, as is likewise the purchase or lease of lumbering facilities in the West, in order to help supply the member regionals.

Paint, shingles, and lumber are produced by some of its members (regional wholesales), either in their own factories or in those owned jointly with other cooperatives. Thus, the International Cooperative Lumbering Association, the members of which are seven regional wholesales in the United States and four in Canada, produces red-cedar shingles. Indiana Farm Bureau Cooperative Association owns six sawmills and Consumers Cooperative Association (Missouri) owns one.

On the West Coast, Associated Cooperatives of California opened a building-supply department January 1, 1947. The association has made a loan to a small lumber mill, in return for the purchase rights to all its output. One housing association in its territory had already joined the wholesale by the end of 1946, and others had indicated their intention of doing so.

In Indiana the 60 county cooperatives which are members of the Indiana Farm Bureau Cooperative Association (the wholesale) all have lumber yards, the supplies for which come from the wholesale association. Most of them also offer a roof-applicating service and spray-painting service. The wholesale itself, as noted, owns six sawmills, is part owner of the red-cedar shingle mill of the International Cooperative Lumbering Association, and is helping to finance other lumber acquisitions in the West. In addition to lumber, it handles steel, and (in cooperation with Purdue University) is promoting a homestead-improvement program.

Central Cooperative Wholesale carries a complete line of building materials; and many such supplies may also be obtained through Eastern Cooperative Wholesale. (For a list of supplies and technical services available through the cooperative wholesales, see Appendix B, page 85.)

In addition, there are possibly 100 farmers' cooperative lumber yards and hundreds of other retail coöperatives throughout the country which handle lumber and certain other building materials and supplies as part of a general retail business.

Possible Avenues of Further Development

SOURCES OF FUNDS

The experience of the projects here described suggests several possible sources of financing which might be developed. Union funds form one such source. No individual labor organization would wish to tie up any considerable amount of its resources in housing. However, in the aggregate, the money controlled by unions in this country is considerable. One leader in cooperative housing, who is also a man of union background and experience, suggests that diversion to housing of even as little as 5 percent of each organization's funds would be of inestimable help. A central agency, formed for the purpose on a local or State basis, could use the money so raised as a revolving fund from which to make construction loans and loans for member equity. This would give the initial shove for projects that might otherwise never be able to get started. The agency could be formed as a regular corporation, or preferably as a cooperative, with the contributing organizations as members which would hold stock in the amount of their contributions. This procedure has already been used in Tulsa, Okla., where a small building project was financed through a corporation in which members of the city building-trades council took part.

Members of regional cooperative wholesale associations might also vote to invest some of their patronage refunds from the central organizations in this central agency or in a similar fund. With the increasing collaboration between labor organizations and cooperatives, such a joint enterprise could easily be worked out.

The National Cooperative Finance Association was formed in 1943 to coordinate the resources of the consumers' cooperative movement and to assist in financing cooperative enterprises. Its membership consists of eight regional wholesales and National Cooperatives. The finance association was urged by the 1946 Cooperative Congress to "organize immediately a program which will make mortgage credit available to cooperative and mutual housing associations." There are some possibilities in this direction.

Credit unions are another potential source of financial assistance for housing. In a number of States these associations are permitted to make loans on the security of real estate; the same is true of associations organized under the Federal Credit Union Act, but the period of such loans is limited to 2 years. In States where this is not permissible, loans might be made on the basis of other security. Also, some of the laws authorize the making of loans, secured only by the signature and good faith of the borrower, up to $100 and even in some States $300. Although these are small amounts, they would be helpful in cases where only a simple dwelling is concerned and much if not most of the work is done by the family, on a self-help basis. In other cases, such amounts could be used toward the member's down payment.

The Metropolitan Life Insurance Co. has made numerous loans for housing purposes, the Mutual Life Insurance Co. made one to an association herein described, and probably many other similar organizations have also done this. Among cooperative insurance companies, at least one group—the five companies operating under a unified system in Wisconsin and Minnesota—makes loans, to members of cooperative associations, for housing. Where the insurance laws permit, this would seem to be another good use for accumulated insurance assets.

Building and loan associations, savings banks, and GI loans are obvious sources. The last-named undoubtedly will be utilized more effectively when regulations are worked out whereby the Veterans Administration guaranty can be applied to a cooperative project as well as to dwellings individually financed. If legislation along the lines proposed in the Wagner-Ellender-Taft bill is enacted, 95-percent mortgage insurance would be available to cooperative and mutual housing projects, thus facilitating the obtaining of funds from the regular lending agencies.

PROVISION OF TECHNICAL SERVICE

Undoubtedly, one of the major needs of the new housing groups—and one that most of them lack—is that of competence in the technical matters of law (incorporating the association, searching titles, drawing up and closing the land-purchase and building-construction contracts, etc.); selection of qualified architects and contractors, as well as accounting and possibly engineering service.

Such specialized knowledge should be available to cooperatives throughout the country. It could be furnished as part of the consumers' cooperative movement, through State, regional, or the national federations, or could be supplied through an independent association of professional technicians operating as a workers' productive association. It has been suggested that a national association of technicians (experts in accounting, finance, law, architecture, etc.) be established, with branches in various parts of the country. Such an organization could enroll in its membership socially minded persons in the above professions—all available at designated local establishments.

An organization of the latter type, but on a local scale, was actually incorporated in Washington, D. C., just before the beginning of the war. This "housing producers' cooperative" was started with the idea of enlisting the services of local professionals who would furnish services in all the various lines needed in building a house. This association never went into operation, as the war stopped private building. Similar organizations are feasible, however, and might be formed where the appropriate professions are or can be interested in the idea.

To get such a service into actual operation, however, presupposes some organizing drive and a source from which such a drive can emanate. For this reason, if technical service is to be made available on either a local or national basis, it is more likely that the motivating force will come from the consumers' cooperative movement rather than from the professions themselves.

If this is true, then undoubtedly the cooperatives would prefer that such service be provided as one arm of the consumers' movement rather than as a producer function.

Ultimately, it seems probable that this service will be furnished by cooperative associations in the housing field. In that case, as is usual in the consumers' cooperative movement, initiative will come from the local housing associations, which can (and have the duty to) make available for the benefit of new groups what they themselves had to learn by trial and error. This they can do by organizing on a State, regional, and national basis and establishing in these federations departments charged with providing technical assistance.

At present the available machinery consists of a national association (just getting under way) at the top and local associations at the bottom. Except for one regional association (also new) there is as yet no intermediate organization. Reports indicate, however, that with housing groups springing up all over the United States, federation should not be too far in the future.

Chapter II.—All-the-Way Cooperative Housing

Amalgamated Housing Projects, New York City

The Amalgamated Clothing Workers of America was the first of the labor unions to take an active interest in providing better housing for wage earners at lower rentals through the cooperative method. At the very beginning, however, the sponsors of this activity realized that a housing project should not be confined to members of one industry or one labor organization.

The cooperative housing idea was first broached at the 1924 convention of the union, but no definite action was taken until April of the following year. Prior to the convention members of the union, who were also active in the organization's credit union, formed the A. C. W. Corporation [1] to provide themselves with housing on a cooperative basis. This corporation was later taken over by the Amalgamated Clothing Workers and acted as its construction company. The first project was begun largely to demonstrate that low-rental housing is possible if carried out on a large scale.

In all, seven separate building projects were undertaken—three by the Amalgamated Housing Corporation, two by the A. H. Consumers Society, Inc., one by Amalgamated Dwellings, Inc., and one by East River Cooperative Apartments, Inc.

The size and year of completion of each of the projects are shown below:

	Apartments	*Rooms*
Amalgamated Housing Corporation, Bronx:		
1926–27	303	1, 187
1929	192	822
1931–32	115	426
Amalgamated Dwellings, Inc., Manhattan:		
1930	236	930
A. H. Consumers Society, Inc., Bronx:		
1941	48	128
1946–47 [1]	30	108
East River Cooperative Apartments, Inc., Manhattan:		
1947–48 [2]	796	3, 047
Total	1, 720	6, 648

[1] As of December 31, 1946, this project was under construction; it is limited to veterans of World War II.

[2] As of December 31, 1946, this project had advanced to the stage of receiving bids for the construction.

The discussion in this section relates only to the first six of these projects. The seventh (East River Cooperative Apartments) is described on page 19.

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[1] This corporation has since been dissolved.

For none of the above construction were union funds used. At the beginning, however, the union acted as sponsor and guarantor, and several organizations composed of union members or affiliated with the union (the New York and Chicago Amalgamated Banks, the Amalgamated Center, and the Amalgamated Clothing Workers' Credit Union) advanced temporary loans, to enable the project to get under way. Because of the success of the first venture, the later projects were able to obtain financing from regular agencies. However, as the later buildings were carried on largely for and by the same union group, and notably under the same leadership,[2] the name Amalgamated was used for all.

LOCATION AND DESCRIPTION OF BUILDINGS

The buildings of Amalgamated Housing Corporation and those of A. H. Consumers Society, Inc., occupy a triangular plot in one of the finest locations in the Bronx. On the north side this development is bounded by Van Cortlandt Park, the city's largest public park, consisting of some 1,100 acres; on the east, by Mosholu Parkway; and on the south, by Jerome Park Reservoir. Families living in these apartments, therefore, have views of the park, the waters of the city reservoir, or the palisades of the Hudson. The proximity of the parks means access to the tennis courts, ice skating, and other outdoor recreation and exercise made available by the park facilities. The buildings are within 5 minutes' walk from two subways.

The first buildings erected by the Amalgamated Housing Corporation are of the walk-up type,[3] five stories in height. The buildings erected in 1929-31 are six and seven stories in height, and provide elevator service. Those of the A. H. Consumers Society are two and three stories high. Privacy is assured by the installation of many stairways; in the walk-up buildings, only two or three apartments open onto a single staircase and in the elevator buildings, only three or four.

The buildings cover approximately half of the plot, the other half being used for gardens and landscaped areas. The structures are in the form of hollow rectangles. Those erected prior to 1941 are of Holland brick, of mixed colors; the succeeding ones are of domestic red brick. All buildings are equipped with incinerators, mechanical refrigeration, gas ranges, bathtubs and showers, as well as hardwood floors. (For view of interior court of Bronx buildings, see cover.)

The downtown building, erected by Amalgamated Dwellings, Inc., occupies a square block, 300 x 200 feet, and is bounded by Grand,

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[2] A. E. Kazan, the prime mover in all the projects, and their manager after completion, is also the leader in the East River Cooperative Apartments.

[3] Elevators were eliminated under a compromise reached on a restriction in the deed which had prohibited the erection of an apartment house on the site.

Sheriff, Broome, and Columbia Streets. This is one of the most neglected regions in the city of New York; in about a third of the area the buildings have been either demolished or boarded up, and the other two-thirds are occupied by industrial buildings or tenement houses. At one time this was one of the most congested districts in the city.

The Amalgamated structure is six and seven stories in height, and contains 236 apartments, ranging from two to five rooms. It is equipped with 8 automatic elevators, incinerators, mechanical refrigeration, showers, and bathtubs. The lay-out of the apartments and the design of the buildings is similar to those in the Bronx, the same architect having been employed in both. The high cost of land made it necessary to use a greater percentage of the plot for the building—60 percent. A landscaped court of 24,000 square feet provides a pleasant outlook to most of the apartments.

This building—which is in sharp contrast to its surroundings—demonstrates the possibilities of cooperative effort in replacing dilapidated buildings, in substandard areas, by good housing.

LEGAL STATUS AND FINANCING

Amalgamated Housing Corporation and Amalgamated Dwellings, Inc., are limited-dividend companies organized under the New York State Housing Act. A. H. Consumers Society, Inc., is organized under the regular corporation law.

The buildings erected by the first two of these organizations enjoy a 20-year tax exemption (on buildings, not land). In return, their rental charge is limited to $11.00 per room in the Bronx and $12.50 in Manhattan. The consequent savings are therefore considerable. Under the original law, the granting of tax exemption by the municipality was mandatory, if the project was approved by the New York State Board of Housing. The law was subsequently amended, making city approval optional. As this provision to some extent nullified the benefits of the act, in that it limited rentals without assuring tax exemption, the buildings erected in 1941 and 1946, although sponsored by the same group as before, were undertaken as an enterprise of the A. H. Consumers Society which is not under the housing law.

The first six buildings cost nearly $1,970,000, of which $315,000 was for land and $1,654,359 for construction. Construction cost averaged $1,437 per room and 38.95 cents per cubic foot (including basement space). A 20-year 5-percent first mortgage of $1,200,000 was obtained from the Metropolitan Life Insurance Co. The remainder came from payments by the tenant-members, at the rate of $500 per room, and from the sale of 6-percent preferred stock to tenants, the union, and other friendly organizations. In addition to the tax exemption (saving nearly $30,000 a year, or $2.11 per room per month), savings were made in other ways—by the purchase of comparatively low-cost land, by the ½-percent reduction in interest on the Metropolitan mortgage (lowering the rate from the customary 5½ to 5 percent saved the housing association an estimated $97,865), and from the waiver of the usual recording fees, revenue stamps, etc., by the authorities and the insurance company.

Building 7 in the Bronx had a construction cost of $1,003,021; this was at the rate of $1,322 per room and 41.79 cents per cubic foot (including basement).

The last unit erected in the Bronx by the Amalgamated Housing Corporation was considerably smaller than its predecessors and contained only 115 apartments. The total cost was about $570,000, of which $380,000 was obtained on a 5-percent first mortgage from the Metropolitan Life Insurance Co., and the remainder from the members.

The success of the Bronx projects prompted Aaron Rabinowitz, then a member of the New York State Board of Housing, and Herbert H. Lehman, then Lieutenant Governor (later Governor) of New York, to undertake the financial responsibility for the downtown Amalgamated venture. During the construction period they advanced about $800,000. The actual work, however, was carried out by the same group that built the Bronx buildings. The downtown building cost, for construction, $1,064,713—$1,272 per room and 38.03 cents per cubic foot. The expenditure for land, however, was considerably higher proportionately, bringing the total cost of the project to nearly $1,520,000. It was financed by a mortgage loan of $960,000 from the Bowery Savings Bank, $60,100 from the sale of debenture bonds, and the rest from members' down payments.

Although all the housing projects erected up to 1946 received mortgage loans from either an insurance company or a savings bank, a deviation was introduced in the construction of the 1946–47 unit of the A. H. Consumers Society. In order to reduce the interest rate, and thus keep rentals down, the cooperators living in the earlier buildings were urged to subscribe to mortgage-bond certficates, bearing 3 percent interest for the first 5 years and 4 percent for the second 5 years. The corporation will have the right to call in some of these bonds every year, or buy the entire amount, at will. Purchasers of these bonds will thus receive a fair return on their investment, and the whole operation will be a demonstration of the effectiveness of self-help cooperative effort.

Subscribers for apartments in this building are limited to veterans of World War II, with special preference for those who lived in other Amalgamated dwellings before joining the armed forces. As in all the other projects, they will subscribe for $500 in stock for each room.

receiving in return stock or a certificate of indebtedness and a lease to an apartment. The lease runs for 2 or 2½ years, with the option of renewal. The corporation, however, reserves the right not to renew the lease if the applicant is found to be undesirable. (Nearly 70 percent of the original tenant-cooperators in all the Amalgamated buildings still live in the projects.)

COST AND CONDITIONS OF MEMBERSHIP

In the admission of housing-association members, the members of labor organizations are given preference, but during the nearly 20-year period of operation many persons have changed their occupation, and a good many nonunionists are now living in the development. In general, preference is given to wage earners, members of labor unions, salaried people, and those who can be classified as belonging to the moderate-income group. The needle trades, with the Amalgamated Workers members comprising the largest single group, account for about 50 percent of the residents of the Bronx apartments and about 25 percent in the downtown building.

In the Bronx buildings, the applicant for an apartment was required to raise at least 50 percent of the investment; the rest could be met by contracting a loan. In order to enable the applicant to pay this loan over a long period, the assistance of the Jewish Daily Forward (a labor newspaper in New York City) was obtained. It arranged with the Amalgamated Bank for the latter to make loans to prospective applicants accepted by the housing corporation, permitting them to repay these loans over a period of 10 years and using as collateral a deposit of $150.000 made by the Forward. That deposit was gradually released as the loans were repaid.

In the case of the Amalgamated Dwellings, Inc., Messrs. Lehman and Rabinowitz pledged $350,000 [4] and authorized the bank to extend loans up to 70 percent of the required equity investment of the applicant. On the A. H. Consumers Society's 1941 building, the corporation accepted payment from the prospective member partly in notes to be paid in the course of several years and partly in cash. These notes were not discounted, as the corporation itself was able to carry the project.

The average rental in the buildings of the Amalgamated Housing Corporation project (Bronx) is below $11.00 per room per month; in that of the Amalgamated Dwellings (Manhattan) it is $12.22; and in the buildings of A. H. Consumers Society erected in 1941 (Bronx) it is $13.00. In the latter association's 1946–47 Bronx building the monthly charge is $16.00, this higher figure being necessitated by the high cost of construction and the fact that no tax relief is granted.

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[4] This was in addition to the funds supplied by them during the construction period.

Two factors tending to retard the growth of cooperative housing are inability on the part of a good many applicants to raise the equity investment, and the uncertainty of being able to recapture the equity investment if at any time the applicant wishes to withdraw from the cooperative housing project.

In the Amalgamated, the redemption problem has been handled very successfully thus far, notwithstanding that the first buildings were built in a period of high prices and were subjected almost immediately to an unprecedented period of depression. Reserves for redemption of shares have been built up through the voluntary contributions by the residents, over a number of years, of half of their patronage refunds from A. H. Consumers Society and the housing corporation. In the spring of 1946 these reserves totaled some $250,000 in the Bronx and $65,000 in the downtown project, and the A. H. Co-op Community News could report (issue of October 1946) that no persons had left the community who had not "received a full refund of their equity." Distribution of refunds on the 1944–45 operations of the two Bronx associations (housing and service)—exceeding $50,000—was then in process. Members were being urged to continue their previous contributions to reserves, because "no one can foretell what the future will bring."

COMMUNITY AND COOPERATIVE ACTIVITIES

As the Amalgamated residents are a fairly homogeneous group and by themselves form a good-sized community, they have developed a community spirit and carry on many activities together. Among these, cultural activities form a considerable part. In the Bronx they include Sunday afternoon forums on topics of current interest, folk dancing, classes in current events, consumers' cooperation, drama, book-review group, dancing (children), nutrition, etc. For the children there are also a nursery school, supervised game-room activities, and an all-day Saturday recreation program under the direction of seven counselors.

During the war the Amalgamated members raised funds from which were paid half of the rents of resident fathers who were drafted, in order to insure that their families would be able to keep their apartments.

Both the Bronx and Manhattan projects carry on business activities other than housing. These activities in the Bronx are conducted by the A. H. Consumers Society, Inc., and downtown, by the Amalgamated Dwellings Cooperative Service, Inc., the stockholders in both of these being identical with the stockholders of the housing corporation.

The A. H. Consumers Society, originally formed as a service organization, is gradually taking on more and more functions. At present this corporation distributes milk and electricity cooperatively, runs a laundry service, and operates a food store in the development. It assumed the function of purchasing the stock of outgoing members of the Amalgamated Housing Corporation in cases in which there are no new applicants to take the place of those who wish to withdraw. It extends loans to prospective new applicants when they are unable to raise the required investment, and has also assumed the responsibility of erecting any additional buildings.

The net earnings of this corporation for the years 1944–46 were $20.545, $18,906, and $24.560, respectively. These earnings were distributed to the members in proportion to their patronage.

Recently this corporation also acquired the greater part of the vacant land in the immediate vicinity of the Bronx Amalgamated project, with a view to erecting additional cooperative apartments. It also acquired 16,000 square feet of business property on which it intends to operate a cooperative retail shopping center for the benefit of the community.

East River Cooperative Apartments, New York City

Thus far, to the Bureau's knowledge, only one cooperative project has been undertaken under an urban redevelopment law. It is the East River Cooperative Apartments.

Some 20 States have passed urban redevelopment laws, the purpose of which is to facilitate slum clearance and the reclaiming of blighted areas. Such processes, of course, imply large-scale operation and great amounts of money. Probably very few cooperative groups, by themselves, would be financially or technically qualified to provide housing under the redevelopment plan. If, however, they could enlist the interest of existing cooperatives, and of one or more limited-dividend, philanthropic, public, or mutual housing enterprises, such a project might be feasible.

Such agencies have in most cases a surplus of applicants for housing, who could be referred to the housing cooperative, as well as the necessary business and administrative experience.

Also, the urban redevelopment laws generally provide a method for land acquisition, through condemnation procedure if necessary; some of these laws likewise permit reduction of land charges to a level consistent with its use for dwellings or apartment houses.[5]

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[5] The market price of blighted property is ordinarily so much greater than a reasonable use value that an urban redevelopment project would start with an impossible debt burden unless a large part of the deflation loss were met from public funds.

Tax exemption on the increased value of the redeveloped area, for a fixed period of years, is also provided in some statutes.

The East River Cooperative Apartments will embrace eight city blocks, an area of approximately 522,500 square feet; included in this area are a playground at the extreme northwest corner, Public School 110 at the extreme northeast corner, as well as the building of Amalgamated Dwellings, Inc., a cooperative housing project built in 1930 (see p. 14). The new enterprise is undertaken by a group of sponsors representing subscribers to the apartments, the City of New York, and the financial agency supplying 80 percent of the required funds as a mortgage loan.

This is an area in which property values have been declining for years. Vladeck Houses—a city-sponsored low-rent housing project—are situated nearby. Except for this city slum-clearance project and the Amalgamated building, no new housing has been undertaken in this district for many years.

METHOD OF PROCEDURE

The sponsors undertook to raise 20 percent of the cost of the project by the sale of stock or debenture bonds to the applicants for housing in the new enterprise. If necessary, the sponsors may attempt to obtain additional funds from other individuals and agencies that might be willing to assist in financing the development. The individual prospective cooperator is required to subscribe to $500 of stock or debentures for each room for which he applies; of this amount, $100 per room is paid at the time his application is filed and accepted.

When this plan was at first conceived, four local savings banks agreed to undertake the financing, construction, and completion of the project. It was understood that the cooperative organization would raise 20 percent of the cost, from the sources above noted. The banks were to accept a purchase-money mortgage to the extent of the other 80 percent. This loan was to run for 25 years at 4 percent, with about 2 percent amortization. The local saving banks were later replaced by the Mutual Life Insurance Co., which was willing to accept 3½ percent in interest, and the plan was modified to the extent that the responsibility for the construction and completion of the project was shifted to the cooperative organization. The insurance company limited itself to a loan not to exceed $5,600,000, or 80 percent of a total cost of $7,000,000.

Under the law, the city agrees to accept the present assessed value (i. e., the unimproved value) of the property as the tax base. The value of the improvements—buildings, and improvements to land—is exempted from taxes for a period of 25 years, after which the association will pay taxes on the full assessed value. The return on investment is limited to 6 percent of the total actual cost.

Cooperators will pay towards maintenance a charge (rental) not to exceed $15 per room; no rent refunds or rebates are to be declared by the cooperative organization during the first 5 years. All savings are to be applied to reducing the mortgage indebtedness. The $15 per room will go to pay interest on the mortgage, depreciation, maintenance, taxes, etc. The "level payment" plan of amortization of mortgage under which the total monthly payments remain constant (but with an increasing amount of this going on principal as interest payments decrease), is to be used to decrease the mortgage liability.

THE BUILDINGS

The East River Development will consist of three 12-story buildings, containing 796 apartments, and a total of 3,047 rooms. Each building will occupy a square block. In addition, one block will be taken up with a garage and a community building to serve the tenant cooperators.

Some of the present streets will be eliminated; others are to be widened. When the project is completed, only one street will cross the development. Children going to school or to the playground will cross only one public street. The buildings will occupy 25 percent of the net land area, or approximately 18 percent of the gross area (including streets). The greater part of the land will be developed as gardens and courts, allowing sufficient air and light in each apartment. With very few exceptions, every apartment will have cross-ventilation and privacy; in each, the rooms are all accessible from a central foyer.

COST TO INDIVIDUAL MEMBER

As noted, the prospective member must subscribe for stock or debentures in the corporation at the rate of $500 per room, and at the time of application must deposit $100 per room as evidence of his good faith. Before construction begins, he must have paid in 50 percent, or $250 per room, and by the time the buildings are completed, the entire amount. The monthly charge of $15 per room will remain constant, and will go towards paying his share of interest, amortization, maintenance, repairs, insurance, etc. After the first 5 years, if that charge should prove to be excessive, the excess is to be returned as a rebate or refund. As the mortgage is reduced, the equity of the member is correspondingly increased.

No method has been devised to assist prospective cooperators who have difficulty in raising the $500 per room. Thus far, only a small percentage of the prospective registered subscribers has signified the need of contracting loans to enable them to join.

PRESENT STATUS OF PROJECT

By mid-November, 1946, more than 75 percent of the apartments had been applied for. Plans had been drawn for the first building (the three buildings are alike in design) and it was hoped that work could be started by the spring of 1947.

With practically the same sponsors and the same management here as in the Amalgamated projects, performance is assured. However, the financial success of the undertaking depends, in essence, upon the price of building materials and cost of labor when construction begins. To stay within the rent limitation, the total actual cost of the project cannot exceed $7,000,000. If material costs rise so high as to bring the total cost above that figure the project will have to be abandoned or modified. Rising price levels have already necessitated a revision of the original financing, resulting in a change of lending agency (i. e., from savings banks to insurance company), in order to economize. On the other hand, if the project succeeds, it may be extended to the East River Drive (Franklin D. Roosevelt Drive)—thus adding an area slightly larger than the one embraced by the present undertaking.

Group Housing Cooperative, Washington, D. C.

Group Housing Cooperative was formed in May 1944. Any person interested in the expansion of cooperative housing is eligible for membership in this organization, upon subscribing for two $5 shares of stock. Membership in Group Housing Cooperative is a prerequisite for membership in any housing project developed by it; however, such membership is not in itself a guaranty of a dwelling nor of membership in any GHC community.

During the first 2 years of its existence the association did educational work in the theory and practice of cooperative housing, with a view to the actual provision of dwellings as soon as conditions permitted. The work was carried on through standing committees on membership, planning, finance, legal matters, public relations, and education.

The association had 411 members by the end of December 1946, with 7 additional applications awaiting approval.

PROCEDURE FOR SPONSORED PROJECTS

Each project which the parent organization sponsors and develops is to be incorporated separately. The function of GHC will be to perform, in consultation with the members, all the preliminaries—land acquisition, provision of legal, architectural, and accounting services, and community lay-out—up to the time when a sufficient proportion (25 percent) of the potential members has invested in the project. At that time a new corporation will be formed whose board will then carry the work through to completion, with the advice and assistance of GHC.

The prospective members of the new community (having already joined GHC) will join the project cooperative, in which each family will have only one vote. Each will subscribe for stock in an amount corresponding to the value of the dwelling selected by it.

It is planned that all of the projects sponsored by GHC shall be "cooperative all the way." Each member family will have a permanent lease on the unit of its choice, but will not hold title to it. If at any time the family desires smaller or larger quarters it will have preference, as regards existing vacancies, over any new member.

BANNOCKBURN PROJECT

Early in 1946 the 124-acre Bannockburn golf course, lying a short distance outside the District of Columbia, in Maryland, which had been taken over by the Potomac River Naval Command and operated as a service recreation center, was put up at public auction.

Cooperators' Properties, an association formed for the purpose of supplying buildings for the use of cooperatives in and around Washington, agreed to act as trustee, receive subscriptions under a syndicate arrangement, purchase the tract, and give GHC a 9-month option on it. It was successful in purchasing the property for $193,000.

Architects were then employed who drew up a plan for a "balanced community" with various types and sizes of dwellings, shopping center, parks and recreation areas, and community center (the clubhouse of the former club).

It was found that, retaining the natural wooded areas and adjacent open land for parks, some 600 dwellings could be provided in the area, with a density of not over 5 families per acre. The community as planned would consist largely of single-family houses, with a few semidetached dwellings, each with 50-foot frontage, and three apartment buildings up to 8 stories in height, each set in a landscaped area of 4 to 6 acres. The provision of various-sized units would facilitate transfer from one to another as families grew or contracted in size.

The total cost was estimated as between 5 and 6 million dollars. It was reported that a large insurance company, interested in long-term financing, was giving serious consideration to placing a mortgage loan on the project.

Local zoning regulations specified single-family dwellings only. The association's application for rezoning the area was denied. Application for rehearing, in April, 1947, was to be made. In the meantime the association decided to go ahead with a small "pilot" development of 18 single-family houses on 4 acres of the land.

Conditions of Membership

The association for the new community, Bannockburn Cooperators, was incorporated under Maryland law in August 1946. As it was not a cooperative law, cooperative features were incorporated in the bylaws. These included nonprofit operation; one vote per member, regardless of the amount of stock owned; and proxy voting (required by the law) only by a member of the absentee's family and no more than one proxy voted by any member. The bylaws also commit the association to fair labor practices in dealing with its employees and purchase of materials through cooperative sources, giving preference to commodities produced under union conditions.

Membership in the association was limited to members of GHC who expect to live in Bannockburn village. Preference was given in the following order: (1) To persons who had subscribed to the purchase syndicate under which the land was bid in; (2) to persons who were members of GHC at the time of purchase, but did not subscribe to the syndicate; and (3) to persons who joined GHC after the purchase. The latter two classes had preference in the order in which they had joined GHC. However, any applicant could be rejected if it appeared that he "or any member of his family unit has shown an attitude inconsistent with the principles or bylaws" adopted by GHC or Bannockburn Cooperators.

Each member must buy 5 shares at $1 each, and make a down payment of $500—$200 at time of admission and $100 per month for the next 3 months (the subscriptions of syndicate subscribers may be applied to this amount). A further payment of up to $50 may be required, but no more thereafter until definite construction commitment has been made for the particular dwelling unit selected. It is expected that the member equity required will range from 15 to 20 percent of total cost.

Priorities in selection of dwelling units are to be in the same order as admission into membership.

In December the new association was sufficiently well organized to take over the property, reimbursing the parent association for its expenditures and assuming the legal, architectural, and other commitments. The association does not plan to begin construction until "materials and manpower are available and prices appear stabilized"—probably not before the summer of 1947 or even later. In the meantime the land is being leased as a golf course at a rental high enough to cover taxes and interest on the mortgage.

Our Cooperative House, New York City

This project arose from the desire of Consumers' Cooperative Services (an organization operating a chain of cafeterias in New York City) to further the expansion of the cooperative movement. Unclaimed patronage refunds (minus taxes) on nonmember business were put into a reserve for such expansion. By 1929, after 9 years' operation, the reserve had grown to over $136,000.

Canvass of the membership indicated housing as a preferred field for action. A piece of land in the Chelsea district of downtown Manhattan was bought and a subsidiary, Rochdale Housing Corporation, was formed to undertake the construction of an apartment house.

The building was a 12-story structure, built in the form of an H, with court gardens, elevator service, roof garden with a view of the Hudson River, and cooperative cafeteria.

Of the 66 apartments, 30 had 4 rooms, there was one 5-room penthouse apartment, and the rest had 1 to 3 rooms each. They were equipped with extra-large windows, electric refrigerators, and many extra "gadgets"; several also had fireplaces. Members were required to invest sums ranging from $1,000 to $4,200, depending on the size and location of their apartment. They received, for this, third-mortgage bonds and a 50-year lease. Original monthly payments ranged from $44 to $65 [7] for 1 room, $66 to $93 [7] for 3 rooms, and $77 to $134 [7] for 4 rooms; these, it is reported, were from one-fourth to one-third lower than those charged for comparable apartments in the neighborhood.

FINANCING

Construction was completed and the apartments were ready for occupancy by October 1930. The total cost was $652,700, of which $190,000 went for land, $395,890 for construction, and $66,810 for fees and financing cost.

The money was raised by a first-mortgage loan of $300,000 from the Bowery Savings Bank, a second mortgage of $130,000 ($99,152 subscribed by members and $30,848 by CCS), a third mortgage of $119,600 raised by the tenants, a fourth mortgage of $37,700 held by CCS, and a loan of $65,400 to run until such time as all the apartments were taken by member-owners.

An association, Our Cooperative House, was formed by the residents and took over the management of the place, on a 50-year lease from Rochdale Housing Corporation.

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[7] These top amounts were later reduced to $60, $80, and $115.

By the end of the first year 47 apartments had been taken by tenant-owners; the rest were leased to nonmembers. The operations during this period yielded a surplus of $4,364, from which a patronage refund amounting to 3 weeks' rent for each tenant (total, $3,234) was paid.

However, the depression, a factor not anticipated when the project was undertaken, began to make itself felt with greater and greater severity. The financial obligations of membership and even of nonmember rental in the new building were high—more than most people were willing to undertake in view of the great uncertainties of the time. Also, there was a continuous turn-over in membership, resulting partly from loss of employment but also largely from a shifting from job to job, which entailed removal from the neighborhood. The result was that, notwithstanding a rent reduction in 1933 and again in 1937, the association could hardly keep the building filled,[8] much less attract owner-members. Although 47 apartments were taken by owners at the start, by 1931 there were only 31 of these left. The following year the number rose to 38, but this proved to be the peak. Thereafter the number fell off continuously until by 1944 only 11 remained; the other 55 residents were renters.

Notwithstanding these difficulties, the association was run economically and had been able to operate within its income until 1935, when it sustained a loss (of about $1,000) for the first time. A slight recovery for several years thereafter was followed by operating losses year after year, beginning with 1940.

The association had been able to meet its obligations as regards both first and second mortgages throughout the period, however. By 1937 it had reduced its first mortgage to $247,000 and by 1940 to $222,000. In the meantime, however, the parent association, Consumers' Cooperative Services, had had to increase its investment from $133,948 in 1930 to $154,762 in 1937. During the ensuing 3 years Our Cooperative House was able to retire about $5,000 of CCS's second-mortgage bonds and about $4,500 of the loan the association had advanced for members' equity (pending sale of the remaining apartments); this reduced the CCS investment to $148,702 by March 1940.

However, interest on the third mortgage had gone unpaid since 1940 and that on the fourth mortgage since 1937. None had ever been paid on the $10,000 worth of common stock held by CCS.

In 1940 the first-mortgage holder offered a new mortgage with a substantially lower interest and amortization rate, provided the principal was reduced to $200,000. This was done with the assistance of CCS—a process which resulted in raising the latter's total investment in the enterprise to an all-time peak of $166,993, as of March 31, 1942, and in its taking over the operation of the building. With the consent of the second-mortgage holders, the interest rate on their bonds was reduced from 6 to 5 percent. By this time only $26,000 of the $185,000 in third-mortgage bonds was held by members living in the building, which meant an interest obligation on $159,000.

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[8] This, of course, was an experience common to most apartment houses in the '30s, especially those with fairly high rent levels. In the neighborhood of Our Cooperative House, the banks which had foreclosed on properties in distress lowered rents sharply, wiping out the previous advantage enjoyed by tenants of the cooperative (see p. 25).

This heavy burden, and the additional problems entailed by the war, in the form of increased operating costs and frozen rent levels, made necessary another financial operation in 1944–45, when the organization was faced with the impossible prospect of having to redeem nearly half of the second-mortgage bonds which were to fall due on September 30, 1945. A plan was formulated by which Our Cooperative House was to be dissolved and Rochdale Housing Corporation reorganized with two classes of stock: The common stock ($10,000 in amount), owned by CCS; and nonvoting, noncumulative preferred stock ($100 per share, total $130,000). Third-mortgage holders were offered a choice of preferred stock to the face value of their holdings (in exchange for their bonds) or cash equal to 16½ percent of such face value. It was reported that about two-thirds asked for cash and one-third accepted preferred stock. The plan also met with the approval of the second-mortgage bondholders, who not only voted an extension of time for the bonds coming due but oversubscribed the issue.

This reorganization left the financial arrangement as follows: A 4-percent first mortgage of $180,000, repayable at the rate of $4,000 per year, held by the State Insurance Fund; a 5-percent second mortgage of $121,000, held by 65 investors (CCS holding $20,000 of this); and preferred stock of $130,000, held by 15 investors (CCS holding $90,000).

TERMINATION OF THE PROJECT

As of January 1, 1946, Our Cooperative House went out of existence and this cooperative experiment came to an end. The 9 remaining tenant-owners (who were among the third-mortgage holders affected by the above reorganization) were given 2-year leases at "maintenance rentals." Hereafter, CCS will operate the house (as it has actually been doing for the past 6 years) through Rochdale Housing Corporation. All apartments will be leased and none tenant-owned. In other words, the project has become simply an investment of CCS, not an enterprise run cooperatively by and for resident-members.

A report from the organization to the U. S. Bureau of Labor Statistics stated that, notwithstanding rent ceilings and increased labor and maintenance costs, the reduction in carrying charges and the elimination of vacancies were providing a safe margin in operations for the current (1946) year.

Opinions vary as to the causes of failure. All agree that the primary reason was the dislocation caused by the depression and the consequent unwillingness of prospective members to undertake financial obligations of such magnitude. One of the greatest problems, as one of the original members points out, was only accentuated by the depression. That was the continual shifting of the working population from which the cooperative membership was drawn. This group consisted of social workers, professional people, and high-grade white-collar workers. Even before the depression, they moved from job to job, either within the city or to positions outside. This mobility resulted in a remarkable instability in cooperative membership. Other factors mentioned were the rather high interest rates, maintained after current rates had fallen, the high luxury level of the project, and apartments ill-adapted for general use. Criticism of apartment layout and planning centered in the small size of the bedrooms (not suitable for family use) and in the large proportion of 4-room apartments. Families (counted upon to take the larger apartments) found the neighborhood—which was more suited for single business and professional people and couples—not convenient for raising children. All these factors made impossible the securing of a full tenant-ownership, and without this the project could not succeed.

United Workers' Buildings, New York City

Many years ago a small group of needle-trades workers leased one floor in a house in New York, on a cooperative basis. As the group increased, the whole house was taken over, and certain social features were added and a summer camp was started. These proved so popular that the field of activities was broadened until at one time the United Workers Cooperative Association was the largest and most active cooperative group in New York City.

Beginning in 1925, the association bought tract after tract of land, finally owning 6 city blocks, all bordering on Bronx Park. On this land several apartment buildings were erected.

The first project contained four units surrounding a large central garden, and provided 339 dwelling units. One section of this group consisted of "bachelors' quarters" (single furnished rooms); each 3 of these had a common bathroom and a kitchen was provided for every 12 rooms. The second block of buildings contained 385 apartments and was in the form of an E.

These were 5-story, walk-up apartments. As no wing was more than 2 rooms deep, every room looked out either upon a street or upon the interior garden. Special care was taken to obtain cross ventilation. Less than 50 percent of the ground space was occupied by the buildings. Each kitchen was equipped with gas range, refrigerator, and dumbwaiter; each bathroom had shower as well as tub.

CONDITIONS OF MEMBERSHIP

Membership in the union of the applicant's trade was a prerequisite to joining the housing group. The equity required of each prospective member was $250 per room, half to be paid at the time of joining and the rest within a year. The monthly payment was at the rate of $14 or $14.50 per room, the amount varying according to the location of the apartment chosen.

Originally, the member-purchaser received no stock in the enterprise, but simply a receipt for the amount paid in and a 2-year lease to his dwelling. At the end of 2 years, if he was still acceptable to the other residents, his lease was to be renewed; if not, he had to leave, in which case his principal was to be returned, without interest, minus his proportional share of the cost of redecorating the apartment for a new tenant. Subleasing was not allowed; a resident leaving, for any reason, before expiration of his lease had to return the apartment to the association.

COOPERATIVE AND COMMUNAL FEATURES

Community activities carried on by the association were numerous and varied. They included a kindergarten and day nursery with four full-time teachers; after-school classes in Yiddish and Jewish history for children of grammar-school age, and evening classes in English for the adults of the colony; a "youth cooperative" which arranged for lectures, discussion groups, and various recreational activities, such as concerts, entertainments, hikes, etc.; a community library; an auditorium; a large gymnasium with the usual "gym" equipment, a piano, shower room, locker room, and a room for steam baths; a health clinic; the year-round camp already mentioned (near Beacon, N. Y.) ; collective purchasing of gas, electricity, ice, and milk; and seven cooperative stores—a grocery store, meat market, fish market, vegetable store, delicatessen, laundry, and restaurant. Earnings from the latter were not to be returned in patronage refunds but were to be used for community purposes, as under the Belgian system.

LABOR POLICY

This group had a well-defined labor policy. As already stated, all members were required to be union members, and this requirement was also carried out wherever possible in the business dealings of the association; it dealt only with union companies. All the construction work on the buildings was done by organized labor and the materials were supplied by union companies. The association insisted that even the common laborers employed must be union men. The employees in the cooperative stores, restaurant, and laundry were all members of their respective unions, as were also the teachers in the kindergarten. In one instance the association was responsible for the unionization of a formerly open-shop business—that of the milk dealer from which the dairy products for the colony were bought.

FINANCING AND FATE OF THE PROJECT

The land used for these buildings cost $450,000, and the construction of the buildings planned was estimated at $3,000,000. As noted, each prospective resident had to pay a total of $250 per room. For the first block of buildings, which cost $1,600,000, $250,000 was raised in this way. A loan of $1,100,000 was obtained from the New York Title & Mortgage Co., and the remainder by a 6-percent bond issue of $250,000. This first block was begun in 1926 and finished early in 1927.

The second block was built in 1928. It was financed by a first-mortgage loan, and a bond issue (in the nature of a second mortgage) effected through a subsidiary (Consumers' Finance Corporation) to the housing association.

As indicated in the preceding description, the plans and lay-out were fairly elaborate. Largely because of the high costs, necessitating rents higher than those specified in the New York Housing Law ($11 in the Bronx), the group was unable to qualify under that law for the 20-year tax exemption it afforded. This, of course, meant that a sizable tax burden had to be assumed by the residents.

An attempt was made to organize for the third block under that act, with considerably less-elaborate plans. However, as one observer pointed out, "they had already undertaken more than they could carry through."[9] As the equity payment required was only $250 per member, the net worth of the association was very low, and it appeared, also, that the association had fallen into arrears, on interest, amortization, taxes, and assessments, by over $200,000. The lender instituted foreclosure proceedings. Under a compromise agreement, the land not already built on was relinquished and the association reorganized into the Workers Colony Corporation, with its common stock (the members' paid-in equity) held in trust for the members and its preferred stock exchanged for the second-mortgage bonds of the old Consumers' Finance Corporation—all under the direction of the holder of the first mortgage, the lending agency. The various business enterprises, including the cooperative stores, were sold to private interests or otherwise disposed of.

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[9] Recent Trends in American Housing, by Edith Elmer Wood, New York, The Macmillan Co., 1931, p. 176.

By 1931 the arrearages had been paid off and the management of the project had been returned to the residents. However, the depression was by then 2 years old and several years of it still lay ahead. Reports to the U. S. Bureau of Labor Statistics indicate that the association never recovered its former ground. Assets at the end of 1941 amounted to $2,383,414, and first and second mortgages totaled $2,201,000. Capital stock (the common stock held by the residents) aggregated $480,525. However, as a result of continued operating losses, by the end of 1941 there was an accumulated deficit of $611,843, more than wiping out the members' equity. At that time about 60 percent of the apartments were occupied by shareholders, and the other 40 percent by renters. Later the mortgagee took over the property and the Workers Colony Corporation was dissolved.

The community facilities—auditorium, kindergarten, gymnasium, library, play room—are still available and utilized by the residents. These activities and the privilege of good housing in pleasant surroundings at relatively low rentals are the sole remaining benefits of the enterprise that started so ambitiously.

Chapter III.—Cooperation in Ownership and Management—The “Mutual” Projects

A “mutual” association, in the general sense of the term, is one that practices the principles of mutuality, i. e., providing goods or services without profit, on a democratic basis, for its members only. Any housing cooperative providing dwellings for its members is thus a mutual organization. Recently, as a result of a plan formulated by Col. Lawrence Westbrook, the term has been used specifically to designate a “system of rental-ownership, under which the occupants of homes in a given community lease the premises which they occupy from a company owned by the occupants themselves.”[1] In such a project the cooperative takes over, for operation and eventual purchase, a completed development.[2] In the projects here described—and in the “mutual” system as visualized by Colonel Westbrook[3]—no down payment is required of the individual member or of the housing association, all the funds being supplied by the sponsor or builder.

The rentals paid cover amortization, interest, insurance, taxes, maintenance costs, administration, and an allowance for vacancies. The tenant thus gradually builds up an equity not only through his payments on principal, but also through certain other credits. Repair and maintenance charges are estimated annually and any excess of actual expenditures is credited to the tenant's account, thus giving him a direct incentive to take good care of his dwelling. His share of the vacancy reserves is also credited to him.

Should he vacate his dwelling during the first year of occupancy, any reserves to his credit accrue to the housing corporation. Thereafter, however, he would be entitled to a refund varying according to the length of time during which he has contributed toward the various reserves and the extent to which these have been or must be drawn against (as for maintenance during his occupancy and renovation for a new tenant). He would also be entitled to repayment of his stock (or principal) equity in an amount equal to the “current price” (i. e., original price depreciated over the period of amortization, less the amount of principal remaining unpaid). A new tenant coming in to take the withdrawing member's place takes over the dwelling at its “current price,” with the same monthly payments on principal as were being made by his predecessor.

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[1] Mutual Home Ownership for the Veteran, by Lawrence Westbrook.

[2] However, “mutual,” as used in the Wagner-Ellender-Taft housing bill, considered in the 79th Congress but not passed, would have covered any nonprofit housing association providing dwellings for members only.

[3] See “No Down Payment,” by Col. Lawrence Westbrook and George Creel, in Collier's, February 2, 1946.

The mutual arrangement has certain very definite advantages to the member. He is not required to make any down payment whatever beyond, possibly, a membership fee. Should he have a period of unemployment or other difficulties which make it impossible to meet his monthly payments, he may utilize his excess reserves for the purpose, or may borrow against his reserves. As contracts for dwellings are easily transferrable on the books of the corporation, and as units of various size are provided in the projects, a member whose family is expanding or contracting may move from one dwelling to another that is better suited to his needs, with proportionate increase or decrease in total and monthly obligations.

Other advantages of the plan are that each resident, as a member of the corporation, has an equal voice with his neighbors in the affairs of the community; that the plan provides community advantages not generally available to the average individual purchaser; and that it enables the group as a whole to control the property so as to prevent neighborhood deterioration.

No resident ever receives title to his dwelling. Colonel Westbrook emphasizes that this principle is basic. "What he has is the right of perpetual occupancy as long as he keeps up his monthly payments. Anything else would lose the benefit of the system, for with an individual in full control of his property, the community could not enforce high standards."

West Acres, Pontiac (Mich.) [4]

In 1936 the late Senator James Couzens formed a corporation to which he advanced $550,000 with which to buy land and construct 200 houses of varying size and type, in Pontiac (Mich.).

No down payment was required, and the rentals established were "substantially less than the prevailing rental rates." The monthly payment on a 1-bedroom house, for instance, was $32.70 and for a 3-bedroom house $43.80. Nevertheless, it covered amortization spread over a 25-period, interest, taxes, insurance, maintenance, etc., and was sufficient to yield a 3-percent return continuously on the sponsor's investment.

It is declared that in the 10 years of its existence the project, under varied economic conditions, "has tested every basic principle of mutual ownership." Not only did the residents have the benefit of low rents, but without exception families which had to move away realized (through various credits) more than they had paid in on amortization. It is reported that, such was the pride of ownership and so well were the dwellings maintained, the property is now appraised "at well above the estimated 25 to 35 percent increase in production costs since 1936."

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[4] Data are from Collier's, February 2, 1946.

Public Mutual Housing Projects

Under the defense housing program of the Federal Works Agency, eight projects were designated as "mutual" housing communities; three of these were in New Jersey, one in Pennsylvania, one in Ohio, one in Indiana, and two in Texas. After the creation of the National Housing Agency the projects were transferred to the Federal Public Housing Authority of that Agency.

Although intended to help meet this defense emergency, only such projects were earmarked for "mutual" ownership as were of permanent construction and built to house workers employed in plants regarded as "definitely established parts of the industrial life of the community in which they are located." [5] This therefore ruled out flimsy construction in purely war-born places, which were likely to be abandoned after the war.

The funds used were advanced by the Federal Government under the provisions of the Lanham Act, but all mutual projects were to be self-liquidating from the start and carry no rental subsidies.

The purpose of the mutual plan was two-fold: (1) To enable the Government to dispose of the projects after the war, and (2) to enable middle-income families (i. e., with incomes too high to qualify them for subsidized low-rent housing but too low to permit the making of any sizable down payments on privately built dwellings) to own their own homes. It was considered advisable that the dwellings be placed on a rental basis, under direct FPHA management, with ownership retained by the Government during the war emergency, in order to insure their being available for war workers. However, the Government made a definite commitment, in each of the eight projects, to sell them to nonprofit mutual housing corporations which were formed by the tenants and met certain prescribed conditions.

The accompanying table shows the location, size, and mutual housing status of the eight projects as of December 31, 1946.

At the end of the war, the FPHA pointed out that the war period had offered no conclusive data on the experiment, as none of the projects had yet operated under the direct ownership of the tenants, and only two (at South Bend, Ind., and Dayton, Ohio) had been managed for any length of time by mutual ownership corporations. It noted, however, that these two were "among the most efficiently and economically operated of the Government-owned war housing projects."

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[5] Article by Colonel Westbrook in Labor Information Bulletin (U. S. Bureau of Labor Statistics, Washington), September 1941, p. 10.

TABLE 1.—*Projects earmarked for mutual home ownership program*

Project and location	Dwelling units	Acres	Total development cost	Status as of Dec. 31, 1946
Greenmont Village, Dayton, Ohio.	500	130	$2,385,000	Mutual Ownership Corporation negotiating for purchase.
Walnut Grove, South Bend, Ind.	250	81	1,149,000	Do.
Winfield Park, Linden, N. J.	700	109	3,704,000	Mutual Ownership Corporation operating under lease, with option to purchase, signed Apr. 1, 1945.
Avion Village, Grand Prairie, Tex.	300	78	920,000	Mutual Ownership Corporation operating under lease, with option to purchase, signed July 1, 1945.
Dallas Park, Dallas, Tex.	300	114	972,000	Do.
Audubon Park, Audubon, N. J.	500	100	2,321,000	Mutual Ownership Corporation, acting as agent for FPHA. Negotiations under way for lease, with option to purchase.
Bellmawr Park, Gloucester, N. J.	500	133	2,119,000	FPHA manager, under direction of regional office in New York City.
Pennypack Woods, Philadelphia, Pa.	1,000	120	4,367,000	Do.

The value of the mutual ownership plan for other public war housing of permanent construction, and possibly for the "greenbelt" towns, is recognized. It is particularly adapted for use in connection with large apartment developments or other multifamily structures in which direct purchase by individuals would not be feasible. In such cases the FPHA would recognize and deal with mutual ownership corporations of residents, provided the corporation can "demonstrate its ability to assure immediate occupancy of at least two-thirds of the dwelling units. As a consumer body, it would be given preference over groups or individuals offering to buy the project for investment purposes." [6]

The corporation.—In order to enter into negotiations for purchase, the tenants must form a nonprofit mutual home ownership corporation.

As a first step toward the formation of such a corporation in a project in which there is sentiment for purchase, a tenants' committee is selected in an election in which every leaseholder in the project is eligible to vote. This committee acts as an organization committee for forming and incorporating the new corporation.[7]

The corporation is run by a board of nine trustees—three representing the public, three the residents, and three the Government. During this period the trustees formulate bylaws, receive membership applications, and issue membership certificates. When the residents have joined in sufficient proportions to indicate that the time is ripe for putting the mutual ownership plan into effect, the FPHA is requested to lease the property to the corporation, with an option to purchase at the end of 2 years' operation. This 2-year period is designed as a testing time in which the corporation, under FPHA supervision, masters the problems of management and learns to carry on independently.

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[6] Statement issued by FPHA.

[7] The Federal Public Housing Authority of the National Housing Agency, Washington, D. C., will assist the tenants during this stage, by providing information on the plan and technical advice on the mechanics of forming a sound corporation.

The lease obligates the board of trustees to manage the project in conformity with FPHA regulations and policies for operation and maintenance, set forth in the lease, and under a budget approved by that agency.

The board also collects the rents from the residents and from these it pays all the operating expenses. The margin between revenue and expenditure is paid to the FPHA, to cover interest and depreciation; if the margin exceeds the cost of these two items the surplus is credited, to be applied (at the time of final sale to the corporation) in reducing the purchase price to the corporation.

At the end of the 2-year period the corporation may exercise its option to purchase. The purchase price is set by two appraisers, one representing the Government and the other the corporation; if they cannot agree they appoint a third person mutually satisfactory, whose decision is final.

Conditions of sale.—No down payment is required. At the time of sale the corporation receives title to the entire property, but gives the FPHA a mortgage for the entire purchase price and a promissory note for which the mortgage is security. These obligate the corporation to make, over a period of 45 years, monthly payments totaling approximately one forty-fifth of the purchase price per year, plus 3 percent interest on the unpaid balance.

Although the Government retains certain controls over the management, in order to protect its investment, considerable responsibility is vested in the members from the outset.

Cost to member.—The member pays a membership fee of $50 at the time of joining the organization. He signs a contract, binding himself to purchase, on an installment basis over a 30-year period, stock in the corporation equal to the value of the accommodations he plans to occupy. He is given a lease on the dwelling of his choice, running for as long as he continues to occupy it and make his payments. These payments consist of a monthly rental which covers 3 percent interest, insurance, taxes, administrative expenses, reserves for maintenance and contingencies, and the payment on his stock subscription. As fixed amounts are paid on the principal each month, the interest payments (which are figured on the unpaid balance) continuously decrease. When the member has paid up the entire principal, his monthly payments will include only the cost of taxes, insurance, maintenance, and repairs. Since the tenant is paying off his obligation in 30 years, whereas the corporation has a 45-year period of amortization, he enables the corporation to make prepayments on the principal owed to the Government, thus building up an advance equity or "cushion" for use in times of adversity.

GREENMONT VILLAGE, DAYTON, OHIO

On October 1, 1945, at the expiration of the 2-year lease, the Greenmont Mutual Housing Corporation exercised its option and notified the Government of its desire to purchase. Negotiations over a period of a year were expected to result in a contract to purchase, for approximately $1,500,000, the 130-acre tract containing 500 dwelling units and recreational and community facilities. As of mid-September 1947,[7] all but 12 of the 500 resident families were members of the corporation. These 12 will eventually have to vacate in favor of members unless they decide to join.

The community is laid out in the form of a circle, with dwellings in small groups on cul-de-sacs where children may play safely, away from the main thoroughfare that swings in an arc through the project. At the northwest corner of the tract are the new community school, the community buildings, and the shopping center.

In the center of the tract, space is provided for recreational activities. A tennis court was being laid out at the time the project was visited, and one large area was used by a group of airplane-model enthusiasts. Opportunity for further beautification and recreational facilities is offered by a creek (overhung by scattered trees and crossed by several foot bridges), which runs through the tract.

Dwellings—facilities and costs.—The dwellings consist of 1-story single and double houses and 2-story double houses of rectangular shape and flat-roof construction. Relief from monotony is obtained by interspersal of buildings of different heights and sizes, by the use of exterior paint of different pastel colors, and the varying use by the tenants of flowers and shrubs in the yards. A 2-foot layer of insulation under the roof and 6 inches of water keep out the summer heat.

Every dwelling unit has a living room, utility room, kitchenette, and from one to three bedrooms. Monthly rentals are as follows: $27.50 for a 1-bedroom unit in a double house, $30.00 for a 2-bedroom unit in a double house, $32.00 for a 2-bedroom unit in a single house, and $32.50 for a 3-bedroom unit in a double house. These rentals are calculated to cover amortization as well as upkeep. Operating expenses at Greenmont have been kept low, averaging $10.86 per dwelling per month during the year ending September 30, 1945. This figure included expenses of management, janitorial service, utilities, repairs, replacement, maintenance of grounds and structures, waste removal, and insurance.

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[7] When the project was visited by a member of the staff of the Bureau of Labor Statistics.

The average cost per dwelling was $4,793, of which $161 was cost of land, $127 went for architectural and engineering costs, $935 for site improvements, and $3,220 for construction of the dwelling and equipment, $248 was cost of community buildings, and miscellaneous items averaged $102 per dwelling.

Community buildings and services.—The administration building contains, besides the office of the project manager, a large hall where community meetings are held, movies (mainly for the children of the project) are shown, and the various organizations of the residents (women's club, boys' club, men's club, veterans' group, etc.) hold meetings and recreational and social events. The building also contains rooms for smaller groups, space for several overflow classes from the school, and a large well-equipped kitchen from which refreshments are served on social occasions.

A smaller building near by houses the child-care center. Here a staff of five, hired by the corporation, care for the smaller children of the community. The center is open from 6 a. m. to 6 p. m. It provides breakfast, lunch, and afternoon snack, supervised play and rest periods, and classes in music appreciation, singing, and drawing. Its charges (for a 6-day week) for children of residents amount to $5.50 for children who receive lunch and snack and $6.25 for those who also receive breakfast; for nonresident children $1 more is charged. Up to 40 children are being cared for; at the time of the visit of the Bureau's representative, 33 children were present and were taking their afternoon rest on cots in a large, airy room. Quarters and equipment were provided by the corporation; otherwise the center is self-supporting.

The commercial center, at the edge of the tract, contains a privately owned cleaning establishment and barber shop. and a cooperative association which operates a meat and grocery store and a new drugstore. The latter also serves lunches, ice cream, soft drinks, etc., and is planning to add a household-appliance and small-hardware department. In September the grocery store was averaging about $12,000 in sales per month and the drugstore about $1,500 per week. The association has been handicapped by supply difficulties and by inadequate capital. Some 325 families are members.

WALNUT GROVE VILLAGE, SOUTH BEND (IND.)

In mid-September 1946, appraisal of the Walnut Grove property was in process, the Mutual Housing Association having completed its 2-year probational period. All but 12 of the 250 families resident in the village had become members of the association.

The community lies at the edge of the city of South Bend, Ind., between two main highways. The thoroughfare of the village leads in from the highway to the west, at the north edge of the village, and swings in a horseshoe curve through the tract, coming back to connect with the same highway at the south side of the tract. A small curving road gives access to the east highway at the top of the horseshoe arc.

Dwellings—facilities and costs.—The dwelling units are set diagonally on either side of cul-de-sacs which lead off, also diagonally, from the thoroughfare. Some diversity is produced by the use of various levels and sizes of buildings. All the buildings, however, are of dark-stained, frame construction, so that the general effect of the village is not so pleasing as at Greenmont. The same style of architecture—porchless and with flat roofs—is used as at Greenmont.

The rooms are at two different levels, kitchen and living room being at ground level, whereas the bathroom and bedrooms are several steps higher. The elevation of these latter rooms provides space for a small basement and enables cross-ventilation in the bedrooms through small high windows which are set into the wall where these rooms rise above the lower-level rooms.

Rents are the same as at Greenmont.

Community buildings and services.—The administration building lies at the west side of the tract, between the two ends of the thoroughfare. It contains a meeting room and the cooperative store, as well as the office of the manager.

A space has been set aside, near the east entrance road, for a baseball diamond, and plans have been drawn for a small stadium there. Swings, slides, and sand boxes are scattered here and there for the children.

Chapter IV.—Housing with Self-Help Features

Penn-Craft (Pa.) Community

The Penn-Craft experiment dates from the spring of 1937 when the American Friends Service Committee [1] undertook a housing project for 50 families of coal miners. Its declared purpose was to aid in "finding greater economic security and better social life for the great body of industrial workers in this country."

The economic life of the region in which Penn-Craft is situated depends on the mining industry. Private trade, banking, and railroads thrive when the mines are working and languish when they are idle. Mine activity, on the other hand, is dependent on industrial activity and is greatest when the country's industries are busy. Many of the mines in Fayette County had been worked out and closed down by the time the project was started, and others active during the war but no longer profitable to operate have been closed down since. Nevertheless, extensive coal fields are still available in the vicinity and across the Monongahela River.

The problem of displacement and unemployment therefore is not immediate, but must be faced eventually. The sponsors of the project, anticipating that time, hoped not only to demonstrate the possibility of improving the living conditions of the miners through self-help, under competent disinterested supervision, but also to insure a cushion (in the form of subsistence homesteads) against hard times. The project was to be an experiment in education, utilizing the spare time of the miners to provide new and better housing owned by themselves and eventually leading to greater family self-sufficiency with decreasing dependence on paid employment.

The work has been carried out in two projects, the first on 200 acres of farm land in Fayette County near Republic, Pa., the second (now in process) on 165 acres near the first property. In both cases financing, management, and supervision were provided by Friends Service, Inc., a nonprofit organization. Procedures for the two projects have in general been the same. The chief differences lie in the size of the individual holdings (the 1½–3-acre homesteads in the original community have been increased to 10-acre holdings in the second tract, in the interests of greater economic security for the families), in the removal of certain subsidies that were extended in the first project, and in the adoption (in the second project) of a sliding scale of repayments that takes account of financial emergencies affecting family income.

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[1] This committee was organized by the Quakers in 1917 "as an avenue through which young men and women of the Society of Friends could express their desire to help their fellow men, not by bearing arms and participating in war, but by helping to heal the wounds of war." The program of child feeding in the bituminous-coal fields, undertaken in 1931–32, at the request of President Hoover, led the committee to become interested in means whereby unemployed and partially employed miners could produce their own food from the land and develop new skills as a source of cash income. The project here described was the outgrowth of that interest.

SELECTION AND CHARACTERISTICS OF HOMESTEADERS

In the first project only coal miners were eligible. Each applicant family was required to furnish rather detailed information about itself. In selecting the homesteaders, consideration was given to age, financial resources, life expectancy, and productive capacity of the family. In families having no financial resources, it was required that there should be an "evident family production for a period of 10 to 15 years."[2] A basic requirement was that the applicants must either be citizens of the United States or take immediate steps toward naturalization. Medical examination was required of all the members of the family before final acceptance.

Preference was given to applicants from Luzerne and Redstone Townships and the area immediately surrounding, but there was no discrimination as regards race or creed. The result was a community that included various religious faiths and Negroes as well as whites. At least three-fifths of the settlers were of English, Scotch, or Welsh descent and the remainder included Slavs, Poles, Irish, Germans, Italians, and French—a cross section of a typical mining community in this region.

In the assignment of the land, the homesteaders drew numbered slips entitling them to choice in the order indicated on the slip drawn. Thus, the possessor of No. 1 was entitled to first choice among all 50 plots, No. 2 to choice among the remaining 49, and so on.

In the second project, selection is on the same basis as in the first, except that nonminers are being accepted as well as miners.

THE HOMESTEADS

Each homestead in the first project contained a dwelling, poultry house, and other outbuildings. As the miners' families are generally large, the dwellings are good-sized 2-story stone buildings, each with modern kitchen, living room, bathroom, and 2, 3, or 4 bedrooms. Each bedroom has a large closet. Each house has electricity, a front or rear porch, and a full basement containing a central heating plant, laundry facilities, and food-storage space. Some of the houses have garages built into the side of the basement.

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[2] One exception was made to this, for a family consisting of an older man and his wife, in view of certain exceptional considerations.

Houses in the second project will be of the same size, or larger, and will have the same facilities.

In the first project the red stone native to the locality was used as building material. In the buildings under way in the new tract, cinder blocks are being used, because of the smaller amount of labor required. With mines running full time and employment at a high level, labor time is at a premium and cannot be spared for quarrying and shaping the stone, whereas the cinder blocks can be made quickly and cheaply by unskilled workers and are regarded as satisfactory.

In the first project, a standard plan was used for the 4- and 5-room houses and two plans for the 6-room dwellings. Variety in appearance was obtained by reversing the plans, shifting the location of the porch, garage, etc. In the second project, use is being made of plans of rural houses drawn up by the former Farm Security Administration.[3]

The land plots of the first 50 homesteads ranged from 1½ to 3 acres, depending on the topography of the ground. This furnished space sufficient to raise a substantial part of the family's current food as well as some to store for winter. Additional garden space, if desired, was available in the belt of land reserved for farming and gardening. It is expected that the families in the new section, where the homesteads average 10 acres each, will in times of steady employment use the extra land for the pasturage of dairy and/or beef cattle, sheep, pigs, poultry, etc. When jobs are scarce the land can be utilized for more subsistence crops. It is explained that the purpose of the second project is the further demonstration of "the value of land as a backlog of security" and that Friends Service desires that production for home use be emphasized "at all times * * * as the thing of first importance."[4]

FINANCING, AND TERMS OF CONTRACT

Upon becoming a participant in the homestead project, each family signs a lease agreement with Friends Service, Inc.

The present lease agreement differs in certain respects from that used in the building of the first group of houses. The corporation still obligates itself to supply engineering service, supervision, and direction of construction and installation of all public improvements, and such skilled labor as is necessary. Previously, however, it supplied the first two of these items, as well as the heavy tools and equipment, without cost to the home owner. This subsidy has been withdrawn, it being the feeling of the corporation that the project should stand on its own feet. Therefore the prospective home owner is now charged $15 per month for "overhead" from the time he signs the lease agreement until he moves into his completed dwelling.

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[3] Small Houses (U. S. Department of Agriculture, Farm Security Administration). Blueprints of houses contained in this pamphlet are available, on payment of a small charge (30-70 cents) from the Extension Agricultural Engineer, New Jersey State College of Agriculture, New Brunswick, N. J.

[4] Statement issued by David W. Day, manager of both the first and second projects.

Originally the corporation agreed to advance a cash loan of $2,000 to each member, of which not over $300 could be used for the hiring of the skilled labor necessary in construction, the remainder being used for building materials, outbuildings, cost of land, the homesteader's share of the cost of water system and roads for the whole project, and some small equipment; the loan may also be drawn upon for temporary housing, pending completion of the permanent dwelling, but must be repaid at the rate of $10 per month. In the new agreement these sums are raised to $2,500 and $500, respectively, and in the second project a down payment of $500 is required.

Under the original agreement the homesteader was to repay his loan (beginning when he moved into his finished house) over a period up to 20 years at the rate of $1 per month for every $200 borrowed; this amount included interest at 2 percent. A "variable payment" plan is provided for in the new lease agreement, which relates the monthly payments on the cash loan to the family income. In prosperous times the family may repay its loan as fast as its income permits. In hard times—subject to a required minimum payment of $48 in any consecutive 4-month period—the payment may drop to as little as $1 per month if the weekly gross earnings are between $5 and $10, or to nothing if they fall below $5.

The second lease agreement runs only for 1 year after date of occupancy, during which time the homesteader will pay the corporation a rental which will include interest at 4 percent. At the expiration of the year period, the leaseholder may exercise an option to purchase the homestead, in which case the corporation will assist him to refinance his cash loan, using the regular loan agencies to do so. From the proceeds of the refinance loan the corporation will be repaid in full, thus enabling it to turn over its funds more quickly and go on to further demonstration projects. In the original project, as noted, the corporation's funds were tied up for periods up to 20 years. At the end of that time, or sooner, if the homesteader paid up his loan more quickly, the latter would receive title to the property in fee simple, but not until his entire loan was repaid.

Under both lease agreements the homesteader agrees to contribute his own labor, and that of members of his family, toward the construction of his house and the houses of the other homesteaders; to make his required monthly payments; to keep the premises clean and in good repair; not to allow them to be used for any purpose obnoxious or detrimental to the community; and not to sublet or lease the property for commercial purposes except with the approval of the management (corporation). Further, in the new lease (in order to eliminate long lapses of time during construction) the leaseholder binds himself to build a house "ready for occupancy," within a period of 18 months from the time he signs the agreement.

LABOR SUPPLY, AND TERMS OF THE "LABOR LOAN"

All the work has been done under the direction of the project manager appointed by Friends Service. He assigns the available workers to the various types of work in process at any given time, purchases all necessary supplies, and determines the order of progression of the work.

In all the construction processes, the labor of the adult members of the family and of sons 16 and 17 years of age (formerly 15–20 years) is used. The labor of adults is reckoned in terms of man-hours; that of the youths in terms of "boy-hours," one boy-hour being equivalent to three-fourths of a man-hour.

In theory the expected labor performance of the homesteader (or his sons) is at least two 8-hour days per week. Actually, the amount has varied widely, depending largely on the extent of paid employment at the mines and therefore on the free time available to the homesteader.

At the end of each day the amount of time spent at work at the project is reported by the homesteader to the office and is entered to his credit. If it was spent on the dwelling of another colonist, it is also entered as a debit against the latter's account. Once a week each homesteader receives a statement showing the status of each of the houses, in terms of labor-hours. This statement shows for each homestead the date the colonist was accepted into the project, the total hours he has worked since that time, the time worked during the week for which the report is made, a "progress estimate" showing the hours that would stand to his credit if the colonist had put in the two 8-hour days a week regarded as standard, the total "purchases" in labor-hours spent by other homesteaders on the house, such purchases during the week of the report, and the balance of labor-hours still owed. Once a month he receives a statement showing the labor hours worked on his house and by whom. Statements are also rendered upon completion of each portion of the work, showing the status of the cash accounts.

Each homesteader binds himself in the lease agreement to repay the amount of time spent on his house by an equal amount worked on his neighbors' dwellings. Failure to carry out this promise may (as for failure to meet rent payments) result in expulsion from the project.

No homesteader, having repaid his labor debt, is allowed to accumulate more than 100 labor hours' credit thereafter. This surplus is used for extra labor, such as for grading of lawns, laying of sidewalks, making driveways, etc., needed after the house is completed.

EVOLUTION AND PRESENT STATUS OF THE COMMUNITY

In the original project, in 1937, the nonprofit organization, Friends Service, Inc., which was formed to provide management and supervision, used contributed funds to purchase a 200-acre farm, 2 miles southwest of Republic (near Uniontown), Pa. The purchase included the land, which was roughly in the form of a shallow bowl, a large red brick house, a small dwelling more than 200 years old, and several outbuildings. The center section of about 100 acres was divided into homestead plots of 1½ to 3 acres each. The rest of the land was kept for woodland and for farming, grazing, and the raising of hay and feed for the homesteaders' cows and poultry.

Before any work could be started on the dwellings, however, much "community" work in the form of roads, utilities (water, sewer, electricity) and clearing out of brush had to be done and this labor served as a try-out test for the applicants.

How the houses were built.—Only two workers were on a cash basis; these were a skilled mason and a carpenter under whom, as gang foreman, the homesteaders and their sons worked. The plastering was done by the homesteaders under the direction of a plastering contractor hired by the corporation. Most of the homesteaders were unskilled in construction work, but the specialized skills of one or two members (an electrician and a carpenter) were utilized.

The costs were minimized by making as complete use as possible of materials and resources at hand. In the first project native stone available on the site was quarried and cut by the men, and the sand used in the cement work was crushed in the community's own stone crusher. In the new project, because of lack of labor time for quarrying and shaping the stone, cinder blocks are being used as construction material. These are made by the men themselves on a simple machine.

Some 70,000 feet of timber has been cut from the community's woodland; a local sawmill cuts this into lumber of required sizes.

Various labor-saving and simplifying devices have been used to enable the unskilled homesteaders to do as much of the work as possible. Thus, the project manager devised a movable form (see diagram, p. 84) by the use of which the men could lay the stone in the walls quickly and satisfactorily without supervision by a skilled mason. It is estimated that this saved some $200 per house. Interior trim, door and window frames, etc., were made by the homesteaders themselves from odd lots of lumber obtained at bargain prices. Improvements in skills and processes resulted in steadily reducing costs. Thus, the first foundation cost of about $117 was eventually reduced to about $30.

Progress of the work.—Excavation on the first basement was started in August 1937. Because the mines were fairly active and the miners' free time therefore limited, the construction was slow. The first house was not ready for occupancy until November 1940.

In the meantime, in order to obviate so much travel between the mine village where the prospective homesteaders were then living and the site of operations, it was decided that the poultry house that was to be a part of each homestead should be built first—and that this be used for family quarters until the house proper was completed. These buildings furnished shelter during the construction period and in a few cases were still being occupied in September 1946—by the families of veteran sons of original homesteaders.

By the summer of 1943 all 50 houses were occupied, and the project as originally planned was complete. Since then a further step toward greater family self-sufficiency has been undertaken and is now under way. A nearby farm of 165 acres has been bought and divided into 15 homesteads of 10 acres each. By September 1946, 11 of the new homesteads had been applied for; 8 of the applicants are ex-servicemen. Work was already in progress on 2 of the homesteads at the time they were visited.

The Penn-Craft homesteaders in the original project have spent the time since completion of their houses in landscaping their places and paying on their cash loans, and have made good progress. Thus, with the average expenditure of some 2,750 labor hours and $2,000 in cash they have been able to obtain well-built stone houses that were estimated in 1939 to be worth from $3,000 to $4,000 and would bring at least half again as much today (see fig. 1, p. 47).

ACCOMPLISHMENTS AND PROBLEMS OF THE COMMUNITY

One has only to compare the attractive, substantial dwellings scattered over the gently rolling green land of Penn-Craft Community with the unpainted shacks standing in stark rows, unrelieved by grass or trees, in the nearby mine "patches" where the homesteaders formerly lived, to realize what a long step upward this experiment has meant in their scale of living.

Under the original plan the minimum monthly payment is $12.58 per family, but most of the families have paid at a considerably higher rate. In September 1946 not a single family was in arrears, and seven had completed their payments and received the deed to their homestead. Two houses had been sold, one to the homesteader's son.

Lease modifications in the light of experience.—The original lease contained no restriction on sale, it being felt that opportunities for the sale of property in a community as small and as isolated as Penn-Craft would be so few that that fact alone would tend to prevent unduly high sale prices. Experience under the plan made some restriction and other changes seem desirable. Under the new lease agreement the leaseholder agrees not to sublet or assign his interest without the consent of the managing corporation. In the event of his death or of circumstances necessitating his removal from the project the management is to "cooperate in endeavoring to find a suitable successor

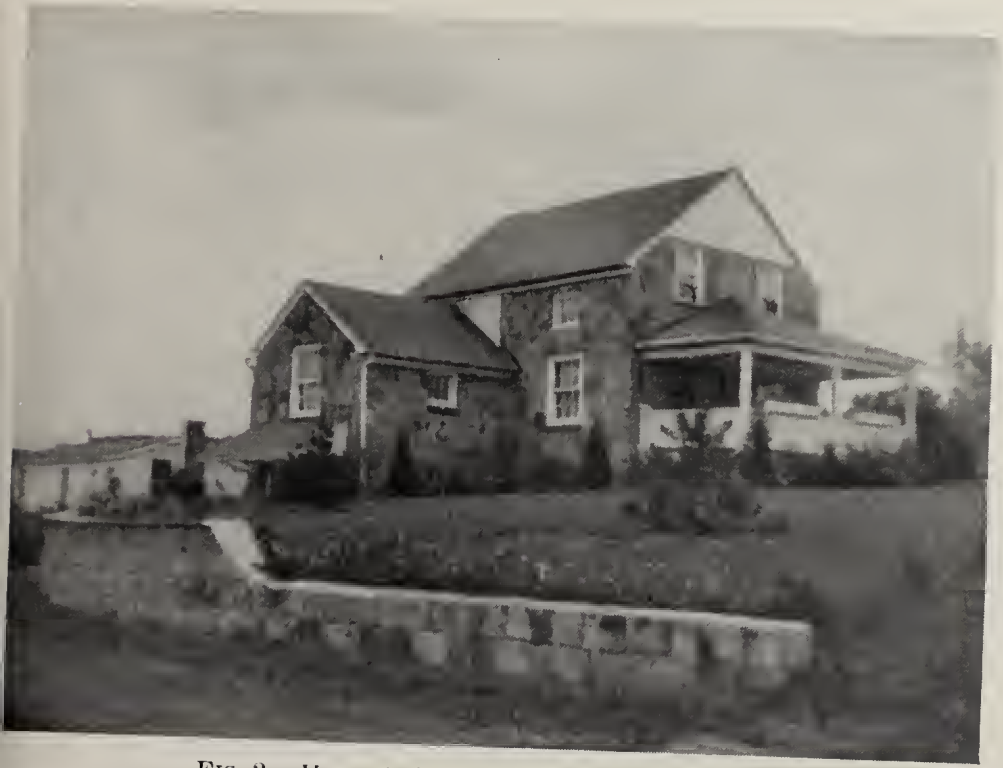

FIG. 2.—House built by self-help at Penn-Craft.

o take over the homestead." All questions regarding other restric-ions on the property are to be decided by a "Restriction Committee" omposed of five members—homesteaders—elected by vote of the omestead association members.

A revised lease with the same restrictive features, has also been rawn up for the first-project homesteaders. By September 1946 ll but 8 of the 50 had signed such leases.

Community life and activities.—Each family becomes automatically member of the Penn-Craft Community Association (the original roject) or the association that will be formed to have general manage-ent of the new project. The community association functions like the old "town meeting," at which questions of community interest, regulations regarding members' obligations and rights, and other matters are discussed and decided.

Community activities center in the brick building which was originally the farm residence. A well-baby clinic and maternal health program, started in Penn-Craft, has become part of a larger, better-equipped center in the nearby town of Brownsville.

Cooperative enterprises.—The Penn-Craft Cooperative Store, started with 5 members and a capital of $25, soon after the project was undertaken in 1937, grew slowly. It had 20 members (and 30 partly paid up) and $150 capital by the middle of 1939; a year later its membership had increased to 54 and its capital to $256. Originally, membership was limited to families living on the project. This, however, as the preceding figures indicate, placed a very definite limitation on the size and usefulness of the association. Membership was therefore thrown open to persons in the surrounding localities, resulting in a quick expansion. By September 1946 the association had nearly 500 members and was doing a business of some $7,000 per month. A new building has been constructed, and it is occupied by the store and a cold-storage plant which is a department of the store. This plant has 340 lockers, all rented; an addition of 215 will be built as soon as sufficient capital is raised. Lockers rent for $12.50 per year. As the facilities are expensive to build, locker patrons, even though already shareholders in the store association, are required to contribute $35 capital each. Much of the surplus garden truck, formerly canned by the housewives, is now being frozen and stored in these lockers. When the Bureau's representative visited the plant, in September 1946, several whole slaughtered beef animals, not yet cut up into meat, were hanging in the big freezer room. Practically all of these and the meat contained in the individual lockers, according to the project manager, came from animals raised by the members. The amount of such production will be considerably increased in the new 10-acre homesteads if present plans are carried out. The credit union started in mid-1940 was not successful and was liquidated. Another is now being planned.

Sources of cash employment.—The coal mines, of course, are the main source of cash employment, but the community has one industry of its own—a knitting mill specializing in women's sweaters. This factory, a large well-ventilated well-lighted plant, was built by the homesteaders, each donating 100 hours of work. It was forced to suspend operations during the war, because of inability to obtain yarn of the quality needed but is now leased to a private employer.

Here 80 people are employed; as the community cannot furnish sufficient number of workers, some 70 percent are from the territory around Penn-Craft. The girl employees earn from 80 cents to $1.00 per hour; the boys earn up to $1.07. The workers have recently joined a United Mine Workers District 50 local. The mill is running full time, and has a good market. Its output is divided about equally among the New York, Chicago, and San Francisco markets.

The community farm, previously operated by the management, has been sold to a young homesteader.

Iona (Idaho) Self-Help Cooperative

To fulfill an urgent need for habitable living quarters, for amounts which they could pay, 15 families in Iona, Idaho (later joined by 6 others) undertook a self-help housing project in 1934. A small revolving fund was obtained under the State-Federal self-help program in effect at that time, and this was used to make loans to members for housing purposes.

CONDITIONS OF LOAN

Under the plan, each participant was required to own a lot with title clear. Upon fulfilling this requirement he received a cash loan from the revolving fund in an amount not exceeding $500, plus a loan of cooperative labor (i. e., part-time assistance in the construction of his house by his fellow members). If his application was favorably received by the cooperative, it was forwarded to the State corporation and his lot was deeded, as security, to a disinterested trustee acceptable to him and to the corporation. The cash loan was made available and the materials necessary for construction were purchased by the cooperative's bonded accountant, so that the actual money did not pass through the hands of the borrower.

Construction was usually begun in a slack period when other employment was not available. On a particular dwelling the labor contributed by the borrower's fellow cooperators was charged against him and credited to their individual accounts on the books of the cooperative, at the rate of 30 cents an hour. This labor had eventually to be repaid by the owner with his own labor on other members' houses.

The cash loan usually had to be repaid over a period of from 2 to 5 years. Payments ranged from $3 to $10 per month, which was generally less than the amount previously paid in rent. When the loan was repaid and the labor claims also satisfied, the borrower received title to the property.

Generally, three loans were necessary to provide for the construction of a complete house. The first loan provided the concrete basement, which was arranged into several rooms—ordinarily, kitchen, living room, and two bedrooms—so that it could serve as living quarters while the first loan was being repaid. The second loan covered the cost of the shell of the superstructure—walls, roof, and windows. The third loan provided for the material for finishing the dwelling. The houses were equipped with cesspools (as there was no general sewage system in the vilage), running water, and electric lighting. All of these represented luxuries, compared to the conditions under which the members formerly lived.

Thus, in a period of 6 to 10 years the family was enabled to pay for a home worth some $2,000 to $2,500, without owing more than $400 to $500 in cash at any one time or paying more than $12 in interest in any year. The exchange of labor of course accounted for a very great reduction in the cash outlay otherwise necessary. Such labor was carried on under the guidance of a carpenter member. Also, in order to reduce cash expenditure, the members salvaged materials from old buildings being demolished, made building blocks, utilized native stone (replacing the concrete originally used, which had to be purchased), and effected various other economies.

In case of sickness the borrower was given an extension of time on his loan. In order to protect the families in case the breadwinner died, the association adopted a plan of "widows' insurance." Under this plan each borrower paid 10 cents a year on each $100 of his cash loan still owing. If the borrower died, the association would take a mortgage in the amount still owed and give the widow a deed to the house, permitting her to live there the rest of her life without further payment. Upon her death the heirs could obtain possession by repayment of the mortgage; failing this, the house would revert to the association.

The housing project was successful and made earnings from the start. In the first 6 years of operation the revolving fund grew (by payment of interest, fines for delinquency, etc.) from $1,650 to $3,000. Although the fund provided sufficient money to finance the participating group, one of the leaders pointed out that "if there had been more in the fund we could have touched more people. As it was, we had to limit our membership growth to those we had funds to serve."

OTHER JOINT ACTIVITIES

The success of the housing venture led the group to look about for other ways in which the living standards could be improved by cooperative means. Medical and dental care were obtained under a plan worked out with two local physicians and a dentist, by which each member family could obtain up to $50 worth of care. The bill was covered by a rider (or mortgage) on the house contract, payable after payment was completed on the house.

A credit union (with about $100 in capital) was started and not only aided in the credit problems but assisted in a food-conservation program which the group undertook. Garden plots were worked to produce food for the families' consumption. In the spring of 1938, each member family pledged itself to store, by 1940, ten 10-gallon cans of nonperishable food, and to raise, each season, one animal to butcher. This was "in anticipation of future economic depressions," and with the idea that it would enable the family to weather 6 months without distress.

One member wrote, regarding his participation in this program—

> I just butchered our self-help pig which gave us 315 pounds of meat. We have enough lard to last our family a year; also some bottled sausage. We will have our winter's meat and two cured hams and some salt bacon for next summer. We fed this pig lots of weeds from the garden and scraps from the house, together with $6 worth of wheat, and we sold a litter of pigs for $40. We have on hand now 600 pounds of flour, 30 sacks of potatoes, 400 pounds of squash, about 100 pounds of dried beans, together with a lot of carrots, dried corn, onions, cabbage, etc. We have only 1 ton of coal, but we have cut enough willow to last us 3 months.

At the end of 1938 some of the families still had insufficient milk and butter. The group therefore voted that every family without a cow must take a loan of $5 from the credit union. This was to be used for the purchase of a heifer calf, in the spring of 1939, to be raised as a source of these products.

Thus, in the course of the program, the families learned to work together for their own benefit and for social purposes. By helping themselves they improved their living standards, raised their morale, and learned new skills which contributed to their economic rehabilitation.

Oakwood Community, Chapel Hill (N. C.)

The project at Chapel Hill was directed by the Service Employees Corporation, a private organization whose stockholders were key men in the business organization of the University of North Carolina. This corporation was formed in 1936 for the purpose of providing social and recreational facilities. The corporation having assisted three employees to obtain building sites on easy terms, one of its officers conceived the idea of providing houses, largely on the basis of exchange of labor, for the building service and maintenance workers employed by the university.

Membership in the housing group was limited to employees in the university service plants (building-maintenance department, laundry, service stores, and accounting, purchasing, and clerical divisions) and the university auxiliary enterprises which serve the university and the town of Chapel Hill (water department, telephone exchange, and electric light and power production and distribution).

The housing scheme was launched in March 1940. Employees who wished to participate were invited to come together and organize themselves into the "Employees Housing Group #1." Members were to work together under a foreman selected by themselves, the project being under the auspices of the Service Employees Corporation. A 40-acre tract of land, about 2 miles from the center of Chapel Hill, was obtained for $2,200 and was christened "Oakwood." Part of the ground was laid out in 50 plots 125 by 160 feet. The lots were priced at $210 each and were distributed by the drawing of lots. It was planned to erect the houses, 3 at a time, in the order of the number drawn. Thus, holders of lots Nos. 1, 2, and 3 were to have their dwellings built first, then those of Nos. 4, 5, and 6, and so on.

Under the plan the amount to be expended on materials was limited to $2,000 per house, and no loan could exceed 2½ times the borrower's annual income or a maximum of $4,500.

An architect was engaged at a fee of 2 percent of the cost of construction— a saving of 2 percent. Bids for the main structure of the houses were let on contract. The Service Employees Corporation purchased the building materials and supplies on competitive bids, and the fixtures and equipment for the houses were bought through a local wholesaler at a saving of about 25 percent. All of the road building, clearing, grading, and basement and septic-tank excavation was done by the participating members, as well as the painting, electric wiring, and installation of the plumbing and the heating system.

Labor accounts were kept in terms of hours worked, the member receiving credit for time worked on other members' dwellings and being debited with hours worked by them on his house. The project was financed from funds of the Service Employees Corporation, by loans from an insurance company, and by FHA insurance. Title to the property was retained by the corporation until each participant had satisfied his labor debt. When that was done, the member received a deed to house and lot and was financed for the exact amount expended on it.

The project involved a total of 14 houses of brick or frame construction, in a variety of styles. These dwellings ranged in cost from $2,750 to $5,000, or about 25 cents per cubic foot. The labor cost of the typical house of five to six rooms averaged about $1,200, of which the personal labor of the members accounted for about $500.

The member had to make a down payment of 10 percent of the total value, but of this the cost of the lot constituted a considerable proportion. Initial monthly charges on a typical house averaged $21.54 plus $1.80 for taxes and insurance, or a total of $23.34.

Watsonville (Calif.) Project

This project was initiated by two businessmen (brothers)[1] of Watsonville, but involved a considerable amount of self-help by the families which participated. The idea originated in 1938, as a means of retention of four skilled workers on the farm of one of the brothers, as well as of disposal of surplus land in their grandfather's estate, not fitted for the irrigated agricultural operations of the district.

Watsonville was and is the business center of a fertile farming region, devoted to large-scale production of apples, lettuce, artichokes, and other truck crops. Large amounts of agricultural labor were needed, but local housing facilities for them and other low-income workers were deplorable. Many, for lack of more reasonably priced accommodations, were living in shabby tourist cabins for which they were paying $5 a week.

FIRST GROUP OF DWELLINGS

A 13-acre tract owned by the Porter family was divided into 5 plots of 2 acres each and 1 of 3 acres. As no local banker was willing to finance the scheme, the brothers signed a note for the entire obligation. To carry out the project, a new company (Pioneer Homes, Inc.) was formed. FHA insurance was obtained under Title I of the National Housing Act, under which no down payment was required.

The land was sold to the families at $200 an acre. The house was a structure, 24 by 24 feet, divided into four rooms—living room, two bedrooms, and kitchen. It could be built for about $300. Running water was the only modern convenience provided in this first group. Building materials and tools for this and later groups were obtained through the building supply company of one of the brothers. It was agreed that the men of the families would undertake to provide whatever outbuildings were needed. The total obligation assumed by the tenant was therefore about $700. As the men contributed their labor, by the time the house was completed the family already had an equity of 25 to 35 percent. The remainder of the obligation was to be paid off in 5 to 7 years, in monthly payments ranging from $10 to $15 per month.

PROCEDURES FOR LATER GROUPS

As the plan became known, more applications were received than the sponsors could accommodate. A second group of dwellings was undertaken, on a tract a short distance from town, lying between the county road and the main railroad line between San Francisco and Los Angeles. As, normally, 53 trains a day pass over this route (more during wartime), the sponsors thought this would be a drawback. To their surprise, the plots nearest the railroad were spoken for first; the people liked to hear the trains going through.

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[1] John and Tom Porter.

These and succeeding homes were built under Title II of the Housing Act (as amended), which required a down payment of 10 percent, but allowed the purchaser to make this payment in labor. The later dwellings had more modern conveniences and cost considerably more than the first group, but embodied the same self-help principle, and the purchaser had as long as 15 years in which to pay off the mortgage loan.

Altogether, some 70 houses were built in Watsonville, 24 in San Jose, and 19 in Stockton, on land totaling about 400 acres. The plan was aimed to care for low-income families for which no housing (within their means to purchase) was available, and for which none was being provided. They included families of agricultural workers (local and migratory), mechanics, artisans, low-paid clerks, etc. Of the first 37 families provided for, only 4 earned as much as $1,200 a year, 7 earned between $600 and $800, and 4 had an income of less than $600 per year. For the first 6 families the average cost, as noted, was about $700; this did not include the value of the man's contribution in labor. For the $1,200 income group the average cost was about $1,360, and for the lower income groups the average was about $950. For these houses the monthly payments per house ranged from $10.32 to $19.89.

In this unorthodox proceeding, in which the purchasers were penniless and had no initial cash stake, the sponsors counted on their self-interest. The brothers felt that the prospect of permanent ownership of a well-built house which the families could obtain for monthly payments smaller than they had been paying for inferior rented quarters would be sufficient incentive to make them "stick." That they were justified in this belief was indicated by the fact that at the end of the first year not one of the first 37 families housed was in arrears; during the first 2-year period only one family was unable to keep up its payments.

SELF-HELP FEATURES AND PROCEDURES

This plan did not embody the Rochdale principle of cooperative ownership; here each family purchased its own home outright. Neither did the plan utilize the exchange of labor which was the principal feature in the Iona and Penn-Craft projects. In Watsonville, each man worked only on his own house.

A family accepted for participation, in Watsonville, was given a choice of house plans within price limitations varying according to its income. The required family equity (in contributed labor) would be 10 percent of the purchase price (land and house) plus closing charges. The man would be shown a cost sheet giving, in the form of "subcontracts," various processes open to him to perform if he was qualified to do so. These were so designed that even an unskilled worker would be able to acquire his 10-percent labor equity; a man with some skill would acquire considerably more.

For each of the processes performed he would be credited with an equivalent value, based on the records of similar work at union rates. The "subcontracts" covered such work as clearing and leveling the land, shoveling, excavating for septic tank and for 45 feet of drain, digging for the foundation, pouring concrete, laying the subfloor and the sheathing for the roof, certain inside carpentry, some interior and exterior painting, etc. The early experience demonstrated the need of trained supervision and this was supplied in the later dwellings.

Local unions cooperated by relaxing their restrictions, to allow a qualified person to perform any work on his own home, in order to establish his labor equity. Union cards were required only for work requiring inspection (such as plumbing and electric wiring). In San Jose the plumbers' union permitted the home owner to serve as plumber's helper on part of the plumbing job; painting was allowed only on condition that it be started and finished by union labor.

Problems, of course, arose. In some cases the labor contribution lagged because paid employment left the home owner little time for work at home. Some of these families were permitted to move into their unfinished houses and to complete their labor contribution later. In other cases, the other extreme was noted; men became so interested in building their new houses that they neglected paid jobs, even to the extent of family privation. The sponsors therefore discouraged any construction work that interfered with cash employment.

In some of the last houses built under the plan, before the war stopped private building, houses were erected on plots of city-lot size. In the others, enough land went with the house to permit a good deal of subsistence gardening, as well as the keeping of chickens, a cow, and even a pig or two in some cases. One man specialized in berries and cleared some $1,200 in 1945 on this crop alone. Another, a former Alaskan "sourdough," made his place almost self-sustaining; this became his vocation, and he took paid work only in amounts sufficient to meet expenses that had to be paid in cash.

Chapter V.—Other Joint Housing Projects

Sponsored by Cooperative Housing Associations

CRESTWOOD COMMUNITY, MADISON (WIS.)

Crestwood is the name of the housing development sponsored by the Wisconsin Cooperative Housing Association, in Madison.

The original group that planned the housing project consisted of persons employed in the various State offices. Through their organization, the Wisconsin State Employees' Association, the first steps were taken in 1936. Later, that association gave way to the housing association proper. Present membership includes not only State employees but also Federal employees, members of the State university faculty, a few local businessmen, and some returned veterans.

Actual construction of the houses did not begin until 1938. In the interval, a tract of 75 acres of land (space for 200 dwellings) was acquired in a convenient suburb, and plans were drawn up for a large-scale development of houses of harmonizing architecture with the understanding that all houses would be owned by the association and leased to the individual members according to accepted cooperative standards.

Long negotiations with the Federal Housing Administration, from which it was desired to obtain loan insurance, resulted in the association's changing its original plan and providing for individual ownership of both lots and houses. This long delay also entailed considerable loss to the association, in preparation and scrapping of plans and in decrease of members as they lost patience and interest. Finally the project plans, covering 20 houses, were approved by FHA, and construction of the first house began in August 1938.

Community Lay-Out

By taking over the entire tract, the association was able to plan in advance the lay-out of a whole community. In this work the association was fortunate in having the assistance of a member with long experience in land utilization. Under his guidance, the plotting of the tract was carried out after a topographical survey had been made, to insure the use of all the natural features to the best advantage.

The whole tract (about half a mile long and quarter of a mile wide) forms a natural amphitheater, with the land sloping up, first gently, then more steeply, to the south, west, and north. The elevation at the highest point is about 1,000 feet above sea level, representing a rise of about 100 feet from the lowest point of the "bowl." The to of the slope is thickly wooded (hence the name "Crestwood") and it is planned to leave this as community land for everyone to enjoy.

A broad avenue, named for the land-utilization adviser (who was the first president of the association), curves through the tract at the edge of the central bowl, and from this avenue dead-end streets run up toward the woods, providing quiet as well as safety from traffic. The wooded slope affords shelter from the north winds and shade in the afternoon. The slight pitch of the streets (which have center drainage) helps to keep the streets free from rain and snow. A narrow strip of community land also runs down between each two cul-de-sacs. In the section that has been developed, one of the strips contains a fully equipped playground, with a supervisor in charge during the summer months. Here also a skating rink is maintained in the winter. In the next park strip, which has a 40-foot drop, other winter sports, such as skiing and tobogganing, are planned. Altogether, about 20 percent of the entire tract is left as community land, title to this area being held by the cooperative association.

In the lowest part of the bowl, near the center, lies an area with rich alluvial soil, which is used for home gardens. Each member is free to utilize a section of this area. In the garden area the association also maintains a tree and shrub nursery with over 6,000 plants, buying these when very small and raising them until they reach usable size. These products are available at cost.

Crestwood is situated on the outskirts of Madison, 5 miles from the State capitol. It is served by a bus line, and members can reach the city in 10 to 15 minutes' ride. There is a grade school at the edge of the settlement. A shopping center, providing varied services, is situated about three-fourths of a mile distant.

Financing of Community Services

The association was incorporated for $100,000 of stock, half common and half preferred, at $50 per share. The non-interest-bearing common stock, of which each member had to have 3 shares, went as payment for the land.

When the association purchased the tract, electricity was available, but there was no water supply and the metropolitan sewer system ended a mile away. Both water and sewer, therefore, had to be furnished by the organization. The proceeds from the preferred stock were used to help finance the installation of the water and sewer system and each member was required to purchase a minimum of 6 shares. Bonds totaling $7,000 were also issued.

A 350-foot well furnished the water, the pumping machinery being housed in a neat station.

The association organized a sanitary district to sponsor the installation of the sewer, turned over to it the sum of $11,000 collected in preferred stock,[1] and received in turn 30-year assessment bonds paying 5 percent interest. The money was used to build a mile-long installation, connecting with the Metropolitan Sewer District trunk sewer, and to lay sewers in the streets of the subdivision. This connection will be controlled by the association for 30 years, during which period, if other subdivisions wish to use the sewer, a portion of the original cost must be assumed by them to retire the bonds held by the Cooperative Housing Association.

The surfacing of the streets was done by the township, but the previous leveling of the street space and the razing of the farm buildings originally on the place were done by the association and cost about $2,500.

When the association has completed development of all the 200 houses that can be accommodated on the land, it will have received more than $100,000 for its stock and land. The difference between actual outlay and this figure represents the association's "potential net earnings," which may be distributed to the members in the proportion that their outlay has borne to the total or may be used for further community development, as the members decide.

Cost to Individual Member

In order to insure that all the members shall be "active," the bylaws specify that no person shall be admitted unless he "executes and files with the association a written statement that he intends to participate in the cooperative housing program of the association and to make his residence in the community * * * as soon as reasonably practicable and feasible."

Each person accepted is required to subscribe for 3 shares of common stock at $50 per share (to apply as part payment on the lot selected). These shares may be paid for in installments, but if so a promissory note or other evidence of indebtedness must be given, the voting privilege being extended after at least $50 is paid in.

Having been admitted to participation, the member is entitled to select a lot. Selection is by "priority of the dates of stock subscription." The lots average 60 by 120 feet. The basic price per lot is $450, but the more desirable locations run higher. In fixing the price, certain "desirability" factors (seclusion, view, and environment) were taken into consideration, each factor carrying an extra charge of $50. For the less desirable lots, the $450 covers the total cost of lot and stock; for the most desirable the cost runs as high as $600, and one lot.

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[1] By the end of 1946, it was reported, most of this preferred stock had already been retired.

high on the hill road, was priced at $700. The average cost of the lots already bought is about $500. This represents a considerable saving from the current local prices for fully serviced real estate, and it is possible that the price may eventually be still further reduced by refunds, after the entire development is completed and all costs are computed.

When the member has completed payment for his stock, plus any "desirability" factors, he receives title to his land. He is then ready to negotiate for a dwelling. Ordinarily,[2] from this point onward, he acts for himself. The construction of his house is his responsibility, except that he may utilize one of the association's floor plans drawn for the association under the original scheme of collective ownership.

Before construction may be undertaken, the plan chosen must be submitted to an architectural committee, in order to insure that the style will not clash with that of the rest of the houses. The total cost may not fall below $3,000. The member must also furnish evidence of eligibility for FHA insurance or of ability to finance construction without such insurance.

Some of the members have reduced costs by doing some of the work themselves. Thus, one member who was an electrician wired his own house. He and several of the other members did their own painting.

Most of the financing was done through two local lending agencies, with FHA insurance. The member's monthly expense includes amortization payment, interest, and certain community charges. These latter include water rent (proportioned to use, minimum $17 per year), and 25 cents per month for garbage collection. The assessment for sewer is incorporated in the taxes and averages $2 to $3 per year.

A member desiring to withdraw has the right to sell his house, provided the purchaser is acceptable to the association, and provided his stock is transferred to the purchaser. However, he must give the association the first option to buy.

Types of Dwellings

The houses exhibit a variety of architecture and of material. One of the larger houses has a field-stone front. Several are of wood, being either painted or stained, but perhaps the greatest number are constructed of 8-inch concrete blocks with cores filled with waylite. In architectural design, the dwellings range from the Cape Cod cottage to the most modern style. In cost, they have ranged from $3,500 to $6,500; before the war the association tried to discourage the building of houses costing more than $5,000.

All the Crestwood houses are of the one-family type, consisting of a kitchen, dining room or breakfast nook, bathroom, living room, and

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[2] But see p. 60.

(with one exception) two or three bedrooms; the exception is a four-bedroom house. They are equipped with oil burners, and a number have fireplaces as well. All but two have built-in garage. A recreation room is also a feature commonly found. Each house has standard plumbing and electrical equipment, and about half the houses are of fireproof construction.

Practically none of the dwellings faces squarely any of the cardinal points of the compass. Generally the house is turned slightly, so that each room receives sunlight at some time of day.

Present Status of Association

Up to November 1946, only one division had been opened, and construction had taken place on only the three northernmost cul-de-sacs and the outer (hill) road. In that section, 38 dwellings had been completed before war conditions halted private building. During the war period, all but 2 of the vacant lots remaining were sold to new members. However, as most of these were not veterans and could therefore not obtain priorities, only 6 houses (all those of veterans) have been erected since the resumption of building.

An additional street was opened for development in the autumn of 1946 and one house had been begun by mid-November 1946. Another street will be opened in the summer of 1947. Installation of sewer and water facilities for this additional land was financed by the sale of 4-percent 10-year callable bonds. This bond issue was offered to members of the housing cooperative and is reported to have been oversubscribed 75 percent. The new facilities are part of the Crestwood Sanitary District, the commissioners of which are three member-residents of Crestwood. The sanitary district now also includes the adjoining section of Glen Oak. Several parcels of unimproved land in that section have been bought by the Wisconsin Cooperative Housing Association; its lots there are being sold at prices ranging from $150 to $300 each.

In 1940, using funds loaned at 2 percent by an anonymous lender, the association undertook a new step—the building, itself, of dwellings at cost for prospective members who do not have the time or inclination to proceed individually. Three such houses had been erected before the imposition of wartime building restrictions. In such cases the procedure is as follows: The new member is required to purchase the lot, on the usual basis or, possibly, may even be accepted on a rental basis, the accrual over expenses being used to finance the family membership. When the householder has paid for his lot he makes the usual arrangements with a lending agency and the FHA. The loan from the lender is used to pay the housing association and the money thus released is used in the construction of another house on the same basis.

Extent of Cooperative Enterprise

The achievements of the cooperative association have been the following: (1) The purchase and plotting of the tract, (2) the financing and installation of a water and sewer system, (3) the creation of a sanitary district, (4) the furnishing of architectural service, (5) the supplying of title insurance for members, and (6) the building of a small number of houses itself. As noted, all but 3 of the houses were constructed by individual contract and the association has no control over them except to pass upon the general style of architecture, to see that the cost does not fall below the minimum of $3,000, and to pass upon the acceptability of purchasers. A withdrawing member must give 60 days' notice and give the association the first option to buy, at either par or book value (if the latter is less). Should the association not exercise its option, no controls are imposed as to sale price. During the life of the association several dwellings have been sold, but none, it is said, "out of line with relative costs of building." Two houses for which disproportionate prices were asked remained unsold "because members of the community do not care to have their friends buy at the prices asked by the owners."[3]

Each member has one vote only, regardless of his investment, and no proxy voting is allowed.

In November 1946 the association was negotiating with the U. S. Weather Bureau for an arrangement whereby the latter would install equipment for the measurement of south-exposure solar radiation, to determine its value in the heating of houses. Some use of this principle has already been made in Crestwood; the first president of the association reports that its use has made possible the heating of his 6-room house, with oil heat, for less than $75 per year.

Other cooperative activities.—Many of the electric fixtures were bought through one of the members (a dealer in such appliances), at a saving of about 25 percent; stove, refrigerator, and water heater together cost only $250. Some furniture was also purchased collectively, at a saving, by special arrangement. Cooperative purchase of eggs, poultry, etc., is also carried on. The housewives alternate in acting as agent, taking the orders and receiving and apportioning the goods.

A large proportion of the residents are members of the cooperatives of the city, these including a gasoline service station and store and an association giving dry-cleaning service. As most of the members work in town and thus have to go in every day, these associations can fill their wants conveniently. The fuel oil for all of the furnaces is supplied by the petroleum cooperative.

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[3] **Letter to Bureau of Labor Statistics from John S. Bordner, October 1, 1945.**

ST. PAUL (MINN.) HOUSING PROJECT

The Cooperative Housing Association of St. Paul was formed in September 1939. Construction began in July 1940.

The association, composed of members of credit unions of Federal, State, and city civil-service employees, purchased from the State 72 lots which had reverted because of nonpayment of taxes. On this property, gas, electricity, water, and sewer had already been installed as well as streets. Only curb and sidewalks were lacking.

The land on which the project was developed lay on an elevation at the northeastern edge of St. Paul, about 3 miles from the center of the town. A grade school was about 3 blocks away and a high school about a mile distant. Four blocks from the project was a bus line, accepting token fares and offering transfer privileges.

Financing and Procedures

The association had no capital stock. As each member joined the association he paid a $5 membership fee and agreed to buy a lot and construct a house on it. The project was financed through the sale of lots to the members, by loans from the St. Paul chapter of the Minnesota Credit Union League, and FHA insurance.

The lots, with an average frontage of 40 feet, were replotted into 48 lots with a frontage of 60 feet. The depth varied from 112 to 126 feet. There was also a 20-foot alley. The cost to the association was $75 per 40-foot lot (or $112 on the replotted basis); the price to the member was $350. The difference was used for association expenses, any surplus being returned in patronage refunds.

Minnesota has a strong credit-union movement, with large accumulations of funds. As the State act permits credit unions to make real-estate loans, the central credit-union organization qualified as an FHA lending agency and proceeded to make mortgage loans on a 25-year basis to finance the individual dwellings. FHA insurance was then applied for, and in most cases the maximum FHA insurance of 90 percent of the appraised value was granted.

With one exception,[4] a single architect served the whole group of owners, receiving as his fee 3 percent on the total cost.

Likewise, one contractor had charge of construction of all but one of the houses.[4] With this contractor, the association had a contract by which he guaranteed his bid on each house; if the final cost exceeded this amount he was to bear the extra expense. If there was a saving, it had to be returned to the member, to increase his equity in the property.[5] His bid was based upon cost of construction (materials and labor) plus architect's fee, plus a $100 "cushion." The contractor's compensation consisted of a flat fee of $250 per house.

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[4] The exception was a member, himself an architect, who was allowed to draw his own plans and supervise construction of his house.

As the association's charter authorized it to act as contractor, the selection of materials and the letting of contracts for them were done by its board of directors. In this the association tried to make use of all possible sources of assistance and information, in order to insure the best quality. Results of tests by recognized testing agencies were used, and valuable help was received from the State university.

Prefabricated materials and standard equipment were used whereever possible. Thus, although a few of the houses were plastered, the majority were finished with tinted Upson board—a prefabricated material that comes in sheets 8 by 16 feet (doing away with joints that might let in drafts), the space between the walls being filled with 2 inches of glass wool, vapor sealed. Heavy plywood was used in subfloors and in outside wall and roof sheathing; this construction was cheaper and made for a more rigid house, with less air leakage. A factory-finished oak flooring was used in all houses.

As the dwellings were constructed in groups of about 10 and the contracts let on the basis of 25 houses, it was possible to do quantity purchasing, such as carlot quantities of lumber and plywood, and gross orders of standard plumbing fixtures, window glass, and other requirements. This resulted in substantial savings. On the lighting fixtures and refrigerators about 40 percent was thus saved, and nearly 50 percent saving was realized on some furniture bought jointly.

Again, by building a number of houses simultaneously, efficient use of labor was possible, each crew of workers performing the same task from house to house and being succeeded by the workers performing the next process in construction.

Only persons belonging to some St. Paul credit union [6] were accepted for membership. Prospective members were also required to supply information on their employment, income, number of dependents, and financial obligations, in order to determine their eligibility from a financial standpoint. Members joining the association had to purchase a lot, at a price of $350; this sum, which included the $5 membership fee, represented a considerable part of the 10-percent equity the member must have to obtain FHA insurance.

The cost of the individual house depended upon the size and style selected, and upon the quality of the equipment that went into it. If the member desired extra-fine hardwood flooring, or a deluxe refrigerator, these of course brought up the cost. However, as the members for whom the dwellings were built all had modest incomes (averaging less than $200 per month in 1940), the houses were also of moderate-priced styles. The buildings ranged from the 2-bedroom, living room, kitchen (with dinette), and bathroom dwelling to a 7-room house with 3 bedrooms, living room, kitchen, dining room, and bathroom. All the houses were of frame construction. Many had fireplaces, a few had recreation rooms, and nearly all had garages (built separately from the house).

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[5] An FHA regulation forbade the return of such savings in cash; the amount must be used to reduce the mortgage.

[6] As credit unions are allowed to make loans only to members.

The maximum bid cost ranged from $3,750 to $5,400. Savings (estimated at about $100 per house) were returned to the individual members in the proportion that the contract price of their house bore to the total cost of all the houses. This prorated sum was applied to the reduction of the member's mortgage. The "profit" which the association made on the lot was to be returned to the members, after deduction of expenses.

For these houses the average cost to the member was about $35 per month, with a maximum of about $40. This sum included amortization, interest (4½ percent, plus ½ percent for FHA insurance), and taxes. These payments began 30 days after the member moved into his dwelling. No other down payment than the value of the lot was required from the member, if his house cost $3,500 or less. Above that amount he had to pay down 10 percent of the excess over $3,500.

The association's officers emphasized that the cost to the member was about what he would have paid at that time to a private builder for the same style and size of house. However, under the association's plan there was no profit for anyone, as officers served without pay, and architects and contractors were on a fee basis. All subcontracts and material contracts were subject to approval by the board, which likewise controlled all payments. The entire cost of the project, therefore, was under the control of the association. The officials were convinced that, because of economies effected by carlot purchases, by standardization (as of window and door openings), and by systematizing the use of labor, the quality obtained in both materials and workmanship was considerably above that which would be obtained in houses of the same price under separate contracts. In other words, the association made available to a moderate-income group, for amounts they could afford to pay, dwellings of a quality that would otherwise be out of their reach.

Cooperative Activities

The activities of the cooperative association in this case included the purchase of the land, the engagement of architect and contractor, and the letting of bids for materials and equipment. It held title to the individual plots until sold, then turned them over to the purchaser. The latter then negotiated with the association's architect and contractor for the kind of house desired, and when he moved into it the association's responsibility ended.

In the purchase of refrigerators, electrical equipment, and furniture, the association patronized the two nearest cooperative wholesale associations. In houses in which Upson board was used for interior wall finish, the walls were tinted with a casein wash made by a cooperative creamery association in Minneapolis.

There are in St. Paul various local cooperative enterprises—a store association, gasoline cooperative, etc.—and a large proportion of the original members were also members of these. Most of the houses were equipped with oil-burning furnaces, and the fuel oil for these was obtained from the petroleum cooperative. Cooperative life and automobile insurance was also available.

In the association each member had one vote. He owned and had title to his individual dwelling, but if he desired to sell his house within the first 5 years the purchaser had to be acceptable to the association. If not, he had to give the association the right to purchase it for what it cost him or at an amount set by an arbitration committee. Apparently these provisions were not enforced and, as prices rose, "speculation was rampant." Houses were sold three or four times, at continuously rising levels. The association is now dormant and plans no further activities. A recent report from the former president expresses the opinion that, from the cooperative point of view, "our efforts were somewhat of a failure."

MINNEAPOLIS (MINN.) HOUSING PROJECT

The Cooperative Housing Association of Minneapolis was started in February 1940. Construction was begun on the first house in September 1940.

As in St. Paul, the association bought the land for its project from the State, paying for it at the rate of one-third of the tax assessment which was delinquent. Some 59 lots in 5 different adjoining blocks in northeast Minneapolis were acquired in this way. The lots were 40 by 125 feet, but were replotted into lots 50 and 60 feet wide. The average cost to the association was $2.50 per front foot, but the land was sold to the member at $7.50 per foot (appraised FHA value). All of the improvements—water, sewer, gas, electricity, and streets—were already in, but the association was required to pay the regular assessments therefor. A considerable part of the difference between the cost to the association and the sale price to the members went to meet these assessments. The association sued the State for refund, contending that under the law the price of tax-reversion land includes utilities. Its position was upheld by the Minnesota Supreme Court, resulting in the recovery of $4,500.

The land acquired was about 4 miles from the center of town, with a grade school about in the center of the tract, so that the distance traversed by the children was in no case more than 2½ city blocks. The nearest high school was 1½ miles away. Stores were within easy walking distance. The streetcar line was 6 blocks away, but a bus line was extended into the development.

There were, in the original group of interested members, 45 persons. During the interval in which financing negotiations were carried on, 3 members lost patience and withdrew, a fourth lost his net worth by fire, and 10 others were rejected because their incomes were too low to undertake the financial obligations involved. Houses were built for the 31 members remaining and for 56 additional members who joined later—a total of 87 dwellings.

Finances and Procedure

As already indicated, the associate paid for the land an average of $2.50 per front foot and sold it to the members for about $7.50. For corner lots an additional $25 was required.

The architect was hired by the association for a fee amounting to 2 percent of the cost of the houses.

A master contract for the whole group of houses was made with a large contracting firm, by which the latter received a fee amounting to 3½ percent of the total cost of the dwellings (minus the architect's fee), and for which the contractor agreed to manage the construction of all the houses. The company guaranteed to keep the cost of the houses within the amount of the maximum bid, or failing this, to meet the excess cost itself. As an incentive for saving on the cost of construction, the contract provided that 25 percent of the first hundred dollars of any such saving should go to the contractor and the remainder to the owners. The contractor, however, had the privilege of totaling costs for all houses, so that a surplus on one could be used to take care of a deficit on another. The association controlled the purchasing done by the contractor; no purchase could be made or subcontract let without approval by the association's board of directors.

The contract also provided that the work on the houses should be done by union workmen receiving the prevailing union scale of wages, and the contractor agreed to give the carpenters a bonus of 50 percent of their regular hourly rate for every hour of labor saved from the contractor's estimate.

The bid prices on the houses ranged from $4,100 to $6,000. The average or typical house cost about $4,700, or from 28 to 30 cents per cubic foot. All of the houses were of frame construction, and were equipped with all modern improvements, including furnaces using natural gas.

As in St. Paul, considerable reductions in price were obtained by quantity purchases. The officers estimated that at least $200 per house was saved on the cost of materials and equipment. Other savings resulted through the use of the Torrens title (i. e., the taking of title to many lots at once), in attorneys' fees, and in title charges. Whereas the title charge for one lot was $25, when the title covered 3 or more lots the charge averaged only about $7 per lot. Because the association held title to the whole tract, title insurance was unnecessary and the cost of insurance was therefore saved. Lower tax rates were also possible because of the larger valuation covered by the single tax title.

Cost to Individual Member

Each member was required to furnish information regarding his financial status and to pay a membership fee of $5. He selected his lot in the order in which he came into the association. According to the size of the lot chosen, this cost ranged from $300 to $450. The average was about $375.

Although this constituted most of the 10-percent equity the member had to have in order to qualify for FHA insurance, he might also have to furnish an additional amount varying with the value of his house. Thus, a 90-percent guaranty on a $5,000 house would cover a maximum loan of $4,500. The difference between the two sums—$500—had to be made up by the member. The cost of his lot (average $375) covered most of it, but the remaining $125 and an estimated $50 to $75 for "closing costs" had to be raised by the member. The immediate investment required from the member therefore amounted to about $425 to $600, depending on the cost of his house and on FHA appraisal of its value in the light of style and construction elements which together constitute the "marketability."

The member's average monthly payment (amortization, interest, loan insurance, and fire insurance) amounted to about $24.50 a month on a $4,600 house with a 25-year mortgage. Taxes in the neighborhood, on houses of these values, averaged another $8 per month. The average income of the whole group of members in 1940 was about $1,700 to $1,800.

Sponsored by Labor Organizations

CARL MACKLEY APARTMENTS, PHILADELPHIA (PA.)

The Carl Mackley Apartments,[7] Philadelphia, constituted the first housing project undertaken in 1934 by the Public Works Administration when it was established after the passage of the National Industrial Recovery Act. The project was planned and sponsored by the American Federation of Hosiery Workers (CIO), with the purpose of providing suitable housing for its members, many of whom were living under substandard conditions.

The union exchanged a piece of land owned by it in the downtown section for one of 4½ acres (valued at $85,000) in the Frankford district. A 35-year, 4-percent Federal loan of $1,039,000 was obtained, and additional funds were supplied by the union, by a public-spirited Friend, and by other individuals. A limited-dividend corporation, the Juniata Park Housing Corporation, was formed which supervised the construction and still holds ownership and management of the project.

Housing and Community Facilities

Housing facilities.—The apartments consist of four rectangular buildings of terra-cotta brick and fireproof construction. The whole project covers an entire city block, but the buildings occupy only a third of the space. The rest consists of lawns and recreational space. The buildings are three stories high and, as they run north and south, practically every room has sunlight at some time of the day. No apartment is more than two rooms deep and each one has at least two exposures (those of largest size have three exposures).

The 284 apartments range in size from 2½ to 5 rooms. The monthly rentals range as follows: A 2½-room apartment of living room, bedroom, pullman kitchen (i. e., 2-burner electric plate, cupboard, and sink, closed off from the living room by folding doors), and bathroom (with shower only) rents for $29.00: a 2½-room apartment with kitchenette (i. e., space for table and chairs, in addition to facilities noted above) and bathroom with tub, for $33.50; a 3-room apartment, with full-sized kitchen, for $38.00: a 4-room apartment for $42.00 if on the third floor, and for $43.00 if on the second; a 4-room apartment with a bay window, $46.00; and a 5-room apartment (each with shower as well as tub), $48.00–$51.00, depending on its location. These rentals include heat, water, and electricity. Electric stoves are furnished, but tenants have to provide their own refrigerators. All apartments on the second and third floors have a porch which they share with the neighboring apartment. Waste disposal is through an incinerator in their common hallway. Ample closet space is provided.

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[7] Named for a young hosiery worker who was killed during a strike in 1931; several plaques throughout the buildings commemorate other fatalities in the same strike.

Community facilities.—On the roof of each building is a laundry with windows on both sides; equipped with stationary tubs, electric washers, ironing boards, and electric dryers (used in bad weather). Drying space is provided on the roof outside the laundry. There is no charge for the facilities or the electric current used here. By agreement among the tenants of the building, each family is allotted laundry-use time each week.

Other community facilities include an auditorium where social events and other meetings are held, 59 heated garages renting for $5 per month each,[8] and a large swimming pool. The pool is used by both residents of the project and persons living in the neighborhood, for a nominal fee, but outsiders pay at a slightly higher rate.

Selection of Residents

When vacancies occur, preference is given to union hosiery workers, other unionized industrial workers, and other industrial workers, in the order named. Although textile workers form the largest group in the present population of the houses, many other occupations are represented, including both manual and "white collar" workers. Families with children are preferred. The general requirement is that the monthly family income should not be less than 3 times nor more than 5 times the monthly rent of the apartment desired.

In this project the resident never becomes the owner of either his apartment or of equivalent stock in the association. For as long as he remains in the project he is a renter only.

One apartment is given over to a nursery school, staffed by three teachers and a cook, all hired by the housing corporation. Owing to the limited space, the present capacity of the school is 45 pupils. The facilities are available to both residents and outsiders, with preference to the former. Here, for a fee of $1.25 per week (5 days) the children receive instruction in such subjects as drawing, modeling, block building, and nature study, have supervised rest and play periods, and (if they are all-day pupils) lunch as well. Each child is examined every day by one of three trained nurses who live in the project and donate their services. Naturally with the low fee charged, the school is not self-supporting. In 1945, only about 56 percent of its income came from fees. The housing corporation provided quarters, heat, light, and water, and the remainder was contributed by local hosiery workers' unions and interested individuals or was raised from the proceeds of benefits, dances, etc., given by the residents. It is hoped that the nursery can be expanded when building materials become available.

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[8] A parking lot, formerly operated, had to be given up for the construction of a number of dwellings by a private builder.

Cooperative Activities

Although the first resident did not move in until early in 1935 and the last one not until October, before the end of the year a credit union had been formed. Beginning with only $28 in share capital, at the end of the first year (by March 1937) the association had increased its capital to $5,496, had 200 members, and had outstanding loans amounting to $5,307. Its operations have been continuously successful, and for 1946 it paid a 3-percent stock dividend on the year's operations. Membership and loans are restricted to residents of the Carl Mackley houses, and the business is all transacted on Friday evenings. All help is volunteered, with the exception that the secretary receives a small honorarium.

Out of a small buying club, started shortly after the credit union commenced operations, grew the Juniata Consumers' Cooperative Association. At the time that it opened its store (March 1937) it was the only cooperative store in Philadelphia that was open full time. The store handles both meat and groceries, and has steadily increased its business. By October 1946 it had reached nearly $2,200 per week. Its present problem is that of space; although it has outgrown its quarters no additional space in the project is available. Membership (now about 130) is open to both residents and nonresidents. The association is affiliated with the Philadelphia Cooperative Federation as well as Eastern Cooperative League and Wholesale.

Administration and Finances

The Juniata Park Housing Corporation which is the owner of the property has a board of five directors, one of whom is appointed by the Federal Government. Actual day-to-day management and operation of the houses is carried on by a paid manager and his staff.

The project has suffered from the effects of two early financial assumptions that proved to be mistaken: (1) Largely because of the required use of WPA labor, the total cost of construction proved to be some $200,000 more than had been anticipated. Because of this, certain planned features had to be either eliminated or curtailed. Thus, the auditorium was left without equipment, and the refrigerators which were intended as part of the provided equipment had to be furnished by the residents. (2) At the time the project was started, it was expected that legislation would provide tax exemption for a certain period (as is the case under the New York housing law for limited-dividend corporations). Rentals were set accordingly.

For 3 years, expecting such legislation, the corporation paid no real-estate taxes. At the end of that time, taxes were suddenly demanded for the whole 3-year period—amounting to some $20,000 on an assessed valuation of $660,000. The corporation has never quite recovered from the financial shock thus administered. It has kept up its interest payments on its Government loan, and part of its amortization. Neither the union (which, apart from the Government, is the heaviest stockholder in the corporation) nor any of the other investors has received a penny of interest. An application for a moderate increase in the rents (which are below the prevailing local level, even without considering the unusual facilities provided) was recently filed with OPA. Such an increase would enable the corporation to regain some of its lost ground.

STONEWALL HEIGHTS, FRONT ROYAL (VA.)

The Local Housing Situation

Front Royal lies at the northern end of scenic Skyline Drive in Virginia, in a valley in the Blue Ridge Mountains. A large viscose plant, manufacturing heavy-duty auto-tire cord, is the main industry and employs about 3,500 workers.[9]

The already acute housing situation was aggravated when, at the most critical stage of the war, an extension of the plant was undertaken, doubling its facilities and calling for many additional workers. So great was the housing shortage that workers had to live as far as 25–40 miles away and drive back and forth each day. A trailer camp, installed for the construction workers who were building the new plant, was later made available for the textile workers. Several hundred dwellings were erected with Lanham Act funds, and a private contractor was given priorities for some 300 FHA-financed houses.

Even these failed to meet the need. Also, the union felt not only that the price ceilings (about $8,000 purchase price and about $50 per month rental) were above the level that its members could afford to pay, but that the houses themselves were too small for the workers' families, unsuitably planned, and lacking in storage space.

Late in 1944 the local union (No. 371) formed a housing committee to see what could be done. Its first step was the construction of a sample house. This was undertaken with the idea of ascertaining the price at which a well-constructed house, designed to meet the needs of the members' families, could be built. A tentative goal of $5,000 for house and lot was set, but the final actual cost was $7,800. In the belief that a considerable element in this high cost was the fact of its being a single unit, the union decided to undertake a larger-scale house-construction project.

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[9] Of these, the 3,000 who are production workers are practically all members of the textile workers' union.

About this time 57 acres of farm land on high, rolling terrain, overlooking Front Royal and with a beautiful outlook toward the mountains on all sides, came on the market for $25,000. With funds contributed by union members and friends, this land was purchased and the plans for a whole new community, Stonewall Heights, were drawn. The plans provided for 158 dwellings, with space reserved for recreational and community facilities. For practical and financial reasons a group of only 50 units was actually undertaken.

Problems Encountered

An unusual number of difficulties was encountered. The first was the inability of the local union to hold title to real estate, under the Virginia law. As a result of union efforts an amendment was obtained which removed this disability.

In the beginning the formation of a cooperative association, which would hold title to the property and carry out the project, was considered, but was found not to be legally feasible in Virginia. A regular stock corporation, the Old Dominion Housing Corporation, was therefore formed, the officers of which were on the staff of the Textile Workers of America or members of the Front Royal local union. Because of inability to obtain a suitable arrangement with a private contractor, the Old Dominion Housing Corporation had also to act as its own contractor.

Several months elapsed before the approval of the local planning commission could be obtained. As its approval was conditioned on the widening of the road leading into the property, the corporation had to buy strips of land on either side of the road. Delays ensued because some of the owners were away in war service or there were judgments or mortgages against the property.

As the farm land purchased for the site lay outside the corporate limits of Front Royal, in order to obtain access to municipal water and sewer facilities and to gas and electricity, the corporation had to build connections—an operation that it is estimated added at least $1,000 to the cost of each house. Further, the project was carried out in a time of unprecedented scarcities and one of erratic price rises. During the 12 months in which the project was under way, prices of materials almost doubled. Bricks rose in price from $19 per thousand to $34, and lumber which cost $57 per thousand feet in June 1945 had risen to $78 by April 1946 and was still rising. Other lags, resulting from an unusually severe winter, delayed outside operations and caused difficulties in obtaining supplies and equipment.

All of these situations entailed what seemed like interminable delays, and it was not until June 1945 that ground was actually broken and the construction of the first house was begun.

Not the least of the many difficulties was the problem of financing. Several of the leaders contributed all their savings, local unionists advanced funds, the local unions in Roanoke, Parkersburg, and Front Royal made loans out of the union treasuries, and the national union also helped. Finally a loan was made through a local bank. Nevertheless, funds were barely sufficient to cover operations.

In addition, the project had to contend with local hostility from certain sources, with suspicion as to the motives of the leaders, and with rumors that the whole project was "going broke." Not only did these things make the going harder, but they necessitated the waste of much valuable time and effort to overcome them.

However, by August 1946 all 50 houses were practically complete and a number were occupied, with families moving in each day.

Conditions of Sale, and Price of Dwellings

In order to regulate the sale of the houses, a seniority system was adopted and a registration fee of $10 was charged. Applicants were given their choice of houses in the order of their registration for purchase.

The first few houses completed were built for $5,500 and $6,000, the next 30 cost nearly $7,000 each, and the final lot about $8,000. No profit was involved at any stage. Regarding the nonprofit aspect, a report to the union members made the following statement:

> The architect-engineer was paid on a per unit fee basis for his architectural and engineering services. In this case, his fee was lower than ordinarily charged for such work. The two people who actually ran the job—directed the construction and managed the business on the site—were paid a regular weekly wage, about the same as paid on any job of the kind. The attorney, who also handled all the business details of the job, was paid a weekly retainer and certain minimum fees for legal work performed for the corporation. None of the directors drew a dime. None of the 30 or 40 people who loaned money to the corporation were even given interest on his or her money. * * *
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> A small-town banker in Rockymount, Va., put up the construction loan and the mortgage money. This banker proved to be thoroughly in sympathy with the aims of the union in doing this project and helped the job along in every way he possibly could. This gentleman would want to work with TWUA on similar projects in the future if possible. The fact is that it is very easy to borrow all the money needed from big or little concerns and at banks and insurance companies, for workers' housing, if competent people are hired who will see to it that the plans are properly made and strict business methods adhered to.
>
> It was necessary to pay several thousand dollars of broker's fees for financing and charges in connection with putting this job through which would not have had to be paid if there had been adequate capital to get the job started.

The total costs were averaged and for the whole group of 50 houses the purchase price was set at $6,050.

The purchaser is required to make a down payment of $650 (which includes settlement costs of $114) and monthly payments of $33.68 over a period of about 25 years. It is pointed out that, because of the nonprofit feature of the project, dwellings of comparable size and construction could not be found elsewhere for less than $8,500 to $9,500. Actually, the report made to the union membership notes, the $6,050 charged does not entirely cover the true cost (about $7,800, because of the sharply rising prices). The difference was covered from amounts realized from the sale of surplus land not needed for the project.

The lots average 65 by 130 feet, and the houses themselves are 34.4 by 26 feet. Each house differs slightly in appearance from the others. The construction is of solid masonry throughout, either brick and cinder tile or brick and concrete blocks. Every house has a large living room with fireplace, two bedrooms, bathroom, and kitchen. Each is furnished with a gas or electric range (according to the choice of the purchaser), electric lighting, full basement, laundry tubs, and a hot-air furnace so constructed that it can readily be converted to oil and with ducts that can also be utilized for air conditioning. An unfinished second story provides space for an additional two bedrooms, and some of the early residents soon began work on them.

All streets in the project are to be hard surfaced, with concrete sidewalks. Surfacing of roads and construction of sidewalks was in progress at the time the Bureau's representative was there. Trees and shrubs are to be planted.

As regards the individual purchaser, there were no self-help features involved in this project. The house was delivered to him completed. However, several of the families which had taken possession at the time the project was visited were working on the conversion of the attic space into bedrooms and doing the carpentry, painting, and other work involved, and at least one man was putting in rock wool insulation.

Each purchaser receives title to his dwelling. With a view to checking any tendency toward profit making on the part of the purchaser, the sale contract originally used contained a provision giving the corporation the first right to repurchase if the tenant wished to move away. However, because the corporation actually had no funds with which to carry out this provision, it was useless and was later dropped. By August 1946, one member had already sold his house, realizing a $2,000 profit—a circumstance very disheartening to the leaders who had given so freely of their time in order to insure the nonprofit feature of the project.

Nevertheless, the leaders feel that, aside from its part in alleviating the housing situation, the project was worth while as a demonstration of the possibilities of group action. They emphasize, however, the absolute necessity, in such a project, of responsible, altruistic leadership, and the employment of thoroughly competent technicians.

TULSA (OKLA.) BUILDING-TRADES COUNCIL PROJECT

Early in 1941 the Tulsa Building-Trades Council formed a housing committee. As a result of its recommendations, the various building-trades unions which were members of the council formed a nonprofit corporation in which each took shares of stock. A tract of land was obtained, and arrangements were made whereby persons participating in the plan could take options on plots of their choice. Originally, participation was restricted to members of the sponsoring unions; later any unionist was admitted.

Plans were obtained for houses of the types which would be suitable for the families concerned and contracts were let for five dwellings. It had been planned that the members (building-trades workers) would work on their own houses and be allowed credit therefor on their down payment, at current union rates. However, because of the great amount of construction work entailed by the defense housing program, the men were kept too busy to do so, and all five had to be built in their entirety by the contractor whom the corporation hired. In the end, not one of the houses was bought by building-trades workers, though all the purchasers were unionists.

According to a leader in the project, the purchasers saved about 10 percent because of the nonprofit feature of the plan. He states that the unions expect to revive the scheme again as soon as conditions become favorable.

Other Sponsorship

GARDEN HOMES CO., MILWAUKEE (WIS.)

An experiment carried out in Milwaukee under the leadership of the mayor, some 20 years ago, is of interest here, in that it provided a method of financing probably unique in this country, although it has been fairly common in Europe.

Briefly, the plan provided for participation by cities and counties through their investment in the preferred stock of a housing enterprise. Subscription for such stock was also open to other organizations and to individuals. The preferred stock was retired as the tenant-owners paid for common stock to replace it. The plan involved no public subsidy or expense to the taxpayers, for interest was paid in the meantime.

The original plan contemplated the erection of about 3,500 houses. Actually, only 105 were built, and as far as the Bureau's information goes, no further action has ever been taken. However, although the plan did not materialize on the scale that was contemplated and the cooperative feature of common ownership was dropped, the enabling legislation is still on the Wisconsin statute books,[10] and could be utilized if interest in doing so were present or could be aroused.

Background and Operation of the Project

In 1920, according to the statement of its mayor, "Milwaukee was the most densely populated city in the country. The acute housing shortage was threatening to develop slum conditions, breeding places for disease and crime."[11] Among the various measures examined, for the relief of this situation, was a plan for a city-sponsored housing project. Action was taken under a law that had been passed in the preceding year at the request of the Milwaukee Housing Commission, authorizing the formation of housing corporations on a cooperative basis.[12] Such corporations were permitted two kinds of capital—common stock (to be held only by the tenant-owners, in amounts equal to the value of the premises occupied by them) and preferred stock (to be held by investors). One section of the law authorized the common councils of cities and the county boards of supervisors to subscribe for the preferred stock of such a housing corporation owning land within the limits of the city or county of their jurisdiction.

Under these provisions the Garden Homes Co., of Milwaukee, was formed, under the auspices of the Milwaukee City Housing Commission. The stated purposes of the company were as follows:

> The elimination of speculation in land values.
>
> The economic and adequate planning of streets, sewage, water, lighting, tree planting, and recreation spaces.
>
> The elimination of waste and of private profit in home construction.
>
> The collective ownership of homes by the workers, without the handicap of labor immobility.
>
> The use of legal, technical, and artistic skill for the benefit of Wisconsin's citizens and home owners.[13]

The company's authorized stock was $500,000 ($250,000 common and $250,000 preferred). Shares were $100 each. Preferred stock was to draw interest at the maximum rate (5 percent, cumulative) permitted by the law. Each tenant-member of the corporation was required to subscribe for shares equal to the value of his dwelling.

The city subscribed for $50,000 worth of the preferred stock, and the county took an equal amount. The Association of Commerce[14] and other organizations as well as individuals also invested. Altogether, according to a report by the company to the U. S. Bureau of Labor Statistics, there were 30 holders of preferred stock. Bank loans completed the necessary financing for the $500,000 project.

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[10] Wisconsin Statutes, 1943, sec. 180.04.

[11] How Milwaukee is Improving its Housing Conditions, by Daniel W. Hoan. *In* American City (New York), July 1930, p. 136.

[12] Acts of 1919, ch. 402.

[13] Report of Proceedings of Third Congress of The Cooperative League, 1922, p. 104.

[14] This organization is reported to have withdrawn later, undertaking a plan of its own (The New Day in Housing, p. 162).

Voting of both common and preferred shareholders was on the basis of shares held. This concession, it was explained, "was necessary, temporarily, to satisfy the loan investors' prejudices."[13]

A 30-acre tract of land, half a mile outside the city limits (but later incorporated within them), was bought for $29,000. It was divided into plots 60 by 100 feet, with an average price of $700 per lot.

The plan provided for 4-, 5-, and 6-room houses which, it was expected, would cost about $4,500 each (including cost of land). Final cost, for the 105 dwellings that were built, was about $5,000 each (the maximum allowed in the law), but even that price, it was claimed, represented an average saving of "fully $1,500" per house.[15] Economies were reported to have been effected through the wholesale buying of land and materials, through the building of many houses at once, and through the elimination of speculative profit. "The tenant obtains a home, at a rental not higher, and probably less than elsewhere. Although the cost of the house is high, more than the average worker can today afford, yet the present members are obtaining homes which could not possibly be bought at such a price otherwise."[16]

The tenant-owners were required to make a down payment of $500 (about 10 percent of the cost). Monthly payments (covering taxes, insurance, repairs, interest on preferred stock, and amortization on preferred stock and bank loans) averaged $8.50 per room or about $45 for a 5-room house or $50 for one of 6 rooms. The houses were to be paid for in 20 years. Under group insurance taken out by the company, if a member died or became totally disabled before completing payment, the insurance would cover the unpaid amount of his capital stock. His family could either continue to occupy the dwelling by paying the other fixed charges (taxes, insurance, etc.) or turn in its paid-up stock to the company at its surrender value.

Applications were considerably in excess of the number of dwellings. By the fall of 1922, it was reported, 90 houses were nearing completion and it was hoped that "many more" could be built in 1923. This hope, however, was not realized.

Fate of the Project

One of the aims, as already noted, was the collective ownership of homes. This was also a provision of the law under which the

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[13] Report of Proceedings of Third Congress of The Cooperative League, 1922, p. 104.

[15] Daniel W. Hoan, 1928, quoted in The New Day for Housing, p. 163.

[16] Report of Proceedings of Third Congress of The Cooperative League, 1922, p. 105.

Garden Homes Co. was formed; title was to be held by the corporation, with leases issued to the tenant-owners. It was explained that it was not the purpose of cooperative associations, such as the Garden Homes Co., to "enable tenants to obtain homes at bottom prices by building collectively and then to allow the individuals to own and sell them for profit to others. Such a policy destroys the cooperative society."[16]

Whatever the plan of the sponsors, the collective-ownership idea could not be carried through. The tenant-owners, or at least some of them, became dissatisfied with the lease arrangement; they "felt that by becoming owners of the homes, with a deed, they would be able to sell at a profit."[17] This attitude was attributed to the fact that the secretary of the company "did not take pains to sell this [the cooperative] idea to all who took the homes."[17] Agitation was started to change the law to permit outright sale, and such an amendment was obtained in 1923, less than a year after the first tenant moved in.

This change, of course, altered the whole character of the enterprise. However, the chief sponsor of the project remained of the opinion that, in spite of the fact that the cooperative character of the project was thus jettisoned, the venture "was a remarkable success, from every point of view."[17]

BUILDING-GUILD EXPERIMENT, SUFFERN (N. Y.)

An assault on the high cost of home owning, through a system of building guilds, was carried on in several places in New York and New Jersey in the middle and late 1930's, using a plan worked out by Ralph Borsodi, economist, writer, and teacher. The experiment began in a small way about 1935. Its declared objects were (1) to furnish honest construction and at the same time lower the cost of building, (2) to eliminate contracting and workers' slow-down methods, (3) to stabilize work and provide year-round employment, (4) to "end commercial exploitation of the home builder," and (5) to provide greater security to capital while at the same time providing labor with a higher yearly income.

Each homestead project involved four parties—the Independence Foundation, a homestead association, the individual homesteader, and a "building guild." The Independence Foundation was a nonprofit agency formed to sponsor, finance, and provide technical supervision and cost accounting for the various building projects. Its funds were raised through the public sale of its investment certificates (bearing 6 percent interest) and loans from banks, building and loan associations, and other agencies. It purchased land at acreage rates and subdivided it into plots large enough to provide space for subsistence gardening.

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[16] Report of Proceedings of Third Congress of The Cooperative League, 1922, p. 105.

[17] The New Day in Housing, p. 163.

In connection with each project, a homestead association was formed by the Foundation to purchase the land, over a period of years, from the Foundation and hold it as a collective agency of the individual homesteaders, granting use of the land to them under a 99-year lease. The houses in the homestead project, on the other hand, were held in fee simple by the occupying homesteaders, and were constructed by an association of building-trades workers (guild) formed for the purpose. Each homestead association had a board of five members, all residents of the community and elected annually for 5-year terms. However, the treasurer of the Independence Foundation was to serve also as treasurer of the homestead association until the latter's obligations to the Foundation had been fulfilled. In the affairs of the association each homeowner had a single vote.

Procedures Involved

An individual desiring to participate in a homestead project would apply to the homestead association for membership, accompanying his application by a $25 membership fee. This was, actually, often the only cash furnished by the prospective homeowner until after he became a resident of the project. If accepted for membership he signed an "indenture" covering the terms under which occupancy of the land was granted to him. Under this agreement he bound himself to pay a "land assessment" in an amount (calculated by the homestead association each year) sufficient to cover his share of taxes, interest on capital investment, maintenance of roads, utilities, etc., and 0.5 percent amortization on the land cost. The agreement likewise provided that for 20 years the property was to be used exclusively for "homesteading purposes." The latter was defined to mean "property used primarily for the residence of the family group and for farming and creative work in the home, studio, workshop, or on the land by the individuals composing such family group." Any use of the property for "mercantile, commercial manufacturing, or industrial purposes" required the special consent of the homestead association.

All of the member's transactions with regard to the land were thus carried on through the medium of the homestead association.

A separate arrangement covered the construction of and payment for his house. Having been admitted as a prospective homesteader, he could then apply for a loan from the Independence Foundation in an amount sufficient to cover cost of construction of the dwelling and necessary improvements on the plot of land he chose. This "loan" was really a credit, for the Foundation took care of the actual expenditure of it, making advances of funds to the guild and paying vouchers for work actually completed. In return, the homesteader obligated himself to make regular monthly payments on the principal, with interest at 6 percent calculated on the monthly unpaid balances. These payments were made directly to the Foundation and varied, of course, according to the size and style of his dwelling. However, the total costs could be, and were, reduced by savings made under the guild system and by the owner's contributing his own labor on various parts of the job.

In the case of a member's withdrawal from the association, his "relative property rights and interests" in the common property of the association were to be determined according to the "ratio of the equity in the association's capital investment created by the member to that of the aggregate created by all the members."[18] In case of dispute on this or other matters in his relation to the homestead association, the member had the right of appeal to a board of three arbitrators.

How the Guild System Operated

As it happened, conditions were ripe for the experiment. At the time the first group of building workers was brought together, in 1936, the general employment situation was bad and the building trades were in the mood to try anything that offered the prospect of work. Under the plan presented to them, although the current union scale could not be paid, 12 months' steady employment was guaranteed; this, in an industry known for its seasonal unemployment, was likely to result in greater annual earnings than under the usual hourly rate. The men found the idea acceptable and the first group was organized into a "guild" and put to work.

Each guild consisted of a "guildmaster" and a crew including several carpenters, painters, and odd-job men. A plumber and an electrician worked for several guilds jointly. Although the over-all planning was done by the Foundation's staff, the actual operations on a particular contract were the responsibility of the guildmaster. Each crew member had a single vote in the conduct of the affairs of the guild. In a legal sense, the guilds were partnerships of the members.

The construction of each dwelling was governed by a contract between the individual homesteader ("proprietor") and the guild, approved by the Foundation. It called for construction to be carried out on the basis of estimates by the guild, but actually all such estimates were made by the technical staff of the Foundation. A supplementary agreement between the guild and the Foundation stipulated that these estimates were to be at substantially the same level as "prevailing charges by responsible contractors for work of equal quality." They covered interest, depreciation, repairs, and other costs incidental to the use of machinery and equipment of the guild, plus 10 percent of basic costs to cover sales, accounting, and general office expenses, 2½ percent for contingency reserves, and 2½ percent to cover any service and repairs necessary during the first year after construction was finished. It was also stipulated that the purchaser should have the right to inspect the books and make such audits as were necessary to verify the accuracy of his account, for 1 year after the final account was tendered him. Any savings between the total estimated cost and the actual cost would be divided equally between the bonus fund of the guild and the homeowner; if a loss was entailed, it was to be born in equal parts by guild and owner.

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[18] Bylaws of the Bayard Lane [homestead] Association, Suffern, N. Y.

Every contract between the guild and the Foundation included the provision that 10 percent of the total basic costs of each construction contract should be paid to the Foundation as long as it acted as financing agent. Whenever its actual costs fell below this figure the difference would be rebated to the guild.

A "drawing account" from which individual guild members were compensated was created by charging against each home owner's loan credit the time spent by each class of worker in the construction of the house, on the basis of a "unit" rate per hour. Thus, the unit rate for the Rockland Building Guild for the year 1939 was 5 cents. The various classes of workers were assigned weights or "ratios" which, multiplied by the unit, yielded their actual hourly remuneration, as shown in table 2.

TABLE 2.—*Rates of pay estimated for members of Rockland Building Guild, 1939*

Class of worker	Probational members		Active and associate members		
	Craft ratio	Hourly rate (ratio x 5)	Craft ratio	Hourly rate (ratio x 5)	Annual rate
		Cents		*Cents*	
Master journeyman	14	70	15	75	$1,716
Journeyman, first class	12	60	13	65	1,487
Journeyman, second class	10	50	11	55	1,258
Senior apprentice	9	45	10	50	1,144
Junior apprentice	8	40	9	45	1,030
Laborer	7	35	8	40	915

Work was on the basis of a 44-hour week. Active and associate members received pay for 6 holidays (New Year's Day, Memorial Day, July 4, Labor Day, Thanksgiving, and Christmas) for 8 hours unless the holiday fell on Saturday, in which case 4 hours were paid for.

The "drawing account" was established in order to provide living xpenses for the crew members while the job was in process. The rate f basic unit and hourly pay established, it was pointed out, were really immaterial in the long run, for the men's total earnings on a job were directly related to the actual savings made on the total estimated costs for that job. These, as already noted, were divided between the men's bonus fund and the home owner. From the bonus fund thus established the guildsmen received additional payments once a year. This arrangement gave a direct incentive to the men to reduce the actual construction costs as much as possible.

The records of the Ramapo Building Guild show that, for the second half of the year 1937, the 19 guildsmen received a bonus of $6.97, for the first half of 1938 a bonus of $37.81, and for the second half of 1938 one of $38.22. This progressive increase in the size of the bonus may well have been a reflection of the increasing realization by the men where their interests lay and of their consequent rise in efficiency and productiveness.

There were other possible increments to their income, also. Thus, if the actual outlays from the 2½ percent set aside for servicing and repairs fell below that amount, half of the sum remaining was to be divided among the crew at the end of 1 year after the job was finished; likewise, half of any savings on the 2½ percent for contingent expenses was to be so divided, at the end of the second year after the job was complete.[19]

Although in the beginning the guilds were financed entirely by the Foundation in order to get them going, own capital was gradually built up by means of a deduction of not less than 5 percent from each man's advances from the "drawing account," deposited to his credit on the guild books. This capital was used for the purchase of new equipment, repairs, etc. In the event of a guild member's permanent withdrawal, the sum of his credit was to be refunded to him. The private property of the members was not subject to seizure for debts of the guild.

Results of the Experiment

The Independence Foundation was in existence for 3 years. During that time it lent, for land and dwellings, some $200,000. Under its auspices eight guilds were established[20] and some 50 houses were built. The first project of 16 houses in Suffern, N. Y., was followed by others in West Nyack and Ossining, N. Y., Ringwood, N. J., and Feasterville, Pa. It ceased operations at the beginning of the war, when wartime restrictions on construction stopped all private building and when considerably higher earnings could be had by guild members, in war industries. On its demise all of the projects, except the

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[19] The other half was rebated to the home owner concerned.

[20] These were the Ramapo Building Guild, Rockland Building Guild, Clarkstown Building Guild, Sloatsburg Building Guild, Twin Ridge Building Guild, Becraft Building Guild, Sterling Building Guild, and New Castle Building Guild.

Bryn Gwelyd [21] Homesteads (Pennsylvania), reverted to the fee-simple plan of ownership of the land (as noted, the ownership of the houses had always been on that basis).

In the opinion of the sponsors of the plan, the experiment demonstrated that, with a continuous development of new units under the supervision of a central agency, it was possible to insure practically continuous employment to guild members, with larger annual earnings than were usual under the intermittent operation customary in the building trades. However, under guild operation, the normal craft lines were blurred and for this reason, if no other, the leaders in the Foundation realized that it would probably be impossible to obtain the cooperation of the building-trades craft unions in normal times.

The experiment also indicated the possibilities of greater efficiency in construction and of consequent savings to both workers and home-owners. The originator of the guild plan is of the opinion that the essential requirement in a plan of this kind is that the estimating, planning, accounting, and technical work (legal matters, land acquisition, architectural service) be done by a competent staff of some outside, impartial body (in this case, the Independence Foundation) in which both workers and home owners have confidence. He emphasizes that considerable savings could also be made through cooperative buying of building materials, fittings, equipment, etc.—not yet available generally in the distributive cooperative movement.[22]

Because of the nonprofit feature of the plan (no "profits" were made at any stage) and because of the incentives inherent in the guild system, substantial savings were made even without such cooperative purchasing. Thus, a report of the Foundation in the August 19, 1939, issue of the Independence Foundation News, stated that on 38 contracts for individual houses, then completed, the aggregate estimated cost was $111,965 and the actual cost $104,134. Savings amounted to $7,319, which were divided between guild members and home owners.

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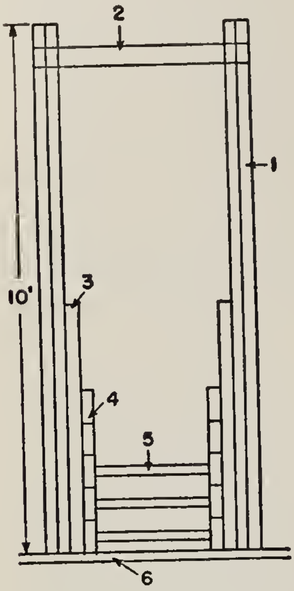
[21] Bryn Gwelyd is Welsh for "Hill of Vision."

[22] See pp. 85 and 86 for supplies and services available through cooperative wholesales.

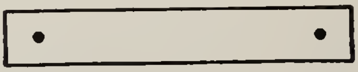
APPENDIX A.—Movable Forms Used in Laying Stone Walls at Penn-Craft

The following sketches, with explanatory material, show how simple forms were devised to aid unskilled workmen to lay stone walls for their houses at the Penn-Craft project.

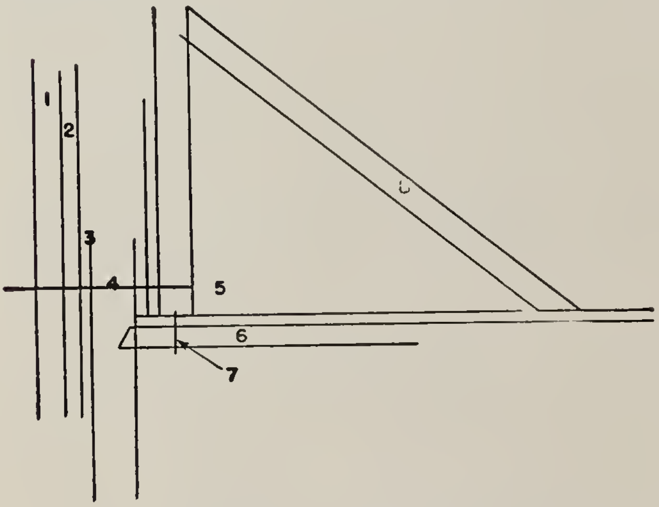


Cross section of forms and posts.

1. *Form post:* Made of 2—2 x 4—10 spiked or bolted together with ½″ iron pin fastened in bottom end, extending through bottom cross board #6.
2. *Top cross board*—Any one inch scrap piece nailed on the two posts to hold them at same width apart as at bottom.
3. *2 x 2 Release stick*—Approx. 36″ long. Is the key board for unlocking forms when ready to move the board upward for the next set.
4. *2 x 10 form plank:* These boards form the inside and outside walls of the form against which the stone is laid. These planks can be used later for floor joist or whatever they may be needed for. A few of them will have to be cut to fit short jogs in the walls.
5. *2 x 2 Release blocks:* These blocks are cut the exact width of the wall that one desires to build. Their job is to hold the form plank snugly against the 2 x 2 release sticks until stone is laid in the form, at which time the release blocks are removed or moved to a new place which needs temporary blocking.



6. *Bottom cross board:* This board is used in starting basement walls on the clay floor of the foundation. No footer is needed where a solid 16″ stone wall is to be built. The cross-board is drilled to receive the ½″ pins in the ends of the form posts as shown in the sketch below. This board is left in the wall. It need not be anything more than a scrap piece of 1″ board sufficiently long to serve the purpose. The length will depend upon the width of the wall to be built.



1. Form post.
2. Release stick.
3. Form plank.
4. Wire (#9) to bind outer post to inner post.
5. Subfloor.
6. Floor joist.
7. Iron pin in end of post-hole drilled in subfloor to hold it firm.
8. Brace to subfloor to keep wall plumb.

Sketch of first or second floor assembly

APPENDIX B.—Housing Supplies and Services Available Through Cooperative Wholesale Associations

The following table lists the cooperative wholesales that provide either building materials or service in the field of housing and shows for each the territory in which they operate and the commodities or services available through them.

Housing supplies and services provided by consumers' cooperative wholesales

Association	Trading territory	Commodities handled	Other housing services
National association			
National Cooperatives, 343 S. Dearborn St., Chicago 4, Ill.	United States, Canada	Galvanized and asphalt roofing, cedar shingles, nails.[1]	
Regional associations			
Associated Cooperatives of California, 815 Lydia St., Oakland 7, Calif.	California, Nevada	Lumber and other building supplies	Advice on organization, legal matters, and land acquisition.
Central States Cooperatives, 1336 Fullerton Ave., Chicago 14, Ill.	Illinois, Indiana, Ohio, southern Michigan.	Lumber, sash, roofing, building hardware and other building supplies.	
Indiana Farm Bureau Cooperative Association, 47 South Pennsylvania St., Indianapolis 9, Ind.	Indiana	Lumber, paint, shingles, steel, building tile and blocks, hardware, and other building supplies.	Homestead-improvement program.
Farm Bureau Services, 221 North Cedar St., Lansing, Mich.	Michigan	Nails and laminated rafters.	
Midland Cooperative Wholesale, 739 Johnson St. N. E., Minneapolis 13, Minn.	Southern Minnesota, southern Wisconsin.	Paint, wood and asphalt shingles, steel and aluminum sheets, paper roofing, nails, pipe, and some building hardware.	Assistance in organization.
Farmers Union Central Exchange, P. O. Box G, St. Paul, Minn.	Minnesota, Montana, North and South Dakota, northern Wyoming.	Paint, lumber, asphalt roofing and siding, nails and other hardware.	
Farmers Lumber & Supply Co.,[2] 1961 University Ave., St. Paul 4, Minn.	Iowa, Minnesota, Montana, Nebraska, North Dakota, South Dakota.	Lumber (75 yards in States named).	
Consumers Cooperative Association, 318 East 10th St., Kansas City 13, Mo.	Missouri, Nebraska, Kansas, southern North Dakota, South Dakota, southern Wyoming, Colorado, Iowa, Oklahoma.	Lumber,[3] composition roofing, Portland cement, brick, and tile, steel, red-cedar shingles, paint,[4] millwork, sash and doors, building hardware.	Legal department; architectural service (building plans and specifications, advice on building materials, etc.).
Farmers Union State Exchange, 39th and Leavenworth Sts., Omaha 5, Nebr.	Nebraska	Asphalt and steel roofing.	
Eastern Cooperative Wholesale, 44 West 143d St., New York 30, N. Y.	New England, Delaware, New Jersey, New York, Pennsylvania, Maryland, District of Columbia, northern Virginia.	Lumber, roofing, building hardware, tile, some interior fixtures.	Full-time adviser on organization, land acquisition, architectural planning, etc.
Grange Cooperative Wholesale, 3104 Western Ave., Seattle 1, Wash.	Washington	Roofing and nails.	
Central Cooperative Wholesale, Superior, Wis.	Northern Minnesota, northern Wisconsin.	Complete line of building materials and paint.	House plans, advice on building materials.
District associations			
Northland Cooperative Federation, Rock, Mich.	Upper Peninsula of Michigan		House insulation.
Range Cooperative Federation, Virginia, Minn.	Minnesota, Mesabi Range district	Lumber.	
Cooperative Services, Maple, Wis.	Northern Wisconsin	Lumber and complete line of building supplies.	

[1] Plans addition of many more items. [2] Subsidiary of Farmers Union Grain Terminal Association. [3] Own sawmill. [4] Own plant.

Appendix C.—Selected List of References on Housing

Burroughs, Roy J.

Farmers' cooperative construction service. (*In* Land Policy Review, U. S. Department of Agriculture, Bureau of Agricultural Economics (Washington), winter 1945, pp. 16–21.) Price 10 cents.*

Presents a plan for a Nation-wide farmers' cooperative construction service, including the construction of homes as well as farm buildings and the servicing of equipment. Proposes that the regional farmers' cooperative wholesales take the initiative in forming a national association.

Bauer, Catherine.

Housing in the United States: Problems and policy. 28 pp. (Reprinted from International Labor Review, July 1945.) Montreal, International Labor Office, 1945. Price 10 cents.

A critical analysis of the housing situation, of public housing, of FHA insurance, and of possibilities under present housing legislation.

—— Modern housing. Boston and New York, Houghton Mifflin Co., 1934. 331 pp., illus.

In addition to historical material, beginning with the 19th century, contains detailed data on elements of modern housing—standards, location, lay-out and building arrangement, building types and dwelling plans, construction, architecture, etc.

Chase, Stuart.

The case against home ownership. (*In* Survey Graphic, May 1938, pp. 261–267.)

Gray, George Herbert.

Housing and citizenship: A study of low-cost housing. New York, Reinhold Publishing Corporation, 1946. 254 pp., bibliography, charts, plans, illus.

An exhaustive report dealing with the historic and philosophic as well as the social, economic, and technological background of housing in both the United States and Europe. Shows how public housing policy has developed, illustrated with accounts of many projects and showing their advantages and shortcomings. There are chapters dealing with determining factors in cost of housing and rent, and with designs for low-cost dwellings. Accomplishments of various Federal housing agencies in the United States are reviewed and appraised. The author also presents a comprehensive program for postwar housing in this country, including therein an outline of policies that should be changed and a proposal for a national council of housing.

Halbert, Blanche, *editor.*

The better homes manual. Chicago, University of Chicago Press, 1931.

Detailed discussion of the various "requirements for good housing"—cost, site, architecture, materials, lighting, etc.

Kirkham, John Edward.

How to build your own home of earth. Oklahoma Engineering Experiment Station Publication No. 61. Stillwater, Oklahoma Agricultural and Mechanical College, 1946. 37 pp., diagrams, illus.

With the object of stimulating "personal initiative in people for building their own homes," at a cost that they can afford, the author (on the basis of his own experience with a house now 8 years old) describes the various processes, and gives diagrams for equipment for hand labor in building a house of earth.

U. S. Department of Labor. *Bureau of Labor Statistics.*

Organization and management of cooperative and mutual housing associations. (*Its* Bulletin No. 858.) Washington, 1946. 65 pp. Price 20 cents.*

Discusses general principles of cooperative housing, site and type of project, community and architectural planning, financing, membership relations, administration and management, tax status, etc. Appendixes give model bylaws, sample share subscription agreement, model lease, and citations of cooperative and housing laws.

U. S. National Housing Agency. *Office of the Administrator.*

Mutual housing: A Veterans' guide. Washington, 1947. 55 pp. Price 15 cents.*

Covers origination and organization, financing, construction, operation and management, etc.

—— *Federal Public Housing Authority.*

Manual of policy and procedure. Section 3555:2—Sales to mutual ownership corporations of Federally owned permanent war housing projects developed under the Lanham Act, Public Laws 781 and 9. Approved January 18, 1946. (Mimeographed.)

—— *Federal Housing Administration.*

A handbook on urban redevelopment for cities in the United States. Washington, 1941. 105 pp. (FHA Form No. 2389.) Price 15 cents.*

—— —— Principles of planning small houses. (*Its* Technical Bulletin No. 4., revised June 1, 1946.) Washington, 1945. 44 pp., diagrams, illus.

—— —— Housing Costs: Where the housing dollar goes. (*Its* Bulletin No. 2.) Washington 1944. 48 pp. Price 10 cents.*

Wood, Edith Elmer.

Recent trends in American housing. New York, The Macmillan Co., 1931. 317 pp.

An analysis of the housing situation in the early 1930's (much of which is applicable today). Chapter X deals with cooperative housing.

Wright, Henry.

Rehousing urban America. New York, Columbia University Press, 1935. 173 pp., charts, diagrams, illus.

A critical analysis of a number of group projects (single, row, and apartment dwellings) here and abroad. Contains chapters on new methods of construction, quality of living space, and analytical and cost studies. Addenda relate to desirable standards for various parts of the dwelling.

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*Obtainable from the Superintendent of Documents, Government Printing Office, at price named. Money order or check should accompany order; do not send stamps.

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UNITED STATES DEPARTMENT OF LABOR
L. B. SCHWELLENBACH, *Secretary*
BUREAU OF LABOR STATISTICS
Ewan Clague, *Commissioner*

Collective Bargaining With Associations and Groups of Employers

Bulletin No. 897

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for

Labor Department Bulletin No. 897

House Document No. 135

Collective Bargaining With Associations and Groups of Employees

Corrections on pages 1 and 6.

The last line on page 1 should read—

unions on the West Coast with employers in a single city. In other

The next to the last line of the second paragraph on page 6 should read—

Secretary of the Interior. The agreement covered all the mines which

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Letter of Transmittal

United States Department of Labor,
Bureau of Labor Statistics,
Washington, D. C., February 14, 1947.

The Secretary of Labor:

I have the honor to transmit herewith a report on collective bargaining with associations and groups of employers. The study is based on an examination of the collective-bargaining agreements and other source materials on file with the Bureau of Labor Statistics. The report provides the most recent picture of the extent to which unions negotiate agreements with associations and groups of employers. It brings up to date the study prepared by the Bureau in 1939.

The report was prepared by the staff of the Industrial Relations Branch, Boris Stern, Chief.

Ewan Clague, *Commissioner.*

Hon. L. B. Schwellenbach,
Secretary of Labor.

Bulletin No. 897 of the
United States Bureau of Labor Statistics

[From the Monthly Labor Review, March 1947]

Collective Bargaining With Associations and Groups of Employers[1]

Most of the examples of industry-wide bargaining in the United States are the product of generations of experience, and as a rule the employer-union relations in these industries have been remarkably stable and peaceful. In the pressed or blown glassware industry, one of the branches of glass and glassware having national bargaining, no major strike throughout the industry has occurred since collective bargaining began with an employers' association in 1888. Similar conditions have prevailed in the pottery industry since 1922. The 1946 contract between the National Automatic Sprinkler and Fire Control Association and the United Association of Journeymen Plumbers and Steamfitters (AFL) is a revision of the original agreement of 1915; and the 1946 agreement between the Anthracite Coal Operators and the United Mine Workers of America (AFL) is a compilation of resolutions, revisions, rulings, and decisions dating back to 1903. Bargaining on an industry basis exists in the elevator installation and repair, installation of automatic sprinklers, pottery and related products, stove making, and wall-paper industries, and in coal mining.

Agreements covering all the employers in an industry within a geographic region are somewhat more numerous than those having application throughout an entire industry. Even more numerous are the instances in which associations or groups of employers are dealt with on a city-wide or metropolitan area basis. In this study, the existing extent and the areas of bargaining with associations and groups of employers are described. The most significant extension of this form of bargaining in recent years occurred during World War II in the shipbuilding industry. The Metal Trades Department of the American Federation of Labor negotiated a master agreement during 1941 with Pacific Coast shipyards organized by unions affiliated with the AFL. Prior to this time, joint agreements had been signed by these unions on the West Coast with employers in a single day. In other industries, since 1939, the practice only widened in those that had used this method of dealing for many years. The number of workers covered by these agreements increased somewhat as more of the Nation's industry became organized and was brought under agreement. However, the relative proportion covered in most industries did not change greatly.

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[1] Prepared by Roy M. Patterson and the staff of the Collective Bargaining Division of the Bureau's Industrial Relations Branch, under the general supervision of Harold S. Roberts, Chief. Special credit is also due for the contributions made by Abraham Weiss, Jesse Carpenter, and Philomena Marquardt.

Few of the examples of collective bargaining on an industry, geographic, or city basis occurred in the mass-production industries, although a single agreement in the automobile industry, for instance, may cover many more employees than an association agreement covering every employer in an industry or trade within the same city. In mass-production industries, trends are developing toward standardized conditions in large segments of industries through corporation-wide collective bargaining. The efforts of unions are directed first toward bringing all the plants of a given large corporation, regardless of geographic location, within the scope of a single agreement. An example is the corporation-wide bargaining between the Ford Motor Co. and the United Automobile, Aircraft and Agricultural Implement Workers of America (CIO). Notwithstanding the great number of workers affected, corporation-wide bargaining differs widely from multi-employer collective bargaining which is the subject of the present study.

Early in 1947, more than 4 million workers were covered by agreements negotiated between trade-unions and associations and groups of employers. These are about equally divided between manufacturing and nonmanufacturing industries. Approximately a fourth of all workers covered by union agreements in manufacturing and a third of such workers in nonmanufacturing are working under agreements negotiated with groups or associations of employers. The agreements were negotiated by one or more unions (1) with a formal or informal association of employers or (2) with informal multi-employer groups. In presenting the information on agreements, no attempt was made to distinguish between agreements with associations and with other multi-employer groups. Identical agreements signed by separate employers with the same union were included, if there appeared to have been negotiations with a group or committee of employers.

Worker Coverage of Group Bargaining

In table 1, the extent of association and employer-group bargaining is shown, based upon the percent of total workers under agreement in the respective industries.

TABLE 1.—*Percent of All Workers Under Agreement Who Are Covered by Agreements With Associations and Groups of Employers, by Industry*

80–100 percent	60–79 percent	40–59 percent	20–39 percent
Clothing, men's Clothing, women's Coal mining Laundry and cleaning and dyeing Longshoring Maritime Shipbuilding and boatbuilding [1]	Baking Book and job printing and publishing Canning and preserving foods Construction Dyeing and finishing textiles Glass and glassware Malt liquors Pottery and related products Trucking and warehousing.	Building service and maintenance Leather products, other Newspaper and periodical printing and publishing	Beverages, nonalcoholic Hosiery Hotels and restaurants Jewelry and silverware Lumber Shoes, cut stock and findings Trade

0–19 percent
Agricultural machinery and tractors Aircraft and parts Automobiles and parts Bus and streetcar, local Bus lines, intercity Carpets and rugs, wool Cement Chemicals, excluding rayon and allied products Clerical and professional, excluding transportation, communication, theaters, and newspapers Cotton textiles Confectionery products Crude petroleum and natural gas Dairy products Electrical machinery, equipment and appliances Flour and other grain products Furniture Knit goods, except hosiery Leather (tanned, curried and finished) Light and power Machinery and machine tools Meat packing Metal mining Motorcycles, bicycles, and parts Newspaper offices Nonferrous metals and products, except jewelry and silverware Nonmetallic mining and quarrying Paper and pulp Paper products Petroleum and coal products, except refining Petroleum refining Railroad equipment Rayon and allied products Rubber products Silk and rayon textiles Steel, basic Steel products Stone and clay products, other Sugar, beet and cane Telegraph service and maintenance Telephone service and maintenance Tobacco manufactures Woolen and worsted textiles

[1] During World War II most of the industry was covered by tripartite zone standard agreements, signed by representatives of unions, employers, and certain government agencies. The principal association agreement other than the zone standard agreements is between Pacific Coast Shipbuilders and the Metal Trades Department of the AFL, covering yards organized by AFL unions.

Area Coverage of Group Bargaining

The industries are classified by area of bargaining in table 2.

TABLE 2.—*Area of Bargaining With Associations or Groups of Employers, by Industry*

Bargaining on a national or industry-wide scale	Bargaining by geographic (regional) areas	Bargaining within a city, county, or metropolitan area
Coal mining Elevator installation and repair Glass and glassware Installation of automatic sprinklers Pottery and related products Stoves Wall paper	Canning and preserving foods [1] Dyeing and finishing textiles [1] Fishing Hosiery Leather (tanned, curried, and finished) [1] Longshoring [1] Lumber [1] Maritime Metal mining Nonferrous metals and products, except jewelry and silverware [1] Paper and pulp Shoes, cut stock and findings [1]	Baking Beverages, nonalcoholic Book and job printing and publishing Building service and maintenance Clothing, men's [2] Clothing, women's [2] Confectionery products Construction Cotton textiles Dairy products Furniture [2] Hotel and restaurant Jewelry and silverware Knit goods Laundry and cleaning and dyeing Leather products, other Malt liquors Meat packing Newspaper printing and publishing Paper products, except wall paper Silk and rayon textiles Steel products, except stoves [2] Tobacco Trade [2] Trucking and warehousing [2]

[1] There also is some bargaining on a city, county, and/or metropolitan area basis.

[2] There also is some bargaining on a regional and/or industry-wide basis.

Approach to Standardization of Working Conditions

One of the major efforts of labor unions in this country has been directed toward the standardization of working conditions throughout an industry or area, in order to lift substandard wages and to eliminate or reduce the factors of wages and hours in competitive costs. One of the ways the labor movement has sought to attain this objective has been by pressing for Federal or State legislation for the protection of certain groups of workers or to establish minimum standards applicable to all workers. Legislation has been sought especially for women and minors on the ground that the interests of society as a whole require that the health and welfare of these groups of workers be protected, and also because they often are in a weak bargaining position and might be used to lower the standards of all workers. Certain minimum standards of health, safety, and sanitation were established by legislation when large sections of the population felt a need for such, and the labor movement from time to time has favored legislative action as the most effective remedy for problems of health and safety. Under the Fair Labor Standards Act, minimum wage and hour standards have been established in much of American industry, thus raising the area of collective bargaining on these issues to higher levels.

Prior to World War II the approach to standardization of wages and working conditions through governmental action was secondary as far as American trade-unions are concerned. Organized labor in this country has directed its chief efforts toward standardization by means of collective bargaining. For this reason the labor movement generally has encouraged parallel organizations of employers for collective-bargaining purposes, in order to obtain extended coverage under one agreement. In some industries the employers also have favored the extension of uniform wages and working conditions by making the terms of a collective-bargaining agreement applicable to a large segment of an industry. When collective bargaining with groups or associations of employers has proved impracticable or impossible, some unions have utilized the technique of presenting identical agreements to the employers within an industry or competitive area. This latter method usually is practicable only in instances where there are a large number of small employers, particularly within a metropolitan area.

Although industry-wide trade associations have come to be a common characteristic of American business, the scope of employer groups or associations engaged in collective bargaining is generally much more limited. Within an industry, employers may be organized for purposes of collective bargaining on a city, regional or, in a few instances, nation-wide basis, or two or more such employer organizations may exist in the same area. As a rule, the unions work toward the extension of the collective-bargaining agreement to as wide a section of the industry as possible. In a number of cases the unions and employer organizations together have directed their efforts toward bringing unorganized sections of the industry within the scope of collective-bargaining agreements. A necessary corollary of dealing through employers' associations is a high degree of unionization among the employees.

During World War II, industry-wide production drives, settling of labor disputes by the National War Labor Board on the basis of industry or area practice, and the Government's wage stabilization policies all contributed to standardization of wages and working conditions throughout industries or areas. Directives of the National War Labor Board were influenced by precedent and prevailing practices in the industry or area and many agreements in the same industry came to have similar provisions on certain subjects. Frequently an order of the Board would affect several employers and the substance of the order would be incorporated into union agreements the employers might have negotiated, without regard to the existence of an employers' association. In the shipbuilding industry, in which a stabilization commission was established, tripartite "zone standard" agreements were negotiated, covering a limited number of subjects. The parties to the agreements were the Government itself and most of the employers and unions in the industry. The shipbuilding industry in the United States was divided into four zones, in each of which the "zone standards" determined practices with regard to those subjects covered by the agreements.

The attention directed to a few national associations with long records of collective bargaining should not be permitted to obscure thousands of employer organizations which have negotiated agreements on a regional or metropolitan basis and which affect hundreds of thousands of workers. These employer groups vary widely as to type, structure, procedure, and scope of activity. Some are temporary and highly informal, with no tangible evidences of permanent organization. Others have complex structures with elaborate constitutions and a staff of full-time employees. Between these extremes there are wide variations in organization, procedures, and functions.

Nation-Wide Collective Bargaining in the Coal Industry

In anthracite mining a single agreement is signed to cover the entire ndustry. In bituminous-coal mining, the union negotiated agreenents with the operators in the Central Competitive Field (Ohio, ndiana, Illinois, and West Virginia) from 1898 until 1927. The agreement for this area set the pattern for negotiations in other areas between districts of the union and local associations of coal-mine operators. The interstate bargaining relationship in the Central Competitive Field collapsed in 1927 and was not reestablished until after the passage of the National Industrial Recovery Act. In 1934 an agreement was signed with the operators in the Appalachian Area which served, as the previous interstate agreement had, as a pattern which the remainder of the industry generally followed. Districts of the United Mine Workers of America negotiate agreements with parallel associations of employers, which follow the terms of the Appalachian agreement. In 1941 the northern and southern groups of operators in the Appalachian area signed separate agreements with the union, and unified negotiations were not reestablished until 1945. In that year, the first industry-wide agreement in bituminous-coal mining was negotiated.

Following the break-down of negotiations between the union and the operators in the spring of 1946, which led to a Nation-wide soft-coal strike, and the rejection by both the union and the operators of President Truman's May 16 arbitration proposal, the President on May 21 "authorized and directed" the Secretary of the Interior to take over the mines. On May 29 an agreement was signed by John L. Lewis, president of the union, and J. A. Krug, Coal Mines Administrator and Secretary of the Interior. The agreement covered all the wines which were seized.

National Bargaining on the Railroads

The traditional bargaining unit in railroad transportation is the individual railroad system. The workers are organized on the basis of craft, and agreements with the various systems are negotiated by each craft union or by "system federations" of shop craft unions. Although the regular working agreements continue to be signed by systems, on occasion certain specific questions of major importance, as wages, have been settled on a Nation-wide basis. Negotiations are generally conducted by the nonoperating unions (clerical, maintenance, and shop crafts) and by the operating unions (train and engine service) separately with representatives of the railroads selected on a regional basis.

Other Industry or Trade-Wide Bargaining

The American examples of trade-wide bargaining of longest status occur in the pottery and glassware industries. Since the early years of this century, an annual meeting has been held between the representatives of the United States Potters' Association and the National Brotherhood of Operative Potters. The current agreement between these parties, for example, continues a provision for joint discharge committees first set up in 1913. Since 1888 the National Association of Manufacturers of Pressed and Blown Glassware, or its predecessor, has been meeting with the American Flint Glass Workers Union. The "Star Island Agreement" of 1903 established a grievance procedure which still is utilized in this industry. The Glass Bottle Blowers' Association of the United States and Canada signed its first national agreement in 1890 and currently has an agreement with the Glass Container Manufacturers' Institute which affects several thousand employees in the industry.

In each of these cases the bargaining agreements are confined chiefly to detailed piece-rate schedules, although a considerable body of "unwritten law" has developed to supplement the national agreement in governing employer-employee relations within a plant. Originally, the trade-wide bargaining was established to regulate the working conditions of highly skilled craftsmen within these industries. With the development of technological changes, one skilled occupation after another has been eliminated. As a result, the unions have extended their jurisdiction to include a major part of the workers in and around the plants and these skilled and semiskilled employees are now covered in the national agreements to the degree that they are unionized. In the glassware industry, however, there are some companies which have negotiated separate agreements. In the pottery industry virtually all of the vitreous and semivitreous branches of the industry are covered by the association agreement.

A different kind of bargaining relationship has been built up in the manufacture of flat glass. By far the major part of the production in this industry is centralized in two large producing companies. These companies, the Pittsburgh Plate Glass Co. and the Libby-Owens-Ford Glass Co., negotiate their agreements jointly, both with the Window Glass Cutters League (AFL) and the Federation of Glass, Ceramic and Silica Sand Workers (CIO), but each company signs separate, identical agreements. The two companies also collaborate in the administration of the agreement to insure uniform patterns of interpretation. Most of the other manufacturers are organized into the Fourcault Manufacturers' Association which negotiates the agreement with the unions.

There are a few other instances of industry-wide dealing, each of hem originating from the efforts of a highly skilled craft to protect ts conditions of employment. Among these are the Wall Paper Institute and the United Wall Paper Craftsmen and Workers of North America, covering wall paper printing; the National Automatic Sprinkler Association and the United Association of Journeymen Plumbers and Steamfitters of the United States and Canada, cover-ng sprinkler fitting; and the Manufacturers Protective and Development Association and the International Molders and Foundry Workers Union of North America, covering stove-molding and hot-water castings.

Employers engaged in the manufacture of paper-mill wire cloth sign similar agreements with the American Wire Weavers' Protective Association. Another instance of trade-wide bargaining occurs in the installation, repair, and maintenance of elevators. Although wage rates are negotiated locally, other working conditions are regulated by conferences between the National Elevator Manufacturing Industry, Inc., and the International Union of Elevator Constructors. A standard agreement is used in all localities, with the locally negotiated rates inserted as agreed upon.

The manufacture of wooden kegs and barrels should also be mentioned as an instance of national conferences between the employers and the union. The conferences, however, have resulted in no agreement on an industry scale and discussion of working conditions has been of far less importance than mutual discussion of trade-promotion plans.

Industry-Wide Bargaining in Mass-Production Industries

In the more recently organized, mass-production industries there are at present no examples of industry-wide collective bargaining resulting in a single union agreement covering the full range of employer-union relations. In a few such industries, however, certain bargaining relationships have come into existence which produce considerable uniformity in the agreements throughout an industry. In the rubber industry, for example, a wage-increase agreement was signed on March 2, 1946, by the four largest manufacturers, which affected a large proportion of the workers in the industry. This so-called "Big Four" agreement is limited in scope to a few subjects; it differs from the usual union agreement also in that it does not have the customary provisions relating to termination and renewal. The agreement provides: "This agreement shall finally dispose of all issues covered in these negotiations including all of the union's 7-point program for a period of 1 year except that during this 1-year period the general wage scale shall be subject to negotiation if conditions economically and in the industry warrant, but only on a four-company (Big Four) basis." If this joint relationship of the four corporations with the United Rubber, Cork, Linoleum and Plastic Workers of America is continued in the future, it may be possible to describe the collective bargaining in this industry as approaching industry-wide negotiations.

A degree of standardization has been achieved in the meat-packing industry through the medium of uniform expiration dates of the agreements with the principal packers. Certain agreements affecting a large number of workers negotiated by the United Packinghouse Workers of America (CIO) and by the Amalgamated Meat Cutters and Butcher Workmen of North America (AFL), covering various plants of the four largest corporations in the industry, have expired on the same day each year for several years.

Negotiation of Similar Agreements in the Steel Industry

In the basic steel industry in the United States there is no employers' association which engages in collective bargaining, yet a great deal of standardization in industrial relations has occurred in recent years. The industry is composed of two dominant groups of employers, one known as "Big Steel" and the other as "Little Steel." The first includes the United States Steel Corp. and its subsidiaries, and the second is made up of a number of independent companies. The Steel Workers Organizing Committee, now the United Steelworkers of America, first signed written agreements with the U. S. Steel Corp. in 1937 and since then, with a few exceptions, practically all of the basic steel industry has been brought under agreement. Even though there is no bargaining by employers' associations, the major provisions of agreements throughout the basic steel industry are similar. This degree of uniformity is occasioned by a number of factors, first among them probably being the predominant position of the United States Steel Corp. Agreements with this corporation tend to set the pattern for the rest of the industry. Also, by long-established practice the same wage adjustments generally are made throughout the industry at the same time. During World War II directives of the National War Labor Board, which generally were applicable to large sections of the industry, further encouraged the growth of uniform collective-bargaining practices. The United Steelworkers of America, the most important union in the industry, also tended to bring a degree of uniformity into the bargaining relationships and practices. Agreements with most of the employers in the basic steel industry will expire in February 1947, and negotiations are in process for new agreements. (Since this was written the parties have agreed to extend the agreements until April 30, 1947.)

Collective Bargaining by Geographic Areas

In the hosiery industry a bargaining relationship has existed between the Full-Fashioned Hosiery Manufacturers of America, Inc., and the American Federation of Hosiery Workers since 1927. The employers' association, originally covering only Philadelphia mills, now covers a major part of the northern section of the full-fashioned hosiery industry. Conferences occur annually, with occasional additional meetings on specific subjects. Under the agreement the joint relations are administered by a permanent impartial chairman.

In the textile industry there are association agreements between the Textile Workers' Union of America and associations of silk and rayon mills in a number of States. A joint arrangement of longer standing exists in the dyeing and finishing of textiles in nonintegrated mills. In cotton textiles in Massachusetts and in knit goods in Philadelphia and New York, many of the employers are members of associations which negotiate union agreements.

Maritime workers usually deal with employer organizations which represent the shipping operators on a given coast. Practically all the union agreements in the maritime industry are negotiated with associations or informal committees representing the employers. On the Pacific Coast the companies are organized into the Pacific American Shipowners Association. On the Atlantic and Gulf Coasts the most recent agreements were negotiated and signed by a Committee for Companies and Agents, Atlantic and Gulf Coasts, most of the members of which are also members of the American Merchant Marine Institute.

The Waterfront Employers of the Pacific Coast embraces employers of longshoremen along the entire West Coast; much of the work of the association, however, is carried on through affiliated local Waterfront Employers Associations in Seattle, Portland, San Francisco, and San Pedro (Los Angeles). The International Longshoremen's and Warehousemen's Union (CIO) negotiates a general cargo agreement with the coast-wide association, which signs "on behalf of" the four local organizations. Separate agreements covering dock workers and ship clerks are negotiated with each of the port associations. On the Atlantic Coast the International Longshoremen's Association (AFL) as a rule, negotiates separate agreements with employer associations in each port.[2]

In the Pacific Northwest the pulp and paper industry, although dealing elsewhere on the basis of individual companies, is combined into the Pacific Coast Association of Pulp and Paper Manufacturers which deals with the two national unions in the field. The unions, representing different occupations in the industry, are the International Brotherhood of Papermakers and the International Brotherhood of Pulp, Sulphite, and Paper Mill Workers. The employers' organization is described in the agreement as follows: "This Pacific Coast Association of Pulp and Paper Manufacturers * * * of which the signatory company is a member, is an employer association of a majority of the pulp and paper manufacturing companies in the Pacific Coast area, comprising the States of Washington, Oregon, and California, and as bargaining agent with authority to bind its members by a majority vote of such mills, has met with a bargaining committee from the signatory union for a period of years, beginning in 1934 * * *." Notwithstanding this provision, each company signs a separate document with the local unions which represent its employees.

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[2] For some time there has been no formal federated organization of the unions in the maritime industry. For a few months during 1946, however, the CIO unions and an independent formed the committee for maritime unity for the purpose of joint negotiations with all employers simultaneously. The American Federation of Labor, also in 1946, established a Maritime Trades Department, composed of AFL unions in the industry. Most of the unlicensed personnel on the Atlantic Coast are represented by the National Maritime Union (CIO). On the West Coast these workers are represented principally by three unions, the Sailors' Union of the Pacific (AFL), the Pacific Coast Marine Firemen, Oilers, Watertenders and Wipers Association (independent), and the National Union of Marine Cooks and Stewards (CIO).

The lumber industry is one which is not yet well organized throughout the country but in which the dominant method of present dealing is through associations within the producing area. The Columbia Basin Loggers' Association and the Timber Producers' Association in Minnesota are examples of associations dealing with the union in this industry.

The fishing industry, particularly on the Pacific Coast where it is well organized, is an example of collective bargaining almost exclusively on an association basis. The employers, however, are organized into a number of separate associations, such as the Alaska Packers' Association and the Central Pacific Wholesale Fish Dealers' Association.

In retail trade, the National Association of Retail Meat Dealers, composed of affiliated State and local associations throughout the United States, negotiates with the Amalgamated Meat Cutters and Butcher Workmen of America. The national agreement between these parties, first negotiated in 1937, is confined to a statement of principles and policies of mutual interest to both parties, who agree to "give their aid and good offices to the execution of fair and reasonable contracts between local unions and affiliated associations in the various localities where the said unions and affiliated associations exist." The agreement further states that it is recognized "that local conditions require local treatment and that it is not practical or feasible to include in this agreement the matters of wages, hours, and conditions of employment." In the Midwest, the Central States Drivers' Council, an organ of the International Brotherhood of Teamsters, Chauffeurs, Warehousemen and Helpers of America (AFL) negotiates agreements with the Central States Area Employers Association Negotiating Committee. Collective bargaining in canning and preserving foods on the West Coast is largely on an association basis.

Most of the shipbuilding and boatbuilding industry on the West Coast is covered by a master agreement negotiated by the Metal Trades Department of the American Federation of Labor. During the war, as previously noted, bargaining on major issues in this industry was on a tripartite basis, and wages and certain other questions were determined by the zone standards. Issues not covered by the zone standards were settled in the ordinary processes of collective bargaining. At the present time the zone standards are still in effect.

Bargaining in the Needle Trades Within Metropolitan Areas

Outstanding examples of stable bargaining relationships over a long period of time between employers' associations and unions are found in the needle trades. In the men's and women's clothing, men's hats and millinery, and fur industries the earliest efforts of unions to organize were accompanied by efforts to combine into associations the employers within the producing area. Bargaining has become established in these industries, with highly developed industrial relations machinery within each of the metropolitan areas which are important as producing centers. These unions and employers' associations customarily make use of a permanent impartial chairman to administer the agreement and there are numerous examples of joint trade boards, stabilization commissions, and other similar bodies which deal on a day-to-day basis with the problems of the industry.

These industries all have the problem of "run-away" shops, which leave the unionized areas and, with the small capital investment required, are able to establish themselves in low-wage, semirural sections. This has been a major reason for the unions' insistence upon dealing on an association basis, for it is through the combined pressure of both the union and the employer association that these "run-away" shops can be brought under control. Another problem within these industries is the regulation of the jobber-contractor relationship. Jobbers have taken advantage of both the extreme seasonal fluctuations and the small investment required in setting up a shop to encourage an oversupply of contractors. Cut-throat competition among the contractors has been furthered by the frequent practice of establishing "fly by night" shops for the duration of a contract secured by underbidding regularly operating shops. Both the owners of shops operating under union conditions and their workers have thus faced a constant threat to industrial stability. Through collective bargaining, the oversupply of contractors has been dealt with and the jobber's responsibility for maintaining union conditions in his contract shops has been established. A large portion of the employer-union negotiations in the needle trades deal with these three-way problems, in addition to the usual wages, hours, and working conditions.

The employers within a given city are usually organized into more than one association within each of the needle trades. The basis of distinction is both the type of product and the classification of employers (i. e., jobbers, contractors, or inside manufacturers). The unions have frequently expressed a desire for more uniformity among the employers' organizations throughout the industry. Although a major part of the production in the country is covered by the New York City agreements alone, the unions have made repeated efforts over several decades to secure industry-wide dealing in the interests of national standardization. Thus far, however, only in men's clothing has there been a successful approach to industry-wide bargaining. For a number of years the Amalgamated Clothing Workers of America has negotiated major wage questions with the Clothing Manufacturers' Association of the United States and with the Shirt Industry.

Other City-Wide Bargaining

In many industries and trades characterized by numerous small establishments within a city, collective bargaining has been conducted with associations of employers within the city. In many cases the associations are formal organizations in which the association officers have the power to bind all members to the agreed terms of employment. In other cases the employers may unite informally and perhaps only for the duration of the bargaining conferences. In many instances the lack of a continuing employers' association makes no difference in the actual negotiation of the agreement, but complicates considerably the enforcement of the agreement.

In cases of city-wide bargaining the extent of coverage of the employers' association generally depends upon the strength of the union. It is common to find within a city an organized group of employers dealing with the union, while other employers within the same industry are organized into a separate association or have no organization. In some cases the union employers form an organized group within a trade association which also includes nonunion employers in the city.

There are probably 5,000 local or city employer associations throughout the country which deal with various unions. More of these are found in building construction than in any other single industry. Other examples, in which the predominant method of dealing is with city-wide associations, are brewing, retail trade, baking, printing and publishing, restaurants, trucking, and barber shops. An important development is found in the electrical machinery industry, where the United Electrical, Radio and Machine Workers of America (CIO) recently negotiated an agreement with the Electronics Manufacturers' Association, representing 20 employers in the New York City area. This association was formed at the insistence of the employers, who are relatively small and who previously had signed separate agreements. The employers desire, through negotiating a single blanket agreement, to achieve a degree of uniformity in wage and working conditions in order to reduce these as competitive factors in costs.

Associations of Employers Across Industry Lines

Employer-group federations embracing all types of business within a city are largely a development of the last 10 years and are concentrated in the Far Western States. Leader in this field is the San Francisco Employers Council, formed in 1939, and which in April 1945 had 1,995 members, 919 of whom were affiliated through their various industry groups. The other members were individuals or independent companies. The objectives of the council, as stated in its articles of incorporation, are (1) to encourage the organization of autonomous employer groups and cooperation among these groups in matters relating to labor relations; (2) "to promote the recognition and exercise of the right of employers to bargain collectively"; and (3) upon request, "to assist its members and others in matters relating to the negotiation, execution and performance of fair labor contracts." The council negotiates or participates in negotiations of agreements between its members and the unions in the city, and performs various other services.

Of a similar character is the Industrial Conference Board of, Tacoma, Wash.—an over-all agency for a number of independent companies and 15 or 20 employers' associations each of which has one or more union agreements. Both the Reno Employers Council of Reno, Nev., and the Silver Bow Employers Association of Butte, Mont., participate in the negotiation of labor contracts for their various employer groups. In Sacramento, Calif., the Sacramento Valley Associated Industries is the unifying agency for a dozen or more associations covering such varied fields as bowling alleys, beverages, furniture warehouses, taxicabs, machine shops, liquor and tobacco dealers, retail foods, wholesale bakeries, draymen, druggists, tire dealers, and building owners. Each association has a union contract signed in its behalf by an individual, who serves both as executive secretary to the associations and as general manager of the Associated Industries.

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UNITED STATES DEPARTMENT OF LABOR
L. B. Schwellenbach, *Secretary*

BUREAU OF LABOR STATISTICS
Ewan Clague, *Commissioner*

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Labor in the South

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LABOR IN THE SOUTH

Introduction

The subject matter of this bulletin should contribute appreciably to our knowledge of southern labor conditions.[1] It does not, however, constitute an exhaustive analysis of the position of labor in the region. This is true even within the specific fields of inquiry. For example, it is quite impossible fully to explore trade-union development or wage differentials within the confines of single articles.

The definition of "South," as employed in this bulletin, is not entirely uniform. Except where a different coverage is specifically indicated, however, the term relates to 13 States. Nine of these States—Virginia, North Carolina, South Carolina, Georgia, Florida, Kentucky, Tennessee, Alabama, and Mississippi—are generally taken to comprise the Southeast; the remaining four—Arkansas, Louisiana, Oklahoma, and Texas—are in the Southwest. This tremendous region contains 843,812 square miles of territory; its population in July 1945 was estimated at 37,624,000, excluding armed forces overseas but including armed forces distributed by State of station. Civilian population was estimated at 35,416,000.

The South as thus defined is not a homogeneous area. There is great and rich diversity in the geography, economy, and culture of the region. It is necessary to emphasize this point because the analysis that follows deals largely, although by no means wholly, in aggregates and averages. This type of social arithmetic is an indispensable tool for many analytical and policy-making purposes, but by its very nature it conceals wide variations in social existence and experience.

If there is diversity in the South, there is also a measure of unity. This unity is partly historical and partly a reflection of the fact that from the colonial period to the present the South has remained predominantly agrarian. To agriculture must be added the economic activities that depend directly upon the forest resources of the region and upon the wealth, including petroleum, under the earth. The South has been primarily an exporter of raw and semifinished products; its industrial development began relatively late and under severe initial handicaps. The ante bellum South, for various reasons, did not encourage the growth of industrial enterprise; and even as late as 1930 a group of southern intellectuals could argue (in I'll Take My Stand) that the social cost of industrialism outweighed its benefits.

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[1] This report is based on seven articles that appeared in the October 1946 issue of the Monthly Labor Review; a substantial amount of material has been added, most of which covers entirely new subjects.

Industrialization, however, has increased significantly. In 1880, less than 8 percent of the wage earners employed in manufacturing in the United States were in the 13 Southern States. By 1939 this percentage had risen to 17.2. Moreover, while the absolute level of factory employment declined sharply in the country as a whole between 1929 and 1939, there was a small increase in the level of manufacturing employment in the southern region. An average of 1,362,027 wage earners were employed in manufacturing in the South in 1939. Manufacturing employment in the South increased sharply during the war years.

The manufacturing base in the South has been comparatively narrow, resting largely upon the textile industries (principally cotton textiles and hosiery), lumber, furniture, and tobacco, with petroleum refining in the Southwest. Other industries (iron and steel, machinery, apparel, and a host of others) have been rather thinly represented. However, the war apparently has strengthened a tendency for the industrial structure of the South to broaden, partly as a result of the rise of essentially new industries and partly from decentralizing tendencies elsewhere. Texas is a conspicuous example, and the Southeast is vibrant with new industrial undertakings.

This bulletin deals with some of the basic factors affecting labor in the South. The analysis of key population and labor force characteristics is essential to any broad understanding of the position of labor in the region. The sections on income trends and levels and on wages and wage differentials provide, in conjunction with the section on living costs, insight into the relative economic position of the southern industrial worker and of other segments of the southern population. They also provide a basic explanation for the great migratory movements discussed in the section on labor supply. Changes in manufacturing employment during the war and immediate postwar periods are also analyzed.

Two sections relate to efforts by workers to improve their economic well-being through organization. The first of these traces the development of the trade-union movement in the South; the second deals with the comparatively small consumers' cooperative movement. Finally, sections are devoted to legislation enacted by the Southern States for the protection of labor or relating to labor organizations and collective bargaining, to the impact of the Fair Labor Standards Act on the South, to old-age and survivors' insurance and unemployment compensation, and to the rise of industry in the region.

I.—The Rise of Industry in the South [1]

Industrial enterprise has always been present in the South. During the colonial period a variety of relatively simple processing operations were performed on the products of southern fields and forests; various household industries supplied basic consumer needs; and by the time of the Revolution more complex forms of enterprise were beginning to emerge.

The colonial South had its grist mills for grinding corn and other grains and larger merchant mills to prepare flour for export and for sale in stores. Tobacco, the chief southern staple during the colonial period, had to be dried, sorted, and packed, and rice had to be cleaned and polished. A more complicated operation was the processing of indigo into marketable cakes. Sawmills became common throughout the South in the eighteenth century, and lumber, in addition to its local use, became a leading export item. The cooperage industry flourished. Potash and pearlash, obtained from the ashes of hardwoods and used for bleaching and in making soap and glass, were in great demand in both England and the Colonies. By 1700, naval stores—tar, pitch, rosin, and turpentine—had become the chief export of the Carolinas.

The household manufacture of such articles as shoes, clothing, kitchen utensils, farm tools, and furniture was widespread. Colonial textile manufactures were based primarily upon wool and to a more limited extent upon flax and hemp. Nearly every colonial home had its spinning wheel and hand loom. Fulling—a process of shrinking woolen fibers to produce a better fabric—gradually came to be done in local shops, the home weavers taking their cloth to the fulling mill just as they took their grain to the grist mill. Some planters employed their poorer neighbors to spin and weave; on the larger plantations slaves performed these tasks. In this way small surpluses of homespun were sometimes produced for local markets.

Iron works had been established in every colony except Georgia prior to the Revolution. Near the end of the colonial period, brickmaking made its appearance. The first settlers of Georgia made some pottery, and other potteries were established in the Carolinas. Clearly industry was not extensive in the South during the colonial period, but its development probably coincided as well with the needs of the southern economy as the exigencies of British colonial policy would permit.

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[1] Prepared by Edgar E. Poulton of the Bureau's Labor Economics Staff.

Industry and the Rise of Cotton Culture

In 1810 manufactures in the South comprised over 20 percent of the value of all manufactures in the United States—a proportion since unequaled. It has been pointed out that "in 1810 the value of textiles produced was greater in North Carolina than in Massachusetts, and the census for that year records more homespun cotton manufactured in Virginia, South Carolina, and Georgia than in the other 13 States and Territories combined. Also more flax was spun in Virginia than in any other State."[2] As early as 1788 power spinning was carried on in South Carolina. To the considerable manufacture of textiles and iron in the South recorded in the census of 1810, such miscellaneous products as saltpeter, leather, rope, gunpowder, hemp, salt, distilled spirits, and maple sugar contributed a crude but important diversity.

This early industrial development ran up against a combination of factors in the southern economy that were to delay industrial growth for at least half a century. The invention of the cotton gin; an almost insatiable market for cotton fiber; the existence of vast areas of land suitable for cotton; and the institution of slavery—all of these factors conspired to foster cotton culture at the expense of other forms of enterprise. In 1826 southern cotton production exceeded 1 million bales; by 1850 production stood at over 2 million bales; and in 1860 about 5 million bales were raised.

Staple plantation agriculture tended to absorb the capital and managerial skill of the region. Capital was scarce, and such surpluses as arose went largely into the purchase of land or slaves; outside capital was, in general, neither sought nor attracted. White immigrants, who made up an appreciable proportion of the Nation's supply of skilled labor, generally avoided districts heavily populated by Negro slaves; in 1860 only 5 percent of the free population in the South was foreign-born, while immigrants made up 18 percent of the population of the rest of the country. Such factories as were established in the South typically depended upon the initiative and resources of one or a few individuals.

While cotton production was increasing fifteenfold between 1810 and 1860, southern industry failed to hold its own. However, there was progress in technology; new kinds of products were turned out, and household manufacture was steadily displaced by the growth of mills. Transportation barriers were lessened by the appearance of the river steamboat and by the introduction of railroads, in whose development the South pioneered. The abundant water power of the Piedmont was increasingly utilized, and coal production increased. But the relative decline in southern manufacturing was striking.

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[2] Mary Anderson, Women's Place in Industry in Ten Southern States, Washington, Government Printing Office, 1931, (p. 2).

By 1860 the proportion of the value of the Nation's manufactures produced in the South was only half of its share in 1810, and no more than 10 percent of the Nation's wage earners were located in the region.

The manufactures started in the South during the 40 years before the Civil War were, by and large, a product of temporary depression in the cotton market. Even such depressions, however, did not effect a substantial realignment of resources, for the plantation system was insensitive to changes in economic demand, and small farmers reacted to lower cotton prices—if at all—by trying to increase production.

There was some development in textile manufacturing during the ante bellum period. The largest cotton mill in the South prior to the Civil War was established in 1847 by William Gregg at Graniteville, S. C. This mill contained 9,000 spindles and 300 looms, and employed 300 workers. The 1860 U. S. Census of Manufactures listed 603 textile mills of all types in the South, with an average employment of 25 workers. Of these establishments, 163 mills employing 10,187 workers were designated as cotton mills.

Next to textiles, iron manufacture was the leading southern industry during this period, differing from its colonial character in its substitution of magnetite for bog ore, in its occasional use of coal for smelting, and in the greater variety and refinement of its products. Between 1810 and 1860 the number of sawmills in Virginia increased from 112 to 779, and by 1855 Wilmington, N. C., and Mobile, Ala., were each exporting annually about 18,000,000 feet of lumber. Turpentine came to dominate naval stores production as distillation was simplified by introduction of the copper still, and a derivative—camphene—became popular as an illuminant. By 1860 Virginia was the leading flour manufacturing State in the South, possessing 1,383 flour mills and even an export market in Brazil. Tobacco manufacturing was stimulated about 1850 by discovery of the yellow tobacco leaf in North Carolina; its manufacture had started at Durham by 1858, but Louisville, Ky., and the James River area in Virginia remained the chief centers and pipe tobacco the chief product. Leather factories devoted largely to the manufacture of boots and shoes were common in the cattle-raising States; and in the grain areas there were small distilleries.

The Beginnings of Modern Industry

The Civil War and its aftermath profoundly dislocated the economic structure of the South. By 1880; however, a number of factors favorable to industrialization began to converge, and that year is generally taken to mark the beginning of the South's modern industrial era. One factor of very great importance was the change in public attitude toward industrial development. "Bring the mills to the cotton" became, in a sense, the slogan of a crusade. Falling cotton prices between 1866 and 1880 lent impetus to the movement. Capital for the early mills frequently was secured by community subscription from many small investors, supplemented by subscriptions from machinery manufacturers and advances from commission houses. Technical change was of tremendous importance in cotton manufacture. The ring spindle and the automatic loom greatly reduced the need for skilled labor, and the development of the humidifier and temperature regulator aided efficient cotton processing.

Between 1880 and 1900 the number of wage earners and the value of manufactures in the South increased about threefold (table 1). This represented a greater rate of industrialization than occurred throughout the country as a whole: the proportion of the Nation's wage earners in the South increased from 8 percent to 13 percent over the period, while the region's proportion of the value of manufactures rose from 6 percent to 8 percent (table 2).

The manufacture of cotton goods led the industrial advance. Significant support, however, came from the appearance or revitaliza-

Table 1.—*Trend of Manufacturing in the South, Southeast, and Southwest, as Measured by Employment and Value of Product, by Decades, 1850–1939*

[Source: U. S. Census of Manufactures]

Year	Wage earners			Value of product		
	South	Southeast [1]	Southwest [2]	South	Southeast [1]	Southwest [2]
1850	109, 866	101, 741	8, 125	$100, 872, 071	$92, 386, 208	$8, 485, 863
1860	131, 979	117, 864	14, 115	193, 462, 521	168, 417, 268	25, 045, 253
1870	174, 798	133, 594	41, 204	253, 618, 436	213, 309, 995	40, 308, 441
1880	209, 065	180, 182	28, 883	315, 924, 772	264, 243, 502	51, 681, 270
1890	436, 296	348, 753	87, 543	667, 893, 335	516, 813, 447	151, 079, 888
1899	594, 973	481, 585	113, 388	953, 370, 000	701, 056, 000	252, 314, 000
1909	928, 548	724, 028	204, 520	2, 081, 370, 000	1, 455, 927, 000	625, 443, 000
1919	1, 168, 787	883, 543	285, 244	6, 795, 589, 215	4, 517, 727, 922	2, 277, 861, 293
1929	1, 338, 131	1, 040, 388	297, 743	8, 215, 101, 880	5, 413, 010, 067	2, 802, 091, 813
1939	1, 362, 027	1, 099, 447	262, 580	8, 253, 143, 880	5, 685, 322, 458	2, 567, 821, 432
	Percentage change, by decade					
1850	------	------	------	------	------	------
1860	+20. 1	+15. 8	+73. 7	+91. 8	+82. 3	+195. 1
1870	+32. 4	+13. 3	+191. 9	+31. 1	+26. 7	+60. 9
1880	+19. 6	+34. 9	−29. 9	+24. 6	+23. 9	+28. 2
1890	+108. 7	+93. 6	+203. 1	+111. 4	+95. 6	+192. 3
1899	+36. 4	+38. 1	+29. 5	+42. 7	+35. 6	+67. 0
1909	+56. 1	+50. 3	+80. 4	+118. 3	+107. 7	+147. 9
1919	+25. 9	+22. 0	+39. 5	+226. 5	+210. 3	+264. 2
1929	+14. 5	+17. 7	+4. 2	+20. 9	+19. 8	+23. 0
1939	+1. 8	+5. 7	−11. 8	+. 5	+5. 0	−8. 4

[1] Southeast includes Virginia, North Carolina, South Carolina, Georgia, Florida, Kentucky, Tennessee, Alabama, and Mississippi.

[2] Southwest includes Arkansas, Louisiana, Oklahoma, and Texas.

TABLE 2.—*Proportion of Total United States Wage Earners and Value of Product in Manufacturing in the South, Southeast, and Southwest, Decennial Years 1850–1939*

[Source: U. S. Census of Manufactures]

Year	Percent of United States wage earners in manufacturing			Percent of United States value of manufactures		
	South	Southeast [1]	Southwest [2]	South	Southeast [1]	Southwest [2]
1850	11. 4	10. 6	0. 8	9. 9	9. 1	0. 8
1860	10. 1	9. 0	1. 1	10. 2	8. 9	1. 3
1870	8. 5	6. 5	2. 0	6. 0	5. 0	1. 0
1880	7. 7	6. 6	1. 1	5. 9	4. 9	1. 0
1890	9. 3	7. 4	1. 9	7. 1	5. 5	1. 6
1899	12. 6	10. 2	2. 4	8. 3	6. 1	2. 2
1909	14. 0	10. 9	3. 1	10. 0	7. 0	3. 0
1919	13. 0	9. 8	3. 2	11. 0	7. 3	3. 7
1929	15. 2	11. 8	3. 4	11. 7	7. 7	4. 0
1939	17. 2	13. 9	3. 3	14. 5	10. 0	4. 5

[1] Southeast includes Virginia, North Carolina, South Carolina, Georgia, Florida, Kentucky, Tennessee, Alabama, and Mississippi.

[2] Southwest includes Arkansas, Louisiana, Oklahoma, and Texas.

tion of other industries founded upon new markets and technologies. It was during this period that the tobacco industry gave promise of its fabulous future, under the influence of the cigarette machine and North Carolina's popular yellow leaf. The important iron and steel industry concentrated around Birmingham, Ala., had its beginning in 1876 as the development of the open-hearth process permitted the utilization of local ore and coal. Lumbering took on added stature as the decline of northern timber sources stimulated cutting of southern yellow pine. In 1888 the manufacture of furniture began at High Point, N. C., now the second largest furniture center of the country. Local production of fertilizer, utilizing readily available raw materials, became increasingly important in order to maintain the fertility of soils steadily drained by the cultivation of cotton and tobacco. In cottonseed oil and cake, the cotton plant was found to have valuable subsidiary uses. And at the turn of the century discovery of the rich Spindletop field in Texas first brought the Southwest's phenomenal petroleum resources into view.

From the base established during the last two decades of the nineteenth century, southern industry expanded steadily. Between 1899 and 1919 the number of wage earners in manufacturing almost doubled, and the increase continued during the prosperous twenties and even (in face of a national decline in industrial employment) during the depressed thirties. By 1939 the value of southern manufactures exceeded $8,000,000,000 (table 1). Continued industrialization during World War II raised southern manufacturing output to new heights.

This industrial advance has been based upon a number of factors. The southern labor supply has been large relative to industrial employment opportunities. Because of the character of the labor market, industry in the South has been able, on the whole, to obtain labor at wage rates lower than those paid for comparable work in other parts of the country. A second factor has been the existence in the South of raw materials of various types to the fabrication of which the abundant labor supply has been adapted. Indeed, the industrialization of the South has involved chiefly the processing of southern raw materials for sale primarily outside the region—cotton textiles, pulp and paper products, tobacco, furniture, sugar, and petroleum products. Future development may include a greater variety of industries producing goods predominantly for local consumption and a larger representation of industries engaged in complex fabrication or assembly (e. g., machinery).

Industry itself is a great progenitor of industry. In the cotton mills, tobacco factories, blast furnaces, sawmills, furniture establishments, fertilizer plants, and oil refineries established in the South at the turn of the century there existed the germs of the subsequent rapid development. Tobacco profits were not only reinvested in the industry, but also found their way into the textile expansion and into the hydroelectric power development of the Piedmont. Railroads steadily displaced river traffic, and coal mining grew apace with the demand for steam power. In towns having both textile mills and furniture factories, the employment of women in the former and men in the latter boosted family income and at the same time helped to stabilize the local economy. The chemical revolution precipitated by World War I brought forth a myriad of new products from the South's store of cellulose (cotton and wood), hydrocarbons (petroleum, coal, and naval stores), and industrial elements (sulphur and fertilizer ingredients, particularly). The interaction of these and other developments produced markets, skills, profits, and attitudes propitious for the greater industrialization that was to come with World War II.

Growth of Leading Industries Before 1940

TEXTILE MANUFACTURES

Cotton-goods manufactures in the South doubled and redoubled in importance in the early decades of this century. Between 1899 and 1939 the Southeast's share of the spindles in the industry increased from 22 percent to 73 percent of the Nation's total (table 3). The so-called migration of the industry to the South is shown by the decline in spindles in New England from 68 percent to 22 percent of the total during the same period. Over three-fifths of the spindles in the South in 1939 were in the Carolinas, reflecting the tendency of the mills to concentrate in the Piedmont while cotton cultivation moved steadily south and west. The growth of cotton textile manu-

TABLE 3.—*Spindles [1] in the Cotton-Goods Industry, in the United States, New England, and the Southeast, by States, for Decennial Years 1899–1939*

[Source: U. S. Census of Manufactures]

Region	1899 [2]	1909	1919	1929	1939 [3]
United States	19, 463, 984	27, 395, 800	33, 718, 953	31, 583, 588	[4] 25, 396, 695
New England	13, 165, 809	15, 383, 909	17, 542, 926	12, 174, 353	5, 562, 796
Southeast	4, 234, 398	10, 065, 288	14, 274, 270	17, 843, 852	18, 552, 202
Alabama	419, 968	885, 803	1, 108, 933	1, 760, 628	1, 862, 533
Georgia	832, 321	1, 747, 483	2, 459, 143	3, 053, 154	3, 553, 841
Kentucky	66, 663	72, 956	85, 836	71, 480	(4)
Mississippi	78, 146	153, 804	158, 802	123, 000	157, 576
North Carolina	1, 137, 328	2, 908, 383	4, 622, 714	6, 020, 134	6, 475, 426
South Carolina	1, 436, 969	3, 754, 251	4, 949, 225	5, 580, 580	5, 320, 498
Tennessee	130, 296	225, 638	329, 337	556, 316	542, 916
Virginia	132, 707	316, 970	560, 280	678, 560	639, 412
Percentage of total United States in New England	67.6	56.2	52.0	38.5	21.9
Percentage of total United States in the Southeast	21.8	36.7	42.3	56.5	73.0

[1] Classified as "active-producing" spindles for the years 1899 to 1929.

[2] Includes 413,032 spindles in other than cotton mills.

[3] Includes ring spinning, mule spinning, and doubling and twisting spindles in the cotton-goods industry; excludes those in other textile manufactures.

[4] Total includes 1,281,697 spindles (including some in Kentucky) which were not distributed by State or region.

factures in the South was characterized initially by production of the coarse and cheaper goods. Gradually, however, the southern industry turned more and more to the production of finer yarns and fabrics, and extended its operations to include dyeing and finishing.

Other textile industries developed (see tables 4 and 5). By 1939 one-half of all the wage earners in the country's hosiery industry were in the South, one-fourth in North Carolina alone. The South was quick to adapt its mills to the processing of synthetic fibers. Between 1929 and 1939 the number of workers engaged in the manufacture of silk and rayon in the Southeast increased fivefold; and in the latter year this region had one-fourth of the Nation's wage earners in the industry. The production of woolen and worsted goods, while still predominantly located in the North, exhibited a measure of growth in the South. In 1939 these branches of textile manufactures together accounted for 39 percent of the manufacturing wage earners and 22 percent of the value of manufactures in the Southeast, indicative of the preeminent position of the textile industry in this area. Textile manufacturing is relatively unimportant in the Southwest.

TOBACCO MANUFACTURES

Although the tobacco plant was cultivated at Jamestown as early as 1612, centuries passed before its local manufacture matched its role as an agricultural staple. Kentucky and the James River area of Virginia were early centers for the manufacture of pipe and chewing tobacco, and in Florida there appeared about 1850 an important cigar industry based on imports of Cuban leaf.

Table 4.—*Number of Wage Earners and Value of Manufactures in Selected Industries in the South, Southeast, and Southwest, 1939*

[Source: U. S. Census of Manufactures]

Industry	Wage earners			Value of manufactures (in thousands)		
	South	Southeast	Southwest	South	Southeast	Southwest
Cotton goods [1]	307,951	301,479	6,472	$842,865	$828,229	$14,636
Hosiery [2]	78,328	78,328	----------	187,724	187,724	----------
Silk and rayon manufacturing	30,513	30,513	----------	117,943	117,943	----------
Dyeing and finishing of textiles [3]	13,080	13,080	----------	52,613	52,613	----------
Men's clothing [4]	48,224	40,122	8,102	137,952	114,280	23,672
Tobacco manufacturing	35,149	33,939	1,210	919,236	916.020	3,216
Lumber and timber products [5]	175,084	119,121	55,963	395,041	271,092	123,949
Furniture [6]	45,939	40,067	5,872	158,467	129,275	29,192
Printing and publishing	26,197	15,992	10,205	185,492	109,779	75,713
Fertilizers	12,054	11,219	835	110,692	102,737	7,955
Cottonseed products [7]	14,354	7,717	6,637	156,807	81,093	75,714
Naval stores [8]	3,324	----------	----------	31,476	----------	----------
Petroleum and coal products	29,297	2,524	26,773	977,840	43,945	933,895
Pulp and paper products [9]	18,194	12,603	5,591	158,791	110,245	48,546
Chemical products [10]	35,103	30,516	4,587	315,923	245,513	70,410
Stone products [11]	14,266	11,156	3,110	68,806	46,956	21,850
Cast-iron pipe and fittings	9,027	9,027	----------	33,986	33,986	----------
Food products	115,264	65,605	49,659	1,269,029	663,752	605,277
Total of selected industries	1,011,348	823,008	185,016	6,120,683	4,055,182	2,034,025
Total manufacturing in South [8]	1,362,027	1,099,447	262,580	8,253,143	5,685,322	2,567,821
Percentage these selected industries comprise of total manufacturing	74.3	74.9	70.5	74.2	71.3	79.2

[1] Includes cotton broad woven goods, cotton narrow fabrics, cotton yarn, and cotton thread.

[2] Includes both full-fashoined and seamless hosiery.

[3] Includes dyeing and finishing of cotton, rayon, silk, and linen; excludes such processing of woolen and worsted goods.

[4] Includes tailored clothing, shirts, trousers, work clothing (not elsewhere classified), underwear, neckwear, and hats and caps.

[5] Includes products of logging camps, sawmills, planing mills, and plywood mills.

[6] Includes upholstered furniture, other household furniture, office furniture, public building furniture, laboratory furniture, partitions, and mattresses.

[7] Excludes processing of cottonseed in making cooking oils.

[8] Although the data are not separately available by States, thus precluding a regional breakdown, all establishments covered by the Census were located in the South. Consequently the total of selected industries in the South is greater than the sum of Southeast and Southwest.

[9] Includes products of pulp mills and paper and paperboard mills, and manufacture of paperboard containers and boxes, not elsewhere classified; excludes other converted paper products.

[10] Includes all products so classified by the Census, except fertilizers, cottonseed products, and naval stores, given separately above.

[11] Includes cement, lime, cut-stone, and concrete products.

It was not, however, until the discovery of the flue-cured North Carolina leaf and the introduction of cigarettes from Great Britain in the early 1860's that the foundation was laid for the industry's phenomenal expansion. The rapid growth of the industry culminated in 1904 in a trust which, after an adverse Supreme Court decision in 1911, was dissolved into the important companies which continue to dominate the industry.

The development of tobacco manufactures was highlighted by the steadily growing market for cigarettes. In 1939 nearly four-fifths of the value of tobacco manufactures in the United States, but fewer than one-third of the industry's wage earners, were associated with the cigarette branch of the industry. At the same time, 40 percent of the industry—in terms of value—was located in North Carolina, principally in large, highly mechanized cigarette-making factories around Durham and Winston-Salem, while Richmond, Va., and Louisville, Ky., were secondary centers.

THE PETROLEUM INDUSTRY

In the first decade of the twentieth century, the Nation's oil center moved from the pioneering Pennsylvania fields to Oklahoma and Texas, thence to California in the early twenties, and back to Texas in the early thirties with the discovery of the rich East Texas field. Since then Texas has steadily extended its lead as the major oil-producing State, alone producing since 1930 about 40 percent of the Nation's crude petroleum. In recent years, Louisiana has overtaken Oklahoma's early lead; these two States, with Texas and California, comprise the four leading producers in the industry. Since 1883 Kentucky has maintained small but steady production from its extension of the Pennsylvania field. In 1920 Arkansas entered into production, to be joined by Mississippi in the late thirties, while wild-catting continued in other southern States. The approximately 85,000 wage earners in the industry in the South in 1939 represented about half the workers in the industry.

This "black gold" is the hub of the Southwest's industrial life, providing income and employment for thousands not directly associated with the industry. Petroleum and its products not only supply about a third of the Nation's energy requirements; it is also a storehouse of organic compounds basic to a wide variety of chemical

TABLE 5.—*Proportion of Total United States Wage Earners and Value of Product in Manufacturing in Selected Industries Located in the South, 1939*

[Source: U. S. Census of Manufactures]

Industry	Wage earners			Value of manufactures (in thousands)		
	United States	South	Percentage of total United States in South	United States	South	Percentage of total United States in South
Cotton goods [1]	409, 317	307, 951	75. 2	$1, 168, 171	$842, 865	72. 2
Hosiery [2]	159, 052	78, 328	49. 2	415, 836	187, 724	45. 1
Silk and rayon manufacturing	119, 821	30, 513	25. 5	441, 900	117, 943	26. 7
Dyeing and finishing of textiles [3]	60, 237	13, 080	21. 7	271, 167	52, 613	19. 4
Men's clothing [4]	318, 214	48, 224	15. 2	1, 150, 898	137, 952	12. 0
Tobacco manufacturing	87, 525	35, 149	40. 2	1, 322, 189	919, 236	69. 5
Lumber and timber products [5]	360, 613	175, 084	48. 6	1, 122, 058	395, 041	35. 2
Furniture [6]	177, 535	45, 939	25. 9	737, 270	158, 467	21. 5
Printing and publishing	237, 484	26, 197	11. 0	2, 131, 224	185, 492	8. 7
Fertilizers	18, 744	12, 054	64. 3	185, 684	110, 692	59. 6
Cottonseed products [7]	15, 191	14, 354	94. 5	171, 476	156, 807	91. 4
Naval stores [8]	3, 324	3, 324	100. 0	31, 476	31, 476	100. 0
Petroleum and coal products	105, 428	29, 297	27. 8	2, 953, 973	977, 840	33. 1
Pulp and paper products [9]	199, 975	18, 194	9. 1	1, 542, 578	158, 791	10. 3
Chemical products [10]	249, 877	35, 103	14. 0	3, 345, 022	315, 923	9. 4
Stone products [11]	69, 138	14, 266	20. 6	435, 787	68, 806	15. 8
Cast-iron pipe and fittings	16, 488	9, 027	54. 7	65, 079	33, 986	52. 2
Food products	823, 693	115, 264	14. 0	10, 618, 026	1, 269, 029	12. 0

For footnotes see table 4, p. 10.

manufactures. The character of the industry's development—its rapidity, its wealth, and advanced technology—injected a powerful dynamic into the southern economy.

FOREST-PRODUCTS INDUSTRIES

In the last half century the South has been, except for the Pacific Northwest, the major source of timber and wood products in this country. At the turn of the century the lumber and timber industry was the largest industry in the South. The industry reached its peak in terms of the regional economy about 1909, when it engaged one out of every three wage earners in the South and produced half of the country's lumber. In terms of the industry as a whole, the South increased its proportion of the country's wage earners in the industry from 35 percent in 1899 to 48 percent in 1939. Some assurance of the industry's future is implicit in the fact that in 1938 the South had about one-fifth of the Nation's timber stand and, of greater significance, about three-fifths of its relatively scarce hardwoods.

The South also plays an important role in three major branches of the forest-products industry—the production of naval stores, the manufacture of furniture, and the production of paper and pulp.

Since colonial times the South has kept a near-monopoly of the naval stores industry. Destruction of the long-leaf pine of the Carolinas had placed Georgia and Florida in the forefront of the industry by the turn of the century, to be succeeded by Mississippi, Louisiana, and Texas as the industry moved south and west along the coast. Although the industry has declined precipitously since World War I, the late adoption of conservation measures and planting of the prolific slash pine assures continued supplies at the same time that chemistry has progressively exploited the versatile pitch.

Until about 1900 the furniture industry was located largely near high-grade woods obtainable in the Northeast and from the virgin forests of the Middle West. As these supplies dwindled, the hardwoods of the southern Appalachians provided the basis for a furniture industry which has grown steadily in both size and quality of product. In 1939 the South possessed a fourth of the wage earners in the industry.

The realization that greater advantage could be secured by processing inferior woods into pulp and paper than by converting them into shoddy lumber gave rise, along with other factors, to the growth of a new industry. Although still in its initial phases in 1939, the pulp and paper mills of the South employed a fourth of the wage earners in the industry.

THE FERTILIZER INDUSTRY

For several decades the South has produced and consumed well over half of the Nation's fertilizer. Various factors account for the regional concentration of this industry. The high cost of transporting the bulky, heavy product makes it advisable to locate near consuming areas; the light, sandy soil and heavy rainfall of much of the South, and cultivation of the same crop year after year, require heavy doses of chemical plant food; the necessary raw materials, particularly phosphates and sulphates, are readily available; and relatively small capital and simple skills are required to establish and operate a fertilizer plant.

COTTONSEED AND ITS PRODUCTS

The early disposal of cottonseed is epitomized in the words of one contemporary who remarked that cottonseed was garbage in 1860, fertilizer in 1870, cattle feed in 1880, and "table food and many things else in 1890." Subsequent development has further multiplied its uses to include products varying from margarine and smokeless powder to varnish and insulation board. The importance of such development is evident when it is realized that the cotton plant produces about 2 pounds of seed for each pound of lint. Since 1910 cottonseed has accounted for approximately a sixth of the farm value of the cotton plant, and is a strategic and often lone source of cash as a result of the practice of exempting cottonseed as security for crop loans. The industry has in general followed the westward course of cotton cultivation; in 1939 the Southeast had 51 percent and the Southwest 44 percent of the wage earners in the industry.

MISCELLANEOUS INDUSTRIAL DEVELOPMENTS

The preponderence in the South of the industries just described is witness to a want of variety in the region's manufactures. The existence of certain other industries making for diversification should, therefore, be noted.

Flour and grain mills are widely scattered throughout the Border States. Various food industries have developed to take care of the increasingly diversified agricultural products. Canning, baking, and beverages particularly deserve mention. Sugar refining is found in Louisiana; and in 1939 Kentucky's distilleries employed 40 percent of the wage earners in that industry.

At the turn of the century the South had about a fifth of the Nation's workers employed in blast furnaces, most of them in Alabama. Although the *relative* importance of the industry declined in the South with the increasing utilization of Lake ores, Birmingham became the center of a growing and progressive iron and steel industry. The iron furnaces not only supply modern steel works and rolling mills in the area, but also provide the basis for a substantial iron-fabrication industry; in 1939 Alabama produced about half of the Nation's cast-iron pipe. During World War II the expansion of Alabama's facilities to make iron and steel totaled about 68 million dollars.

The South's production of brick and tile has for several decades been roughly commensurate with its share of the Nation's total manufactures. For many years the quarries of Georgia and Tennessee have provided the basis for an important cut-stone industry. In this industry and in the production of lime and of cement and concrete products, the South had a fifth of the country's wage earners in 1939. The related manufacturer of pottery and glass products has not, however, made much headway.

The growth of the textile, petroleum, fertilizer, and other industries described above reflect in different ways and degrees the pervasive influence of chemical processes in the rapid development of southern industry. In the industries classified as "chemical" by the Census, the South had 22 percent of the wage earners in 1939. About a third of these were engaged in the manufacture of rayon and allied products, heavily concentrated in Tennessee and Virginia. The manufacture of paints, dyes, soaps, plastics, and industrial chemicals, established at various places, promoted the growth of those industries which best typify the advances being made by southern industry.

Industrial Developments During World War II

About a fifth of the Nation's 20 billion dollar wartime expansion of manufacturing facilities was undertaken in the South. The specialized character of this expansion is indicated by the fact that 47 percent of the wartime investment was for the production of aircraft, ships, ordnance, and explosives. Whether such industrial expansion can or will be available for peacetime production is one of the most challenging postwar questions facing the South.

During the war various southern areas became scenes of feverish industrial activity. Plants for making explosives sprang up all over the region, often in rural areas, with notable concentrations at Choteau, Okla.; Minden, La.; Milan and Kingsport, Tenn.; Louisville and Paducah, Ky.; Aberdeen and Flora, Miss.; Pine Bluff, Ark.; Wilson Dam, Ala.; Texarkana and Waco-McGregor, Tex.; and in the Roanoke-Radford area of Virginia. One of the plants of the atomic bomb project was placed at Oak Ridge, Tenn.

An avalanche of ships came down the ways at Wilmington, N. C.; Hampton Roads, Va.; Charleston, S. C.; Tampa and Panama City, Fla.; Brunswick, Ga., and from the primary Gulf Coast areas around Mobile and Galveston Bays. Large aircraft factories appeared in the Dallas-Fort Worth area; at Marietta, Ga.; Louisville, Ky.; Oklahoma City and Tulsa, Okla.; and Memphis, Tenn. Synthetic rubber plants located near Texas oil at the Houston-Galveston and Amarillo–Borger areas, with secondary production at Louisville, Ky., and Eldorado, Ark. Southern facilities for producing aviation gasoline, amounting to half the Nation's wartime expansion of such facilities, located at Houston-Galveston, Amarillo-Borger, and Beaumont-Port Arthur, Tex.; Ponca City and Beckett, Okla.; Baton Rouge, La., and other petroleum centers. Native bauxite ore fed the aluminum plant at Pine Bluff, Ark., and others in the heart of the TVA power region, while still other aluminum plants were built at Austin and Houston, Tex. The manufacture of various chemicals proceeded apace at scattered locations, and the region's production of textiles and tobacco products rose to new heights.

Despite remarkable achievements in war production, it is doubtful whether southern industry has advanced its prewar position in the national economy, when, with 28 percent of both the Nation's population and land area, it possessed 17 percent of the country's wage earners and accounted for 14 percent of the value of its manufactures. Over the past half century, however, the industrial growth of the region has been notable, and there is great promise for the future inherent in its ample power reserves, its forests and its variety of mineral resources, its kind climate and topography, and the aspirations and native ability of its people.

II.—Labor Supply in the South[1]

The economic and social well-being of the South depends both upon its human resources and upon the quantity and quality of its physical resources. An examination of migration, population, and labor-force characteristics, which the war has affected but not fundamentally altered, is basic to any analysis of the economic position of labor in the South and of the outlook for economic development in the region.

Migration

Perhaps the most striking aspect of the labor-supply situation in the South is that the region not only provides labor for its own factories and farms, but it also contributes substantially to the labor supply of other regions of the Nation. The natural rate of population increase is considerably greater in the South than in the remainder of the country, owing to the higher fertility in the predominantly rural South than in the North and West. The pressure of population on economic opportunities in the South has been such, however, that large outward migration has taken place. During the 1920–30 decade, the number of migrants leaving the South exceeded the number entering by an average of 130,000 a year.[2] During the depression of the 1930's, when job opportunities in northern and western cities were at low levels, the net out-migration continued but reached only 100,000 a year. With the growth of the defense program, and then of the war production program, the annual rate stepped up to the unprecedented figure of 300,000.

Perhaps the most important single factor in increasing the rate of out-migration was the growth of job opportunities in the North and West: in the 1940–43 period more than 80 percent of the contracts for war products were let in these regions, in the cities where industry has long been concentrated. The thousands of jobs which these contracts opened up had to be filled in part by drawing workers from the Southern States. Outward migration from the South continued, in spite of the letting of contracts and the building up of war facilities within the region.

Except for the fact that movements were accelerated and were over longer distances, wartime migration followed the same general pattern that prevailed in peacetime years (table 6). If the 48 States and the District of Columbia are ranked according to percentage of net migration in 1935–40 and 1940–45, the 13 Southern States are found at approximately the same position for the later period as for the earlier. Thus, if we call the State with the greatest net in-migration number 1 and the State with the greatest net out-migration number 49, Arkansas is 44th on the list in 1935–40 and 45th in 1940–45. Most of the 13 States either maintained the same place on the list or dropped somewhat lower on the list because of net out-migration. Only 3 of the Southern States—Alabama, Tennessee, and Texas—moved up on the list in the direction of relatively less out-migration. The 13-State area—and every State in it, except only Florida and Virginia—continued to lose population to other areas.

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[1] Prepared by Sophia C. Mendelsohn and Lester M. Pearlman of the Bureau's Occupational Outlook Division.

[2] Except where noted, the term "South" as used in this section refers to the 13 States of Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, and Virginia.

Table 6.—*Net Interstate Migration in the United States, 1935–40 and 1940–45, by Region and State* [1]

Region and State	Net migration (in thousands)			
	1940–45 [2]	1935–40		
	Total	Total	Male	Female
North	−641	−615	−338	−277
West	1,915	887	460	427
South	−1,626	−338	−157	−181
Virginia	181	44	31	13
North Carolina	−307	−15	−6	−9
South Carolina	−162	−16	−5	−11
Georgia	−149	−33	−12	−21
Florida	219	147	73	74
Kentucky	−308	−55	−26	−29
Tennessee	−79	−39	−22	−17
Alabama	−134	−73	−37	−36
Mississippi	−230	−28	−13	−15
Arkansas	−265	−75	−36	−39
Louisiana	−19	9	5	4
Oklahoma	−356	−184	−97	−87
Texas	−17	−20	−12	−8

[1] Source: U. S. Bureau of the Census.
[2] Civilian migration only.

As before the war, the South had a net loss in its wartime population exchanges with other regions (table 6 and chart 1). Of the 1,600,000 migrants who left the South between Pearl Harbor and March 1945, about 1,000,000 went to the North and 600,000 to the West.[3] In return, however, the South received only 600,000 persons from the North and 100,000 from the West—a net loss of 400,000 to the North and 500,000 to the West.

Internal migration in the South during the war also reached record magnitudes. Gross intrastate migration [4] in the region amounted to 3,200,000 between December 1941 and March 1945, while movements

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[3] Data for the South include West Virginia, Maryland, Delaware, and the District of Columbia. See Census release P–5, No. 5.

[4] Intrastate migration includes migrants whose place of residence was in a different county but in the same State as the place of residence in December 1941.

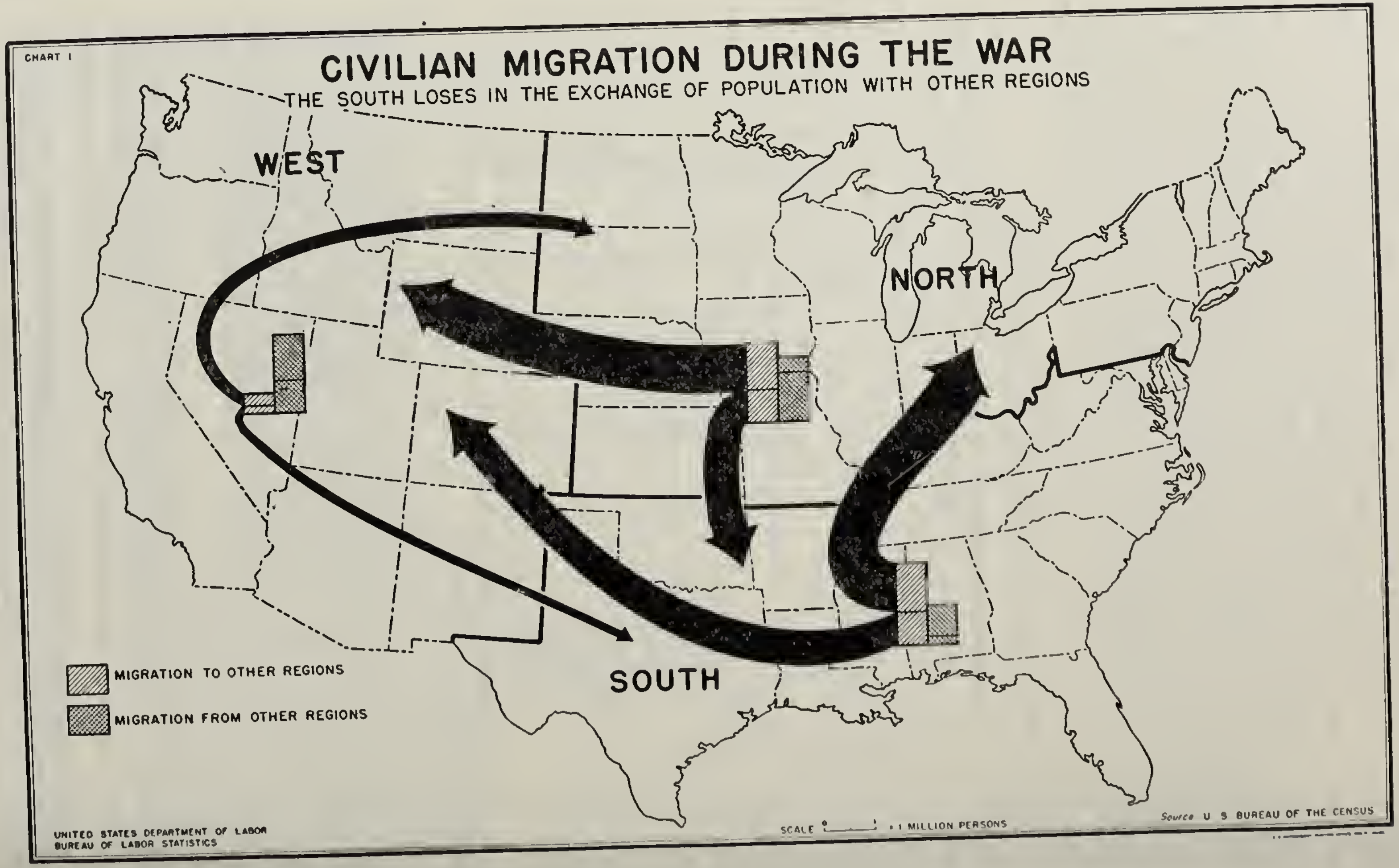

CHART I

CIVILIAN MIGRATION DURING THE WAR

THE SOUTH LOSES IN THE EXCHANGE OF POPULATION WITH OTHER REGIONS

WEST
NORTH
SOUTH
▨ MIGRATION TO OTHER REGIONS
▩ MIGRATION FROM OTHER REGIONS
SCALE = 1 MILLION PERSONS

UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS

Source U S BUREAU OF THE CENSUS

TABLE 7.—*Civilian Migration in the United States, December 1941 to March 1945 by Region* [1]

Item	Civilian migration (in thousands)			
	Total	North	South	West
Migration between regions:				
From North	1,550	----------	640	910
From South	1,630	980	----------	650
From West	400	260	140	----------
Interstate migration in a region	4,090	1,710	1,610	770
Intrastate migration in a region	7,540	3,370	3,220	950

[1] Source: U. S. Bureau of the Census.

between States within the region during this period totaled 1,600,000 (table 7). This reflects a movement from farms to cities during the war which is as striking as that from the South to other regions of the country. In fact, migration from the South was in large part a reflection of the shifts from rural to urban areas. For the United States as a whole, the net loss to the farm population through movement of civilians from farms averaged 900,000 per year in the period 1941 to 1945, compared with only 375,000 during the depression decade of the thirties and 630,000 in the twenties.[5] Evidence of the fact that migrants from the rural South not only went to cities in the North and West but also to southern cities is found in the large population gains registered in industrial areas such as Mobile and Houston.[6]

There is one particular implication in interregional migration to which attention should be called. The outward migration has provided other areas with workers who have been carried through the years of childhood, have been educated, and have in many cases received some work experience in the South (table 8 and chart 2.) After passing their early years in the South—unproductive ones in terms of their immediate contribution to the output of the region—they then move to other areas which can reap the fruit of this nurture and training. Data for the 1935–40 period indicate that of those who left the

TABLE 8.—*Age Distribution of Out-Migrants from the South, 1935–40, by Sex* [1]

Age group	Percentage distribution		
	Total	Male	Female
Total, 5 years of age and over	100.0	100.0	100.0
5–13 years of age	16.8	16.4	17.2
14–24 years of age	27.7	26.3	29.2
25–34 years of age	26.8	26.9	26.6
35–44 years of age	14.4	15.4	13.4
45–54 years of age	7.9	8.6	7.1
55 years of age and over	6.4	6.4	6.5

[1] Source: Based on the Sixteenth Census of Population, 1940, Internal Migration, Age of Migrants.

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[5] See Census release P-S, No. 6.

[6] See Census release P-44, No. 3.

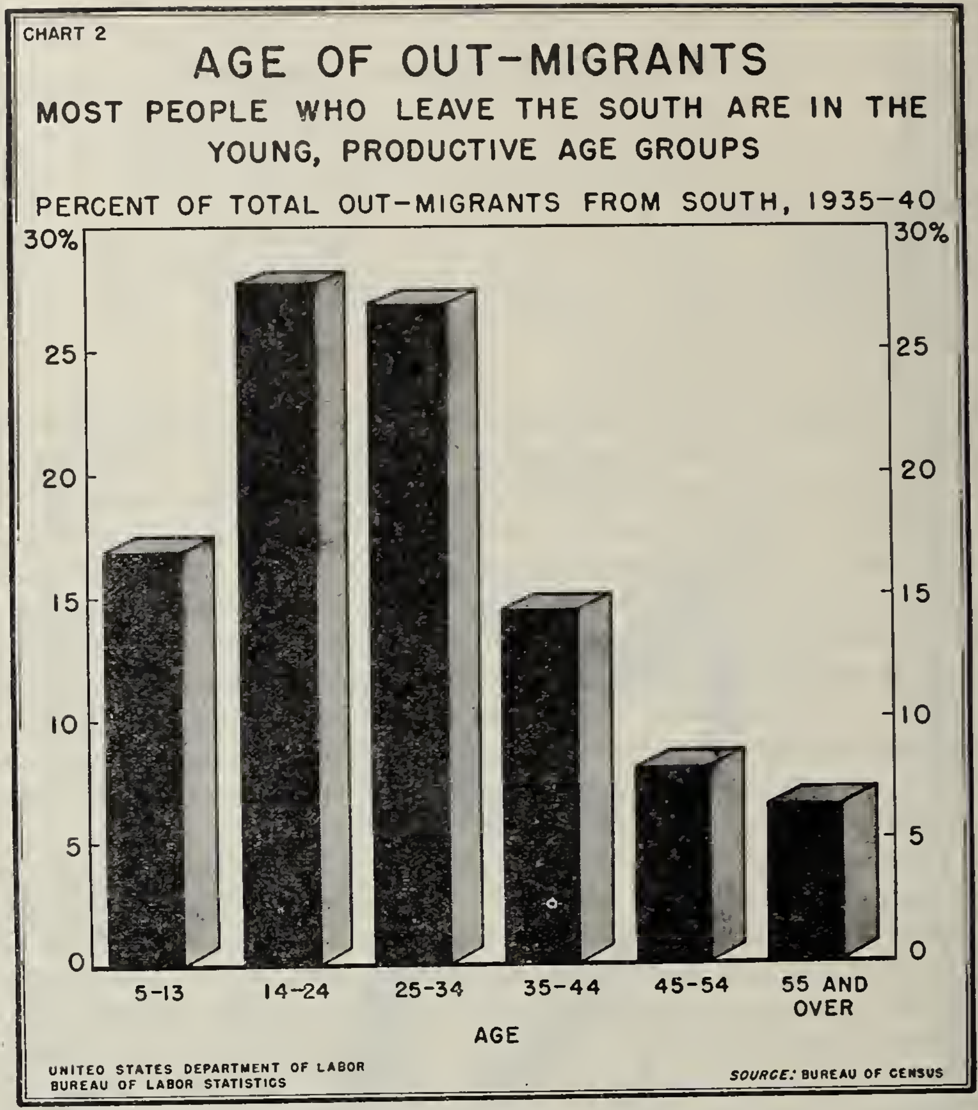

CHART 2

AGE OF OUT-MIGRANTS

MOST PEOPLE WHO LEAVE THE SOUTH ARE IN THE YOUNG, PRODUCTIVE AGE GROUPS

UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS

SOURCE: BUREAU OF CENSUS

South in that period, about three-eighths in the 25–34 age group had a high-school education or better, and six-sevenths had an eighth-grade education or better. As has been indicated, this give and take between areas works both ways, with migrants and capital from other areas entering the South, but, on balance, the South has been making a contribution to the other richer parts of the country.

A smaller percentage of Negroes left the South for other regions than was the case among whites, but there were so few colored persons entering the South from other regions that the South lost proportionately more Negroes than whites in the give and take of population between 1935 and 1940. Thus, Negroes accounted for one-third of the *net* out-migration from the South even though they made up one-fourth of the total southern population. Information on the extent of migration of nonwhites during the war is limited. Some evidence of migration of Negroes to the West, however, is found in the fact that the Negro population in five congested production areas on the West Coast more than doubled between 1940 and 1944.[7]

POSTWAR PROSPECTS FOR MIGRATION

What are the likely postwar trends with respect to migration of the South's population and labor supply? The answer to this question must necessarily be a conditional one. Migration will be heavily cut down if any large-scale industrialization program, drawing on the new war-built plants and on the skills of the wartime force of semiskilled and skilled factory workers, should develop vigorously in the South. But even under this assumption it is likely that migration from the South will be larger than migration to the South. There has been a long-term stability in the geographic distribution of employment opportunities which even the war did not fundamentally alter. The fast-growing population in the South, confronted with relatively low job opportunities and security, will continue to provide workers not only for its own industries but for those in other areas. Under conditions of fairly high employment, for example, job opportunities in New England, in the East North Central areas, and in the Pacific region are likely to be more favorable than in the South, so that migration from the South to these areas is bound to occur. Under conditions of full employment, migration is likely to be even more pronounced, for migration is a necessary step to full employment, given the differences in birth rates and industrialization which now exist and will probably continue to exist between different regions in our country. Only if severe depression were to set in would there be much likelihood of a reversal in the pattern of prewar and wartime migration.[8]

It is not likely that this generalization will be contradicted by the movement of returning servicemen. Surveys made by the War Department in 1944 [9] indicate that on the basis of their plans at that time, 15 in 100 of the soldiers who came from the South are likely to seek employment in the North or West after the war. This means that these States will be losing the potential services of many able-bodied and trained workers who could contribute effectively to the well-being of the Nation by developing the resources of the South. This trend forcibly suggests how essential is the study of the many plans and factors which relate to the greater industrialization of the South.

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[7] U. S. Bureau of the Census, Population, Series CA-3, Nos. 2, 3, 5, 6, and 8.

[8] Detailed analysis of changes in the labor force and postwar prospects for each of the Southern States appears in the article State and Regional Variations in Prospective Labor Supply, in Monthly Labor Review, December 1946.

[9] See Postwar Migration Plans of Army Enlisted Men, in The Annals of the American Academy of Political and Social Science, May 1945.

Trained and able-bodied labor is just as much a productive asset as a mine, a stand of timber, or 40 acres of fertile farm land. One of the South's major problems is how best to utilize this immensely valuable productive asset.

Population and Labor-Force Characteristics

In 1940, 37 million of the Nation's 132 million people lived in the 13 Southern States. Except for Texas, which accounted for over 6 million persons, and North Carolina, with 3½ million, each of the other 11 States had populations which ranged roughly between 2 and 3 million persons (table 9). The labor force or working population numbered some 14 million and, being drawn from the population 14 years of age and over, was distributed among the States in much the same fashion as the total population (table 10).

TABLE 9.—*Geographical Distribution of the South's Population, 1940, by Color and State*[1]

State	Population, 1940 (in thousands)			Percentage distribution		
	Total	White	Nonwhite	Total	White	Nonwhite
South	37, 013	27, 651	9, 362	100. 0	100. 0	100. 0
Virginia	2, 678	2, 016	662	7. 2	7. 3	7. 1
North Carolina	3, 572	2, 568	1, 004	9. 7	9. 3	10. 7
South Carolina	1, 900	1, 084	816	5. 1	3. 9	8. 7
Georgia	3, 124	2, 038	1, 086	8. 4	7. 4	11. 6
Florida	1, 897	1, 382	515	5. 1	5. 0	5. 5
Kentucky	2, 845	2, 631	214	7. 7	9. 5	2. 3
Tennessee	2, 916	2, 407	509	7. 9	8. 7	5. 4
Alabama	2, 833	1, 849	984	7. 7	6. 7	10. 5
Mississippi	2, 184	1, 106	1, 078	5. 9	4. 0	11. 5
Arkansas	1, 949	1, 466	483	5. 3	5. 3	5. 2
Louisiana	2, 364	1, 512	852	6. 4	5. 5	9. 1
Oklahoma	2, 336	2, 104	232	6. 3	7. 6	2. 5
Texas	6, 415	5, 488	927	17. 3	19. 8	9. 9

[1] Source: Sixteenth Census of Population, 1940.

TABLE 10.—*Geographical Distribution of the South's Labor Force, 1940, by Sex, Color, and State*[1]

State	Labor force (in thousands)[2]								
	Total			White			Nonwhite		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
South	13, 827	10, 579	3, 248	10, 035	8, 025	2, 010	3, 792	2, 554	1, 238
Virginia	1, 031	793	238	764	608	156	267	185	82
North Carolina	1, 334	984	350	950	724	226	384	260	124
South Carolina	731	516	215	415	310	105	316	206	110
Georgia	1, 226	890	336	773	598	175	453	292	161
Florida	787	560	227	534	403	131	253	157	96
Kentucky	999	820	179	905	757	148	94	63	31
Tennessee	1, 072	831	241	848	684	164	224	147	77
Alabama	1, 017	776	241	636	520	116	381	256	125
Mississippi	808	612	196	387	314	73	421	298	123
Arkansas	679	563	116	498	425	73	181	138	43
Louisiana	884	674	210	546	440	106	338	234	104
Oklahoma	804	648	156	725	592	133	79	56	23
Texas	2, 455	1, 912	543	2, 054	1, 650	404	401	262	139

[1] Source: Sixteenth Census of Population, 1940.
[2] Consists of persons 14 years of age and over either employed or unemployed.

POPULATION AND LABOR-FORCE GROWTH

Labor-force growth is in large measure a function of population growth. The rise of the American labor force from about 1 million in 1790 to 53½ million in 1940 is essentially an outcome of the increase in the population of working age—from about 2 million to 101 million over the 150–year period. Thus, between 1920 and 1940, population growth caused the southern labor force to expand at a greater rate than that of the North but at a lower rate than that of the West.

	Percent increase, 1920–40	
	Population	*Labor force*
South	20. 2	25. 0
North	16. 3	20. 0
West	35. 9	36. 7

In the absence of interstate migration, however, the South would have experienced by far the greatest rate of population growth, and, thereby, of labor-force growth. As the following tabulation indicates, the South has consistently been the region of highest fertility in the Nation:

	Net reproduction rate[1]	
	1905–10	*1935–40*
South	161	118
North	122	87
West	117	94

[1] Net reproduction rate of 100 means that each generation would just replace itself if birth and death rates of a given period were to continue indefinitely, and if there were no net migration.

This greater fertility is largely a reflection of the predominantly rural character of the South and of the fact that the proportion of nonwhite persons in its population is higher than in the North or West (table 11). High fertility is characteristic of rural residents and of nonwhites. More than 65 percent of the people in the South lived in rural areas in 1940; in the other regions of the country, the proportion was less than 40 percent. Similarly, 1 in every 4 persons in the South is nonwhite, in contrast to a ratio of less than 1 in 25 for the other

TABLE 11.—*Regional Distribution of the Population, 1940, by Residence and Color*[1]

Region	Residence				Color		
	Total	Urban	Rural nonfarm	Rural farm	All classes	White	Nonwhite
	Number (in thousands)						
South	37, 013	12, 873	8, 616	15, 524	37, 013	27, 651	9, 362
North	76, 120	51, 005	13, 571	11, 544	76, 120	73, 207	2, 913
West	13, 883	8, 128	3, 427	2, 328	13, 883	13, 349	534
	Percentage distribution						
South	100. 0	34. 8	23. 3	41. 9	100. 0	74. 7	25. 3
North	100. 0	67. 0	17. 8	15. 2	100. 0	96. 2	3. 8
West	100. 0	58. 5	24. 7	16. 8	100. 0	96. 2	3. 8

[1] Source: Sixteenth Census of Population, 1940.

regions. It should be noted, however, that even within the same residence and color groups, fertility is higher in the South than in the rest of the country.

As shown earlier, a fast-growing population pressing upon relatively limited economic opportunity has resulted in large-scale migration from the South in periods of depression as well as prosperity. The South will continue to export labor as long as its abundance of labor supply is not matched by opportunities for employment.

POPULATION CHARACTERISTICS AFFECTING LABOR-MARKET PARTICIPATION

The effect of the South's higher fertility can be seen clearly in the fact that its population and labor force are comparatively young. This is the case in spite of heavy out-migration of young and middle-aged persons from the South. The median age of the population of the South in 1940 was 25 years in contrast to 31 years in both the North and West. Approximately 52 percent of the South's labor force was under 35 years of age compared to 46 percent in the North and 44 percent in the West.

In addition, there are significant regional differences with respect to labor-market participation within each age and sex group. Although nearly all able-bodied men aged 25–54 years are in the labor force in every region, the work force of the South has relatively more young boys and older men, as shown in table 12. In the case of the youngsters, this is a reflection of the fact that rural youths can more readily enter the labor force than urban youths and of the related fact that southern youngsters leave school at a relatively early age. Only one-third of the southern adult population in 1940 attended school beyond the eighth grade. This relatively low proportion might be expected because of the South's predominantly rural character and because of its large nonwhite population, but even in each separate residence and color group the educational level in the South is lower than in other regions.

Unpaid family work on farms draws large numbers of southern youth into the labor force. Nearly one-third of the teen-agers in the

TABLE 12.—*Age Composition of the Male Labor Force, 1940, by Region* [1]

Age group	Number (in thousands)			Proportion in the labor force [2]		
	South	North	West	South	North	West
All age groups	10, 579	23, 598	4, 379	80. 0	78. 9	77. 5
14–19 years of age	975	1, 279	201	42. 2	31. 1	28. 2
20–24 years of age	1, 469	2, 845	513	88. 7	88. 2	85. 5
25–54 years of age	6, 613	15, 559	2, 937	93. 9	94. 4	93. 4
55–64 years of age	1, 030	2, 821	542	85. 4	83. 9	81. 2
65 years of age and over	492	1, 094	186	48. 5	40. 0	35. 5

[1] Source: Sixteenth Census of Population, 1940.

[2] Labor force as a percentage of population in each age group.

South's 1940 labor force were unpaid family workers in contrast to one-eighth in the North and one-tenth in the West.

The main reason that southern men retire from work at a later age than other men is that a greater proportion of them are engaged in farming, which is typically a family enterprise. As a farmer reaches old age his children or hired help take over the heavier burdens while he continues to work around the farm. In industry, on the other hand, a worker is often forced out of the labor market when he reaches an age at which he cannot compete with younger men. Other factors causing men to work to later ages in the South are the generally lower income levels and the absence of social-security coverage in agriculture.

In the South, nearly one woman in four works or seeks work outside the home. This rate of labor-market participation is slightly lower than that in the North and on a par with that in the West.

Residence and family characteristics of southern women serve to reduce the number working outside the home. The fact that relatively more women in the South live in rural areas has acted to lower the proportion in the labor force. Women in rural areas do not participate in the labor force to the same extent as urban women, principally because there is not much opportunity for any work except farming, where women are employed for the most part only during the peak planting and harvesting seasons. Moreover, farm women generally have more household responsibilities and perform many chores of the type which do not occur in nonfarm households. One out of every three women in urban areas in 1940 worked or sought work outside the home, compared with corresponding ratios of one in five for rural-nonfarm districts and one in eight for rural-farm areas.

In addition, the fact that the South has proportionately more married women and more young children per family has a tendency to keep women out of the labor market. Most women do not continue to work outside the home after marriage, and most of those who do continue to work quit after they have children. For example, among women aged 18–34 in 1940, approximately 67 percent of the single women were in the labor force, compared with only 31 percent of the married women without children, and 8 percent of the married women with children under 10 years of age.

Color composition works in the opposite direction since nonwhite women work or seek work (mostly in domestic service) to a greater extent than do white women. Thus, when farm and nonfarm women are compared separately, it is found that the rates of labor-force participation for the South are higher than the rates for corresponding groups in other regions.

	Percentage of female population 14 years of age and over in the labor force, 1940, in—		
	South	*North*	*West*
All women	24. 2	26. 2	23. 8
Urban areas	35. 1	30. 5	28. 4
Rural nonfarm areas	22. 4	20. 0	18. 1
Rural farm areas	13. 2	10. 7	12. 0

Here, then, are the dominant characteristics of the South's labor force: (1) Except for the effect of migration, the South has the greatest potential rate of labor-force growth in the Nation. (2) Nonwhite workers comprise a relatively large proportion of the South's labor force. (3) There is a predominance of rural workers. (4) The proportion of the labor force concentrated in the younger age groups is greater than for other regions. (5) Southerners leave school earlier to go to work and retire from the labor force at later ages than people in the North and West. (6) In general, the South has relatively fewer women working outside the home than the North, as a result of rural residence and responsibility for the care of larger families. This is true despite the greater labor-market participation of nonwhite women.

III.—Employment in Southern Manufactures [1]

World War II expansion and subsequent contraction of the number of persons employed in manufacturing industries in the South closely paralleled the movement of manufacturing employment in the United States as a whole.[2] In 1939, just as hostilities were beginning in Europe and before the effect of lend-lease production was felt in this country, factory employment in the South approximated 1,658,000 and in the United States as a whole, over 10,000,000 (tables 13 and 14).

By January 1943, at the end of 1 year of full-scale war production, employment in the Southern States had increased 60 percent as compared with about a 64-percent rise for the Nation. By November 1943—the wartime peak in manufacturing employment for both the Southern region and the United States—those employed in the South numbered 2,836,000. The gain was 71 percent as compared with a national increase of about 76 percent over the prewar period.

An even greater similarity of trend was apparent in the later war years. In August 1944, both the South and the United States as a whole had an employment level 68 percent above that of 1939. By VJ-day, in spite of cut-backs and contract cancellations, factory employment for both the United States and the Southern States was about 50 percent above the prewar level.

Immediate contraction of employment at the war's end was not as severe in the South as in the Nation as a whole. The 2,248,000 workers in the South in September 1945 represented a decrease of less than 9 percent between August and September compared with a national decline of over 12 percent. Also, at the time of the postwar low, in February 1946, the South's factory employment was 32 percent above prewar as compared with only 24 percent in the Nation.

Following the postwar low, the South did not gain as rapidly as the Nation. August 1946 manufacturing employment of 2,315,000 was 40 percent above the prewar level, whereas the national increase was 44 percent.

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[1] Prepared in the Employment Statistics Division of the Bureau's Employment and Occupational Outlook Branch by Eleanora H. Barnes under the direction of Clara F. Schloss.

[2] In this section, "employment" is construed as total manufacturing employment; that is, covering all production and nonproduction workers in private manufacturing industries.

The term "South" refers to the 13 States of Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, and Virginia. Detailed estimates of factory employment by State and by industry are available on a monthly basis as part of the Bureau's expanded program in the field of employment statistics.

Table 13.—*Estimates of Total Manufacturing Employment in the South for Selected Months, by State*

[In thousands]

State	Prewar employment [1]	January 1943	November 1943 [2]	August 1945	September 1945
South: Total	1, 657. 5	2, 656. 3	2. 836. 1	2, 462. 8	2, 247. 9
Alabama	144. 2	259. 9	256. 1	221. 3	199. 0
Florida	66. 9	122. 8	140. 8	100. 0	82. 8
Georgia	192. 7	288. 7	314. 4	276. 0	248. 4
Mississippi	56. 7	94. 2	96. 4	83. 0	79. 9
North Carolina	305. 3	400. 2	393. 7	350. 9	340. 7
South Carolina	139. 6	190. 7	189. 1	169. 4	165. 5
Tennessee	172. 2	242. 2	265. 9	252. 0	233. 9
Virginia	164. 8	234. 2	228. 4	200. 4	187. 6
Kentucky	79. 9	122. 4	137 8	127. 8	115. 5
Arkansas	41. 9	75. 0	80. 2	74. 3	69. 4
Louisiana	88. 7	151. 3	183. 1	153. 5	143. 2
Oklahoma	38. 2	84. 9	107. 5	86. 2	62. 0
Texas	166. 4	389. 8	442. 7	368. 0	320. 0

State	1946							
	January	February	March	April	May	June	July	August
South: Total	2, 207. 7	2, 183. 8	2, 226. 6	2, 233. 3	2, 238. 0	2. 260. 9	2, 280. 2	2, 315. 3
Alabama	196. 0	179. 9	199. 3	201. 1	201. 3	202. 4	208. 3	210. 3
Florida	83. 0	83. 0	81. 2	79. 0	77. 9	76. 8	73. 9	74. 3
Georgia	243. 8	244. 3	242. 6	244. 0	245. 7	247. 1	253. 4	259. 5
Mississippi	82. 6	81. 8	81. 0	81. 7	81. 4	83. 4	83. 7	87. 0
North Carolina	346. 3	352. 1	359. 3	358. 5	357. 5	360. 9	358. 1	358. 9
South Carolina	171. 8	175. 1	175. 8	176. 6	178. 4	179. 8	180. 0	183. 9
Tennessee	226. 3	220. 8	226. 0	229. 7	232. 1	235. 0	240 2	244. 8
Virginia	191. 7	192. 6	194. 8	195. 1	193. 5	197. 3	200. 2	205. 0
Kentucky	117. 5	112. 6	115. 7	118. 3	119. 8	121. 9	123. 6	125. 4
Arkansas	61. 9	64. 4	68. 5	66. 2	66. 0	65. 5	65. 6	67. 8
Louisiana	128. 4	128. 7	131. 3	132. 8	132. 8	132. 9	132. 4	128. 0
Oklahoma	56. 4	54. 5	54. 1	52. 7	51. 7	52. 8	52. 5	54. 7
Texas	302. 0	294. 0	297. 9	297. 0	299. 8	305. 1	308. 3	315. 7

[1] Prewar estimates for Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina, and Virginia are based on unemployment compensation data of the Bureau of Employment Security of the Federal Security Agency, average for the third quarter of 1939. Prewar estimates for Kentucky are based on unemployment compensation data, annual average for 1939. Tennessee estimates are based on unemployment compensation data, average for the third quarter of 1940. Arkansas, Louisiana, Oklahoma, and Texas prewar estimates are based on Census Bureau data for 1939 and are not strictly comparable with data for later periods.

[2] Month of wartime peak employment in the South.

Position of the South in the Nation's Economy

Despite the increase in industrialization during wartime, the relative position of the South in the Nation's economy remained approximately the same (table 15). During the period of peak wartime employment, southern industry expanded slightly less rapidly than in the United States as a whole, but by 1945 it had again returned to the prewar ratio where it remained. The South has not materially increased its share of the Nation's total employment. However, the anticipated 17-percent increase in the South's labor supply from 1940 to 1950, coupled with the war-induced greater diversification of industry, and larger reservoir of skilled workers, all give promise of a brighter industrial future.

Major Components of Southern Manufacturing

In the prewar period, the nondurable goods group, heavily weighted by the textile industry, furnished over two-thirds of the employment in the South. Expansion in war industries—primarily shipbuilding and aircraft—increased the relative importance of employment in the durable-goods group to about 46 percent of total in 1943; but by 1946 the prewar ratio was again approached. While the relatively stable nondurable-goods industries employed more workers even during the war peak than the durable-goods industries, the more than doubling of durable-goods employment and subsequent deflation governed the over-all pattern of employment.

Major Industry Groups—South Compared With the Nation

The similarity of industrial development in the South and the Nation during the war years tends to minimize the possibility that expansion of war facilities in the South resulted in a permanent relative gain in manufacturing employment. There has, however, been a broadening of the importance of southern industries in the Nation's

TABLE 14.—*Estimated Employment*[1] *in Manufacturing Industries in the United States, by Industry, for Selected Periods*

Industry	Employment (in thousands)					Percent of total				
	1939	1943	1944	1945	1946[2]	1939	1943	1944	1945	1946[2]
All manufacturing	10,078	17,381	17,111	15,060	13,695	100.0	100.0	100.0	100.0	100.0
Iron and steel and their products	1,171	2,034	2,015	1,786	1,528	11.6	11.7	11.8	11.9	11.2
Electrical machinery	355	914	967	815	608	3.5	5.0	5.7	5.4	4.4
Machinery, except electrical	690	1,585	1,553	1,385	1,259	6.8	9.1	9.1	9.2	9.2
Transportation equipment, except automobiles	193	2,951	2,899	1,797	614	1.9	17.0	16.9	11.9	4.5
Automobiles	466	845	877	726	724	4.6	4.9	5.1	4.8	5.3
Nonferrous metals and their products	283	525	513	450	407	2.8	3.0	3.0	3.0	3.0
Lumber and timber basic products	465	589	569	562	627	4.6	3.4	3.3	3.7	4.6
Furniture and finished lumber products	385	429	413	396	439	3.8	2.5	2.4	2.6	3.2
Stone, clay, and glass products	349	422	395	381	438	3.5	2.4	2.3	2.5	3.2
Textile-mill products and other fiber manufactures	1,235	1,330	1,228	1,173	1,281	12.3	7.7	7.2	7.8	9.4
Apparel and other finished products	894	1,080	1,055	1,044	1,149	8.9	6.2	6.2	6.9	8.4
Leather and leather products	383	378	356	353	391	3.8	2.2	2.1	2.3	2.8
Food	1,192	1,418	1,455	1,440	1,451	11.8	8.2	8.5	9.6	10.6
Tobacco manufactures	105	103	96	95	97	1.0	.6	.6	.6	.7
Paper and allied products	320	389	388	387	431	3.2	2.2	2.3	2.6	3.1
Printing, publishing, and allied industries	561	549	551	555	619	5.6	3.2	3.2	3.7	4.5
Chemicals and allied products	421	873	810	769	633	4.2	5.0	4.7	5.1	4.6
Products of petroleum and coal	147	170	183	191	208	1.5	1.0	1.1	1.3	1.5
Rubber products	150	231	247	243	270	1.5	1.3	1.4	1.6	2.0
Miscellaneous industries	311	563	543	513	523	3.1	3.2	3.2	3.4	3.8

[1] Since January 1943, the Bureau has been receiving employer reports covering total employment as well as production workers. Nonproduction worker estimates for each group have been based on the monthly changes shown by the nonproduction worker segment of these reports. Before 1943, various estimating methods were used to obtain total employment from the production worker series. For this reason, the series, in some groups, may not be consistent prior to 1943. Both production and nonproduction worker series have been adjusted to employment data made available annually by the Federal Security Agency.

[2] 8-month average.

Table 15.—*Manufacturing Employment in the South as Percent of United States Total, by Industry Group, for Selected Periods*

Industry	Percent of United States total				
	1939[1]	1943	1944	1945	1946[2]
South: All manufacturing	16.4	15.9	16.1	16.4	16.4
Iron and steel and their products	7.2	9.1	10.2	9.3	7.1
Electrical machinery	.6	1.1	1.5	1.8	1.4
Machinery, except electrical	4.2	4.4	5.0	5.5	5.3
Transportation equipment, except automobiles	9.3	15.6	16.2	15.9	13.7
Automobiles	1.8	1.0	1.3	1.5	1.6
Nonferrous metals and their products	5.7	8.5	8.3	8.4	9.6
Lumber and timber basic products	47.2	55.0	52.8	49.9	47.2
Furniture and finished lumber products	25.2	28.1	28.3	28.5	27.9
Stone, clay, and glass products	14.8	13.5	12.8	12.9	12.9
Textile-mill products and other fiber manufactures	41.2	47.5	47.2	46.3	45.1
Apparel and other finished textile products	10.1	12.5	12.8	12.5	11.3
Leather and leather products	5.0	6.0	6.3	6.6	6.9
Food	17.1	19.2	19.4	19.3	19.0
Tobacco manufactures	44.7	47.3	49.9	51.2	50.7
Paper and allied products	12.4	15.8	15.7	15.0	15.0
Printing, publishing, and allied industries	9.9	10.5	10.6	10.7	10.8
Chemicals and allied products	23.9	19.7	23.1	24.7	24.2
Products of petroleum and coal	26.9	36.1	36.5	36.6	34.1
Rubber products	3.5	5.1	6.5	6.3	5.9
Miscellaneous industries	[3] 6.4	2.8	3.3	3.4	3.5

[1] See table 13, footnote 1, for date of 1939 regional estimates. See table 14, footnote 1, for basis of 1939 United States estimates.

[2] 8-month average.

[3] Not strictly comparable with later periods.

economy. In 1939, almost half of the workers in the lumber industry and over two-fifths of those in the tobacco and the textile-mill products groups were in the Southern States (tables 14 and 15). The southern sections of the petroleum, furniture, and chemical industries each employed about a fourth of the United States total for these industries. The only other really important industry was food processing which employed over a sixth of the United States total. At the 1943 peak, the South accounted for an even greater share of those employed in each of these outstanding groups with the exception of chemicals. In addition, such manufacturing groups as transportation equipment and paper also had over 15 percent of their employees located in the South and 8 of the remaining 11 smaller groups increased in importance.

Much of the diversification acquired during the war period was carried over into 1946. Whereas in 1939, 5 of the 20 major manufacturing groups had 5 percent or less of their employment in the South, only 3 were in this position in 1946. The southern industry groups that had always loomed large in the national economy continued to hold their own; the increased importance of many of the other industrial groups makes the South less vulnerable to economic disturbances. Such diversification makes for a healthier postwar situation.

Trend of Employment in the South, by Industry Group

War expansion caused many changes in the industry group pattern within the Southern Region. The largest group was textile-mill products which in 1939 furnished only slightly less than a third of all factory employment (table 16). The lumber and food-processing groups were next and together employed about a fourth of the total. Chemical products, furniture, apparel, and the iron and steel products groups accounted for another fourth.

By 1943, all groups showed aggregate increases in average employment varying from a few hundred in the automobile industry to a gain of 443,000 in the transportation-equipment group. The outstanding relative and aggregate increases occurred, of course, in transportation equipment; this group rose to second place in 1943 when it accounted for one-sixth of all workers. Because of the absorption of such a large part of the labor supply in transportation-equipment manufacture, the only other increases in this period were in such war-essential groups as iron and steel products,

TABLE 16.—*Manufacturing Employment in the South, by Major Industry Groups, for Selected Periods*

Industry	Employment (in thousands)					Percent of total				
	Prewar [1]	1943	1944	1945	1946 [2]	Prewar	1943	1944	1945	1946 [2]
All manufacturing	1,657.5	2,769.8	2,761.8	2,467.0	2,243.2	100.0	100.0	100.0	100.0	100.0
Durable goods	526.7	1,280.9	1,287.3	1,033.1	792.9	31.8	46.2	46.6	41.9	35.3
Nondurable goods	1,130.8	1,488.9	1,474.5	1,433.9	1,450.3	68.2	53.8	53.4	58.1	64.7
Iron and steel and their products	84.7	185.4	204.9	165.9	108.0	5.1	16.7	7.4	6.7	4.8
Electrical machinery	2.0	10.3	14.7	14.3	8.8	.1	.4	.5	.6	.4
Machinery, except electrical	29.3	69.2	78.3	76.2	66.1	1.8	2.4	2.8	3.1	2.9
Transportation equipment, except automobiles	18.0	461.0	468.4	285.5	83.9	1.1	16.6	17.0	11.6	3.8
Automobiles	8.5	8.8	11.2	11.1	11.4	.5	.3	.4	.4	.5
Nonferrous metals and their products	16.0	44.6	42.7	37.7	39.2	1.0	1.6	1.6	1.5	1.8
Lumber and timber basic products	219.5	323.9	300.7	280.3	296.1	13.2	11.7	10.9	11.4	13.2
Furniture and finished lumber products	97.1	120.5	116.8	112.8	122.7	5.9	4.4	4.2	4.6	5.5
Stone, clay, and glass products	51.5	57.1	50.5	49.3	56.6	3.1	2.1	1.8	2.0	2.5
Textile-mill products and other fiber manufactures	509.5	631.2	580.1	543.4	578.3	30.7	22.8	21.0	22.0	25.8
Apparel and other finished textile products	90.5	135.3	135.1	130.4	129.4	5.5	4.9	4.9	5.3	5.8
Leather and leather products	19.0	22.5	22.5	23.2	27.0	1.1	.8	.8	.9	1.2
Food	204.3	271.7	281.6	278.2	276.4	12.3	9.8	10.2	11.3	12.3
Tobacco manufactures	46.9	48.7	47.9	48.6	49.2	2.8	1.8	1.7	2.0	2.2
Paper and allied products	39.6	61.3	60.9	58.1	64.7	2.4	2.2	2.2	2.4	2.9
Printing, publishing, and allied industries	55.6	57.7	58.3	59.5	67.0	3.4	2.1	2.1	2.4	3.0
Chemicals and allied products	100.8	171.7	187.5	189.6	153.4	6.1	6.2	6.8	7.7	6.8
Products of petroleum and coal	39.6	61.3	66.8	70.0	70.0	2.4	2.2	2.4	2.8	3.1
Rubber products	5.3	11.8	16.0	15.3	15.9	.3	.4	.6	.6	.7
Miscellaneous industries	[3] 19.8	15.9	17.7	17.5	17.9	1.2	.6	.7	.7	.8

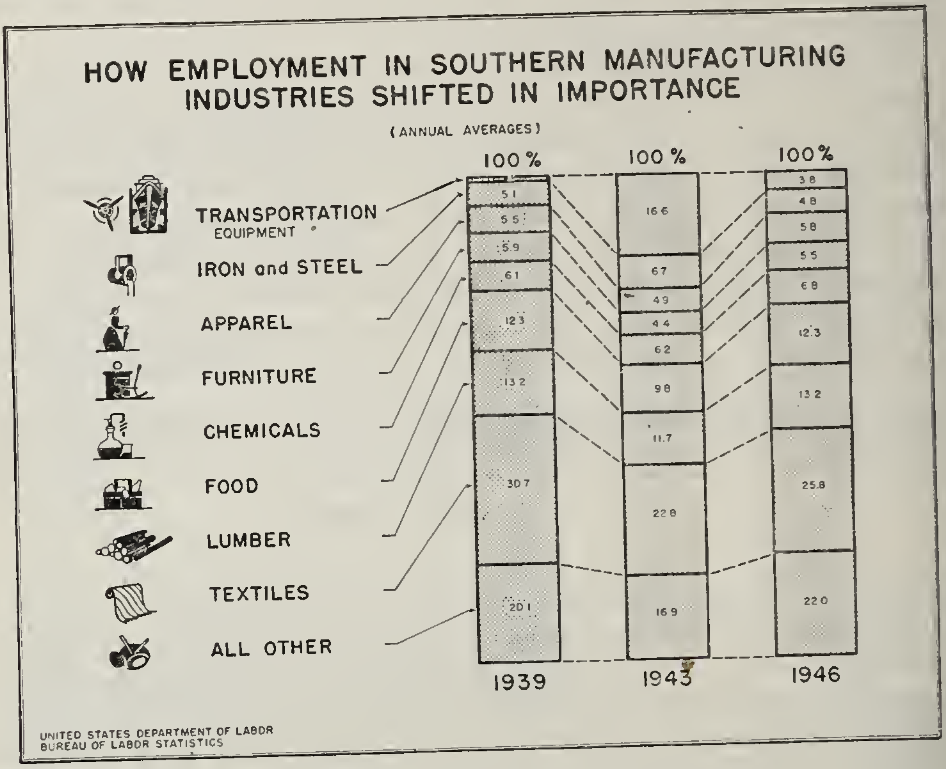
[1] See table 13, footnote 1, for date of prewar estimates.

[2] 8-month average.

[3] Not strictly comparable with later periods.

the machinery groups, nonferrous metals, and chemical and rubber products.

In 1946, the aggregate average employment in all industry groups, except miscellaneous industries, was above the prewar level and for 10 of the major groups was above the 1943 levels. As regards total regional employment, the largest relative decrease between 1939 and 1946 was in textile-mill products—from 31 to 26 percent (chart 2).



Postwar Highlight in Southern Employment

A year after the war's end, the employment total of 2,315,000 for the South represented an over-all net decrease of 148,000 or 6 percent (table 17). Only six major groups—transportation equipment, electrical machinery, iron and steel, automobiles, chemical products, and machinery except electrical—employed fewer people in August 1946 than on VJ-day. Contractions in the shipbuilding and aircraft industries alone accounted for almost 70 percent of the gross decrease. Disregarding this expected sharp contraction in the transportation-equipment group, the employment rise for the year is about 3 percent.

Immediate reductions in employment in the 1 month following VJ-day amounted to an over-all loss of 215,000 workers, or 9 percent of all employment. The most severe cut occurred in the transportation-equipment group in which almost 40 percent were laid off.

TABLE 17.—*Estimates of Total Manufacturing Employment in the South for Selected Months, by Industry*[1]

[In thousands]

Industry	Prewar employment [2]	January 1943	November 1943 [3]	August 1945	September 1945
South: All manufacturing	1,657.5	2,656.3	2,836.1	2,462.8	2,247.9
Durable goods	526.7	1,184.9	1,336.3	1,044.1	842.9
Nondurable goods	1,130.8	1,471.4	1,499.8	1,418.7	1,405.0
Iron and steel and their products	84.7	187.5	192.1	161.0	111.1
Electrical machinery	2.1	8.5	12.3	17.1	11.9
Machinery, except electrical	29.3	62.0	74.6	76.3	63.9
Transportation equipment, except automobiles	18.0	365.4	508.7	285.5	174.8
Automobiles	8.5	6.7	11.1	16.7	11.0
Nonferrous metals and their products	16.0	42.5	46.7	38.5	30.1
Lumber and timber basic products	219.5	333.5	319.7	286.6	279.9
Furniture and finished lumber products	97.1	119.4	117.4	112.5	111.1
Stone, clay, and glass products	51.5	59.4	53.7	49.9	49.1
Textile-mill products and other fiber manufactures	509.5	641.0	615.6	535.4	532.1
Apparel and other finished textile products	90.5	137.7	133.8	128.9	124.9
Leather and leather products	19.0	22.6	22.2	23.1	21.7
Food	204.3	248.8	282.9	279.7	292.1
Tobacco manufactures	46.9	49.9	49.2	47.8	49.4
Paper and allied products	39.6	60.1	62.9	57.1	57.2
Printing, publishing, and allied industries	55.6	57.8	57.8	58.6	59.3
Chemicals and allied products	100.8	170.8	182 4	184.2	168.6
Products of petroleum and coal	39.6	59.7	60.7	71.4	69.0
Rubber products	5.2	8.8	15.2	15.1	14.7
Miscellaneous industries	[4] 19.8	14.2	17.1	17.4	16.0

Industry	1946							
	January	February	March	April	May	June	July	August
South: All manufacturing	2,207.7	2,183.8	2,226.6	2,233.3	2,238.0	2,260.9	2,280.2	2,315.3
Durable goods	782.0	744.0	774.7	786.8	794.8	808.8	819.9	832.2
Nondurable goods	1,425.7	1,439.8	1,451.9	1,446.5	1,443.2	1,452.1	1,460.3	1,483.1
Iron and steel and their products	107.4	79.9	107.2	112.1	112.2	111.8	115.9	117.2
Electrical machinery	8 4	8 5	8.3	8.8	8.6	8.9	9.2	9.6
Machinery, except electrical	67.2	63.8	64.1	64.7	66.4	67.4	66.8	68.3
Transportation equipment, except automobiles	99.7	91.4	83.3	81.7	81.8	78.8	78.2	77.1
Automobiles	10.2	10.1	10.4	11.3	11.6	12.4	12.6	12.5
Nonferrous metals and their products	35.4	30.3	37.2	38.6	39.9	42.8	44.6	45.0
Lumber and timber basic products	281.9	285.4	287.3	291.1	295.6	303.4	309.8	314.2
Furniture and finished lumber products	119 1	120.0	120.9	121.9	122.7	125.2	124.8	127.5
Stone, clay, and glass products	52.7	54.6	56.0	56.6	56.0	58.1	58.0	60.8
Textile-mill products and other fiber manufactures	559.8	570.9	576.6	578.1	578.8	585.4	585.1	591.6
Apparel and other finished textile products	125.7	129.3	130.5	128.1	127.8	130.8	130.1	132.7
Leather and leather products	25.5	26.5	26.8	27.5	27.4	27.5	27.7	27.5
Food	277.8	274.9	276.9	273.3	274.1	272.3	278.1	284.4
Tobacco manufactures	48.1	48.3	48.2	48.7	49 2	50.1	50.5	51.3
Paper and allied products	61.8	62.3	63.4	64.5	64.8	65.8	66.9	67.5
Printing, publishing, and allied industries	64.4	65.7	66.8	67.1	67.7	67.9	68.0	68.3
Chemicals and allied products	159.3	158.0	159.0	155.1	148.5	147.3	147.9	152.5
Products of petroleum and coal	69.9	70.1	69.8	70.5	71.2	71.4	72.1	72.5
Rubber products	16.1	16.0	16.0	15.8	15.8	15.8	15.8	16.0
Miscellaneous industries	17.3	17.8	17.9	17.8	17.9	17.8	18.1	18.8

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[1] Estimates for industry groups are adjusted to levels indicated by 1944 unemployment compensation data of the Bureau of Employment Security of the Federal Security Agency.

[2] See table 13, footnote 1, for date and source of prewar data.

[3] Month of wartime peak employment in the South.

[4] Not strictly comparable with later periods.

Employment was reduced by about one-third in the iron and steel, electrical machinery, and automobile groups; the chemical-products group declined by 15,000 or more than 8 percent. An offsetting seasonal gain of over 4 percent in the food processing industry and slight increases in the tobacco, paper, and printing industries were the only upward tendencies.

Owing to the Nation-wide steel strike, employment in the South, as in the Nation, reached a postwar low in February 1946 despite the fact that many industries were already well established in their reconversion adjustment. Only the iron and steel, machinery, transportation-equipment, automobiles, chemical products, tobacco, and the seasonally affected food groups continued at a lower employment level than in the September 1945 cut-back period.

From the February low to August 1946, declines were limited to the transportation-equipment and chemical-products groups. As the employment drop for the chemical products group was partially seasonal, the major single retarding factor in the recent employment upswing in the South was the continuing contraction in shipbuilding and aircraft.

Postwar Highlights—South and United States, by Industry Group

The employment changes in industry groups in the South in the first year of peace were somewhat akin to those in the United States. For both the United States and the South, iron and steel, the machinery groups, transportation equipment, and chemicals showed employment losses. But most of the percentage decreases were less severe nationally than in the region. In nine groups, national gains were greater than those in the South. In five—nonferrous metals, leather, miscellaneous, paper, and printing and publishing—the South showed greater proportionate increases over the period than the Nation. Although the South's automobile industry was small, it was the one industry in the region which showed an opposite trend to that in the Nation.

Employment in Southern States

The manufacturing economy of component States of the Southern Region was affected in varying ways by wartime expansion. Expansion of plant facilities in the less industrialized States brought later, and for the most part, proportionately greater peak employment. As the war ended, many of these shifts in importance and in industrial pattern were not maintained.

TRENDS—STATES COMPARED WITH REGION

In the prewar period, North Carolina—with an average employment accounting for about 18 percent of all manufacturing workers in the

Southern Region—was the most highly industrialized State. Georgia with nearly 12 percent and Tennessee with over 10 percent were next in importance. Texas with 10 percent was a close fourth (table 18).

TABLE 18.—*Manufacturing Employment in the Southern States by Region and by State, for Selected Periods*

Region and State	Employment (in thousands)					Percent of total				
	Prewar [1]	1943	1944	1945	1946 [2]	Prewar	1943	1944	1945	1946 [2]
Southern States	1.657.5	2.769.8	2.761.8	2,467.0	2,243.2	100.0	100.0	100.0	100.0	100.0
Southeastern States	1,322.3	2,002.5	1,980.8	1,790.7	1,690.4	79.8	72.3	71.7	72.6	75.4
Alabama	144.2	258.5	251.7	223.4	199.8	8.7	9.3	9.1	9.1	8.9
Florida	66.9	136.0	135.3	103.2	78.6	4.1	4.9	4.9	4.2	3.6
Georgia	192.7	302.9	307.4	271.7	247.5	11.6	10.9	11.1	11.0	11.0
Mississippi	56.7	95.1	95.6	85.1	82.8	3.5	3.5	3.5	3.4	3.7
North Carolina	305.3	399.9	383.2	353.0	356.5	18.4	14.4	13.9	14.3	15.9
South Carolina	139.6	191.8	180.0	170.5	177.7	8.4	6.9	6.5	6.9	7.9
Tennessee	172.2	255.9	271.1	255.5	231.9	10.4	9.2	9.8	10.4	10.3
Virginia	164.8	231.9	220.2	202.0	196.3	9.9	8.4	8.0	8.2	8.8
Kentucky	79.9	130.5	136.3	126.3	119.3	4.8	4.8	4.9	5.1	5.3
Southwestern States	335.2	767.3	781.0	676.3	552.8	20.2	27.7	28.3	27.4	24.6
Arkansas	41.9	76.7	77.0	71.3	65.8	2.5	2.8	2.8	2.9	2.9
Louisiana	88.7	166.1	177.1	153.9	130.8	5.4	6.0	6.4	6.2	5.8
Oklahoma	38.2	99.7	101.9	86.6	53.7	2.3	3.6	3.7	3.5	2.4
Texas	166.4	424.8	425.0	364 5	302.5	10.0	15.3	15.4	14.8	13.5

[1] See table 13, footnote 1, for date and source of prewar data.
[2] 8-month average.

By 1943, interstate relationships had changed. The average number of persons in manufacturing in Texas had more than doubled, and Texas was the leading manufacturing State in the region. With an aggregate gain of even less than a third, North Carolina dropped to second place. All States experienced some wartime expansion, but increases were proportionately smaller in Georgia, Tennessee, South Carolina, and Virginia (in addition to North Carolina) in the southeastern group of States than elsewhere. For all these States, the relative decrease in industrial importance was continued into the postwar period.

In addition to Texas, all of the other Southwestern States—Oklahoma, Louisiana, and Arkansas—and Florida and Alabama in the Southeast, had a greater share of regional employment in 1943 than in 1939. Further gains for Texas, Oklahoma, and Louisiana occurred in 1944, while in Arkansas the rise continued even in 1945; Kentucky and Mississippi had a greater proportional employment in 1946 than at any other time.

The States of the Southwest were less industrialized before the war than those in the Southeast. The influx of war facilities and contracts raised the proportion of regional employment in the Southwest from about 20 percent in 1939 to 28 percent in 1944. On the basis of the record for the first 8 months of 1946, the Southwestern

States have declined from this peak position, but they still employ a fourth of the South's factory workers.

Based on the same 8-month average in 1946, each of the States in the Southwest and Alabama, Mississippi, and Kentucky in the Southeast showed proportional increases over the 1939 relationship. It seems, therefore, that the Southwest and some of the smaller industrial States of the Southeast have maintained their increased share of southern manufacturing employment.

OUTSTANDING INDUSTRIES IN THE SOUTH

The considerable importance of the textile-mill products group in the manufacturing economy of the South is well known. Also important are lumber, food processing, chemicals, apparel, furniture, iron and steel, and—during the war and postwar period—transportation equipment. Contrary to a general impression, the tobacco industry in the South actually accounts for only about 2 percent of total manufacturing employment. However, this industry is significant in furnishing work in such States as North Carolina, Virginia, Florida, and Kentucky.

Textile-mill products.—The largest single industry group in the South—textile-mill products—employed about 30 percent of all factory workers in the prewar period and about 25 percent of all southern industrial workers in 1946 (based on an 8-month average). Employment in the group increased 24 percent from 1939 to the peak year of 1943 and, despite declines after 1943, rose over 13 percent between 1939 and 1946; most States participated in the increase.

Little change occurred in the relative standing of the States in the industry. In 1946, about 213,000 or well over one-third of the employment was located in North Carolina. South Carolina with 120,000 ranked second and Georgia with 103,000 ranked third.

Although textile-mill products (with cotton textiles as the primary industry) formed the largest single employing group in the entire southern region, 96 percent of the group employment was concentrated in only six States—Alabama, Georgia, North Carolina, South Carolina, Tennessee, and Virginia.

Lumber and timber basic products.—Lumber—the second larges industry group in the South—accounted for about an eighth of thos employed in the region both in 1939 and after the war. Distributio was fairly even among 11 of the 13 Southern States in 1939; Oklahoma and Kentucky had only small numbers in the group. Alabam ranked first in 1939 with 27,000 workers or about an eighth of th industry total. North Carolina had 25,000 and Mississippi 23,00 persons so employed and the remaining 8 States had from 14,000 t 20,000.

The industry—comprising primarily logging camps and sawmills—increased almost a half in size by the peak year 1943 in spite of labor recruitment difficulties; 1946 employment still exceeded the prewar level by over a third. Only Florida and Oklahoma showed decreases for the entire period. Alabama alone of all the States showed a gain in 1946 over its war peak average. Employment in this State in the lumber group totaled 42,000 workers, a slight relative increase. Georgia, which ranked eighth in 1939, had more than doubled its employment and risen to second place in the industry in 1946. In the latter year, 11 percent of the total lumber group workers were in Georgia.

Food.—Food processing was the third outstanding industry of the South and a little over an eighth of all workers were in this group in both 1939 and 1946. The group was of considerable size in all States in the South. However, in 1939, one-fifth of its workers were concentrated in Texas and one-eighth in Louisiana.

Between 1939 and 1946, food-processing employment had increased one-third and all States shared in the gain. In Texas, the rise was over a half to 59,400 and in Louisiana more than a third to 34,500. Kentucky, Arkansas, and Louisiana each employed more food-processing workers on an average in 1946 than at any other time in the entire period.

Chemicals and allied products.—The chemical-products group accounted for 100,800 workers in 1939—slightly more than 6 percent of regional employment. With many industries within the group requiring new plant facilities for full war production, the peak of 189,600 did not occur until 1945. By 1946, employment had decreased but was still 52 percent above the prewar level.

Owing to the diversity of the industries in the group,[3] it is not practicable to generalize on the causes of regional changes. However, the changes in Tennessee and Virginia, which together comprised about 45 percent of the regional group employment in 1939 and 52 percent in 1946, strongly influenced the over-all pattern.

Employment in the chemical group in Tennessee rose from 23,400 in 1939 to a peak of 61,500 in 1945. In 1946, the number was almost double the prewar total for the State and had risen from 23 to 30 percent of the regional total for the group. The development of the Oak Ridge atomic bomb plant and increases in the production of industrial chemicals were mainly responsible.

In Virginia, the number rose to 34,000—about a 54-percent increase—between 1939 and 1946. Production of rayon fibers furnished the largest segment of employment in the group throughout the entire period, but its importance was reduced during wartime when the production of industrial chemicals increased.

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[3] Fissionable materials, explosives, industrial chemicals, synthetic rubber, rayon fibers, animal and vegetable oils, and fertilizer make up the group.

Apparel and other finished textile products.—The fifth largest industrial group in the South was apparel, which employed 129,400 workers making up 6 percent of regional employment in 1946. The gain was 43 percent from the prewar level. Georgia accounted for about a fifth of the South's apparel workers in the prewar period, and only about a sixth by 1946. Texas had first place in 1946 with an employment total of 22,000, and Tennessee averaged 20,100 workers. These three States together accounted for approximately half of the total workers in the apparel group.

Furniture and finished lumber products.—The furniture products group averaged 122,700 workers in 1946—only slightly fewer workers than the apparel group. The 1946 level was about a fourth higher than before the war and was the peak for the entire period covered.

In 1946 furniture plants in North Carolina (producing primarily household furniture, mattresses, and bedsprings), with 28,300, employed 23 percent of the southern group total. Virginia and Tennessee ranked second and third in 1946 and with North Carolina comprised nearly half of the furniture group.

Iron and steel products.—The iron and steel products group accounted for about 5 percent of total manufacturing employment in the South in 1939; the percentage rose to 7 in 1944 when wartime expansions more than doubled such employment. After the war ended, iron and steel plants retained approximately the same proportion of workers as in the prewar period. The four States of Alabama, Tennessee, Texas, and Kentucky had over three-fourths of the regional total in the iron and steel group in 1946. Alabama ranked first, with almost 42 percent of the total, in 1939; but by 1946 the percentage had dropped to 34. In Texas, the number of persons so engaged more than doubled between 1939 and 1946, and the proportion increased from 7.7 to 14.5 percent of the regional group.

Transportation equipment (except automobiles).—Employment in the transportation-equipment group—primarily aircraft and shipbuilding industries—amounted to only 1 percent of the total for manufacturing in the South in 1939. Tremendous war expansion of these industries, from 18,000 in 1939 to 468,000 in 1944, raised the proportion to 17 percent. By 1946, the total had receded to less than 4 percent of regional employment.

In the prewar period, Virginia had the only sizable transportation-equipment group in the South, employing 9,700 or over half of such workers in the region. By 1944, the Virginia total had tripled, but because of the tremendous expansions in all but one of the Southern States, Virginia ranked seventh, following Texas, Florida, Georgia, Louisiana, Alabama, and Oklahoma. But in 1946, only Texas—with 27 percent of the total in this group—outranked Virginia.

CONTINUED EMPLOYMENT EXPANSION

Continued expansion in southern manufacturing employment is indicated by estimates for both September and October 1946. Between August and October 1946, 20,000 workers were added. Florida, Virginia, and Alabama absorbed most of these workers by adding about 5,000 or more each in this 2-month interval. Only 4 of the 13 Southern States failed to share in the increase.

IV.—Income in the South[1]

Variations in income among the States are due to differences in the natural resources, capital equipment, and productive abilities of the different populations. The possession of abundant capital and natural wealth in relation to population usually constitutes a basis for a high level of income and well-being. Where such resources exist, the States can support adequate programs of public education, health, and general welfare. All the people are the beneficiaries of such programs, particularly those in the lower-income groups. On the other hand, the level of income tends to be low where resources are naturally meager or have been depleted, where capital equipment is relatively small, and where the population is not generally skilled in industry. As a result, State revenues are low, and public functions are likely to be limited. In such areas, a change in the balance between population and resources will tend to occur. In the South,[2] this process has taken primarily the form of out-migration[3] and of industrialization through the use of capital accumulated in the region and brought in from the outside.

Human welfare cannot by any means be measured entirely in terms of money income. Estimates of aggregate income payments[4] and their components, however, can be used roughly to describe the economic status of the population as a whole, and per capita income[5] to indicate the average status of the individual. Such estimates are available for the individual States, and comparisons can therefore be made between the Southern States and the rest of the country. Comparisons are desirable, as the concept of "income level" is relative.

Differences in income level between the South and the remainder of the country reflect, in part, differences in the character of economic activity. Agriculture, of course, is relatively more important, and manufacturing less important, in the South than elsewhere. Moreover, there are important differences between agriculture as carried on in the South and in other areas: farms in this region average fewer acres, capital equipment is smaller, and productivity per man is lower. The structure of manufacturing industry (kinds of industries, proportions of various labor skills employed, etc.) differs substantially in the southern and nonsouthern sectors of the economy. These variations in types of economic activity help to explain why the general level of per capita income in the South, even in 1945, was low relative to the national level.

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[1] Prepared by Solomon Shapiro of the Bureau's Labor Economics Staff. The State income data used in this section have been published or made available by the National Income Division of the Office of Business Economics of the U. S. Department of Commerce. The cooperation of this Division is gratefully acknowledged.

[2] The "South" is used to mean the nine Southeastern States: Virginia, North Carolina, South Carolina, Georgia, Florida, Kentucky, Tennessee, Alabama, and Mississippi; and the four Southwestern States: Arkansas, Louisiana, Oklahoma, and Texas.

[3] See the article Labor Supply in the South, p. 16 of this bulletin.

[4] State income payments represent income received in the various States by individuals, from payers either within or outside the State. These payments include certain "nonproductive" receipts which are included in money income, such as social-security benefits and relief payments. They exclude certain items of income, like business savings, which accrue to, but are not received by, the population. Certain imputed items, such as products consumed on the farm, are also included.

[5] Per capita income payments are derived by division of total income payments by total population, excluding armed forces and civilians outside the continental United States.

While per capita income in the South is low compared with the average for the country, a definite and encouraging upward trend has, however, been evident in recent years. This trend reflects the changing structure of the southern economy resulting from a decline in the relative importance of agriculture, and as a counterpart, an increase in manufactures. Per capita income in the Southern States rose from 55 percent of the national average in 1929 to 69 percent in 1945. Between these dates income in the aggregate had more than doubled in the South, and the region's share of the country's total income had increased appreciably.

A portion of the gain in relative income position grew out of the war. In meeting its war needs, the Nation found in the Southern States a large pool of manpower and a convenient location for many military installations as well as war manufacturing plants. As a result, income payments to individuals in the South increased at a faster rate than in the other States during the war years. It is difficult to tell at this time to what extent the gains of the war years will be permanent.

This section presents estimates of per capita income, average annual wages, and aggregate income payments and their components in the South and the rest of the country. Changing relationships since 1929, and particularly during the war period, will be indicated.

Per Capita Income

TOTAL POPULATION, INCLUDING MILITARY

The marked differential in incomes between the South and other regions of the country is being reduced. Since 1929 per capita income in the Southern States has steadily drawn nearer to the national average. The per capita income of $371 in 1929 was only 55 percent of the national average. In 1940, the per capita income of $340 was 59 percent of this average. In spite of a somewhat greater relative ncrease in population between 1940 and 1945, per capita income in the Southern States was $797 in 1945, 69 percent of the national average (table 19).

TABLE 19.—*Per Capita Income Payments* [1] *and Percent of National Per Capita Income United States and by Region, 1929–45* [2]

Region	1929	1933	1939	1940	1941	1942	1943	1944	1945
	Per capita income payments								
United States	$680	$368	$539	$575	$693	$862	$1,040	$1,133	$1,150
Southern States	371	210	323	340	421	555	693	778	797
Southeastern States	339	198	303	324	407	535	660	740	767
Virginia	422	266	402	450	565	738	833	888	903
North Carolina	309	205	308	316	397	521	610	702	732
South Carolina	252	167	261	286	354	473	575	652	663
Georgia	329	200	290	315	389	507	654	730	745
Florida	484	272	442	471	531	684	879	950	996
Kentucky	371	199	297	308	369	474	613	701	735
Tennessee	349	190	295	317	413	513	659	768	813
Alabama	305	154	242	268	359	482	602	677	700
Mississippi	273	123	201	202	283	396	483	541	556
Southwestern States	428	230	359	369	447	592	755	847	852
Arkansas	305	152	246	252	332	448	519	617	654
Louisiana	415	222	354	357	433	549	722	788	785
Oklahoma	455	226	340	356	417	590	728	860	889
Texas	465	257	401	413	497	655	840	925	917
All other States	795	429	624	667	802	985	1,180	1,275	1,290
	Percent of national per capita income								
United States	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Southern States	54.6	57.1	59.9	59.1	60.8	64.4	66.6	68.7	69.3
Southeastern States	49.9	53.8	56.2	56.3	58.7	62.1	63.5	65.3	66.7
Virginia	62.1	72.3	74.6	78.3	81.5	85.6	80.1	78.4	78.5
North Carolina	45.4	55.7	57.1	55.0	57.3	60.4	58.7	62.0	63.7
South Carolina	37.1	45.4	48.4	49.7	51.1	54.9	55.3	57.5	57.7
Georgia	48.4	54.3	53.8	54.8	56.1	58.8	62.9	64.4	64.8
Florida	71.2	73.9	82.0	81.9	76.6	79.4	84.5	83.8	86.6
Kentucky	54.6	54.1	55.1	53.6	53.2	55.0	58.9	61.9	63.9
Tennessee	51.3	51.6	54.7	55.1	59.6	59.5	63.4	67.8	70.7
Alabama	44.9	41.8	44.9	46.6	51.8	55.9	57.9	59.8	60.9
Mississippi	40.1	33.4	37.3	35.1	40.8	45.9	46.4	47.7	48.3
Southwestern States	62.9	62.5	66.4	64.2	64.5	68.7	72.6	74.8	74.1
Arkansas	44.9	41.3	45.6	43.8	47.9	52.0	49.9	54.5	56.9
Louisiana	61.0	60.3	65.7	62.1	62.5	63.7	69.4	69.5	68.3
Oklahoma	66.9	61.4	63.1	61.9	60.2	68.4	70.0	75.9	77.3
Texas	68.4	69.8	74.4	71.8	71.7	76.0	80.8	81.6	79.8
All other States	116.9	116.6	115.8	116.0	115.7	114.3	113.5	112.5	112.2

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[1] Per capita income payments are derived by division of total income payments by total population (excluding armed forces and civilians outside continental United States). For residents of Virginia employed outside that State, income was transferred from the State of the recipients' employment.

[2] Source: U. S. Department of Commerce, Survey of Current Business, August 1946, and unpublished data.

Among the Southern States, the lowest per capita income has consistently been found in Mississippi, where in 1933 it was only $123, 33 percent of the average income in the country. However, this amount has steadily increased until in 1945 it was 48 percent of the country's average. For a considerable period, Florida has come closest to the national average in per capita income payments—being 71 percent of this amount in 1929 and rising to 87 percent in 1945. During the war years, both Texas and Virginia were around the 80-percent level.

CIVILIAN POPULATION

The inclusion of military pay rolls in total income served to increase southern per capita income during the war years, as average military pay was generally higher than per capita income to civilians in the South. It is desirable, therefore, to examine civilian per capita income by deducting wage payments to armed forces personnel (table 20).

TABLE 20.—*Per Capita Income Payments to Civilian Population, by Region, 1940–45* [1]

Region	1940	1941	1942	1943	1944	1945
	Civilian per capita income payments					
United States	$573	$694	$860	$1,050	$1,143	$1,158
Southern States	337	417	539	681	771	791
Southeastern States	321	402	517	644	730	761
Southwestern States	367	444	580	749	846	849
All other States	666	802	985	1,192	1,285	1,299
	Percent of national civilian per capita income					
United States	100.0	100.0	100.0	100.0	100.0	100.0
Southern States	58.8	60.1	62.7	64.9	67.5	68.3
Southeastern States	56.0	57.9	60.1	61.3	63.9	65.7
Southwestern States	64.0	64.0	67.4	71.3	74.0	73.3
All other States	116.2	115.6	114.5	113.5	112.4	112.2

[1] Source: U. S. Department of Commerce, Survey of Current Business, August 1946, and unpublished data.

This procedure somewhat reduces the per capita income in certain of the Southern States, particularly in the early years of the war, but in the other States where civilian average incomes were higher than military pay, per capita income was increased. The deduction of military pay lowered per capita income in the South from $555 to $539 in 1942, and from $797 to 791 in 1945.

Clearly, there was not sufficient difference between the levels of military and civilian income payments to change any of the important generalizations with respect to the relationship of the South to the rest of the country. The change, however measured, in per capita incomes in the Southern States between 1940 and 1945 more than matched the doubling of incomes in the rest of the country. As a consequence, per capita incomes in the South were appreciably nearer the national average at the end of the period.

Income Status of the Southern Worker

The per capita measures of income take cognizance of the changes in population and represent the income of the average individual—man, woman, or child. The aggregate measures of income, which will be presented later, are useful in showing the relationships of the various economic groups and the relative changes occurring in the economic position of these groups. Both measures fail to describe with any degree of precision the income status of the individual worker.

The ideal procedure for the purpose of describing earnings of typical workers would be to obtain average annual wages for all homogeneous groups of workers, broken down by State, industry division, occupation, sex, race, age, etc. It is unfortunate that data of this sort are not available. For most commercial and industrial workers, however, State unemployment-compensation tabulations can be used to show average annual wages and salaries in the major industries. The best available data for showing the status of farm workers in the various States are the farm wage rates compiled by the United States Bureau of Agricultural Economics.

ANNUAL WAGES IN INDUSTRY

The average worker in southern industry improved his annual earnings during the war in absolute terms and in relation to the average worker in the country as a whole. In table 21, the average annual wage per job covered by State unemployment-compensation laws are shown for seven major industries from 1939 through 1944. These average wages rose steadily in the South, from $1,016 in 1939

TABLE 21.—*Average Annual Wage Per Job*[1] *Covered by Unemployment-Compensation Laws, United States and the South, by Major Industry Groups, 1939–44*[2]

Year	All covered industries[3]			Mining[4]			Contract construction			Manufacturing		
	United States	South		United States	South		United States	South		United States	South	
		Average wage and salary	Percent of national average		Average wage and salary	Percent of national average		Average wage and salary	Percent of national average		Average wage and salary	Percent of national average
1939	$1,360	$1,016	74.7	$1,379	$1,343	97.4	$1,315	$892	67.8	$1,357	$941	69.3
1940	1,405	1,058	75.3	1,404	1,362	97.0	1,368	1,015	74.2	1,436	987	68.7
1941	1,572	1,186	75.4	1,597	1,516	94.9	1,680	1,366	81.3	1,658	1,123	67.7
1942	1,867	1,419	76.0	1,818	1,660	91.3	2,246	1,846	82.2	2,031	1,397	68.8
1943	2,145	1,641	76.5	2,188	1,999	91.4	2,599	2,169	83.5	2,356	1,691	71.8
1944	2,302	1,798	78.1	2,527	2,365	93.6	2,744	2,371	86.4	2,525	1,879	74.4

Year	Transportation,[5] communication, and other public utilities			Wholesale and retail trade			Finance, insurance, and real estate			Service		
1939	$1,538	$1,159	75.4	$1,285	$1,041	81.0	$1,795	$1,592	88.7	$1,207	$849	70.3
1940	1,560	1,197	76.7	1,307	1,067	81.6	1,749	1,577	90.2	1,213	861	71.0
1941	1,636	1,290	78.9	1,400	1,140	81.4	1,798	1,633	90.8	1,271	919	72.3
1942	1,803	1,450	80.4	1,524	1,232	80.8	1,901	1,735	91.3	1,396	1,040	74.5
1943	2,035	1,650	81.1	1,678	1,363	81.2	2,057	1,859	90.4	1,579	1,176	74.5
1944	2,214	1,839	83.1	1,825	1,497	82.0	2,208	1,998	90.5	1,745	1,275	73.1

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[1] Obtained by dividing total wages and salaries paid in covered employment in the various industries by the average employment in these industries. The latter figures are averages of 12 monthly figures, each of which is a total of the number of workers in the industry in the last pay period of the month.

[2] Source: United States data and 1944 data for the South derived from Federal Security Agency, Employment Security Activities, May 1946. Other years for the South are derived from data in the Social Security Yearbooks of the Federal Security Agency.

[3] Includes data for covered workers in agriculture, forestry, fishing, and establishments not elsewhere classified.

[4] Includes crude petroleum and natural gas production.

[5] Excludes railroads and other allied groups subject to the Railroad Unemployment Insurance Act.

to $1,798 in 1944, an increase of 77 percent. This compares with an increase of 69 percent for the country as a whole, from $1,360 in 1939 to $2,302 in 1944.

In 1939, average wage per job in the different industries in the South ranged from $849 in service to $1,592 in finance. By 1944, the averages had shifted in relative rank, but service was still lowest with $1,275, while contract construction was highest with $2,371. Averages in the Southwest were generally higher than in the Southeastern States. In mining, the presence of the high-wage petroleum industry raised average annual wages in the Southwest above the level of the country as a whole. In all the industries except mining, wages of the southern worker drew nearer to the national average between 1939 and 1944.

These estimates of annual earnings do not represent all workers, as in 1944 only about 70 percent of all wages and salaries in the country were paid to workers in industries covered by State unemployment-insurance laws. In the South, moreover, only about 55 percent of total wages and salaries were paid in covered industries. Among those excluded from coverage are farmers, farm workers, and domestic workers, and these groups form substantial proportions of the southern labor force. In addition, 10 of the 13 Southern States cover only firms employing 8 or more workers. Since average earnings of employees in the smallest firms tend to be relatively low, average annual wages of workers covered by unemployment compensation in the South are biased upward as compared with the rest of the country. Nevertheless, as a measure of wages in industrial and commercial establishments of other than very small size, such figures have significance.

It should be clear that the differentials in earnings measure variations in opportunity for employment as well as wage and salary differences, as more commonly understood. For example, average annual wages in southern manufacturing reflect the average return in wages to workers in those particular industries that happen to exist in the South. Similarly, average annual wages in manufacturing in the remainder of the country reflect the return to workers in a somewhat different industrial structure, utilizing, to some extent, other types of skills and other proportions of various grades of skill. Regional wage differentials as such are considered in a separate article.[6]

INCOME IN AGRICULTURE

Although agriculture has become relatively less important in the southern economy, the income status of the individual farmer and farm worker has considerably improved since the depression years. Migration of farm population has alleviated somewhat the pressure of population on the land. It enabled those who remained to improve greatly their position when the demand for farm products and farm prices increased in the prewar and war years. Average net farm income per farm in the South increased from $582 in 1940 to $1,708 in 1944. The threefold increase in net farm income during this period, although about the same as in the rest of the country, is more significant for the South. In this region, the greater rate of decrease in the number of farms and farm population led to larger average-sized farms which, with increased productivity, placed agriculture on a somewhat better economic basis.

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[6] See the article Regional Wage Differentials, p. 56 of this bulletin.

The monthly composite wage rate of farm workers in the South increased from $21.20 in 1939 to $53.20 in 1944. This composite wage represents an average of four rates—monthly rates with and without board, and daily rates with and without board—weighted by the estimated number of workers receiving each rate. It is useful in showing the relative changes in wage rates in the South, which can be compared with the relative change in the index of farm wage rates for the United States. The index of farm wage rates (1910–14=100) was 123 for the country in 1939 and 315 in 1944. The increase of 151 percent in the composite wage rate for the South compares with an increase of 156 percent for the country as a whole.

Income Payments and Their Composition, 1929–45

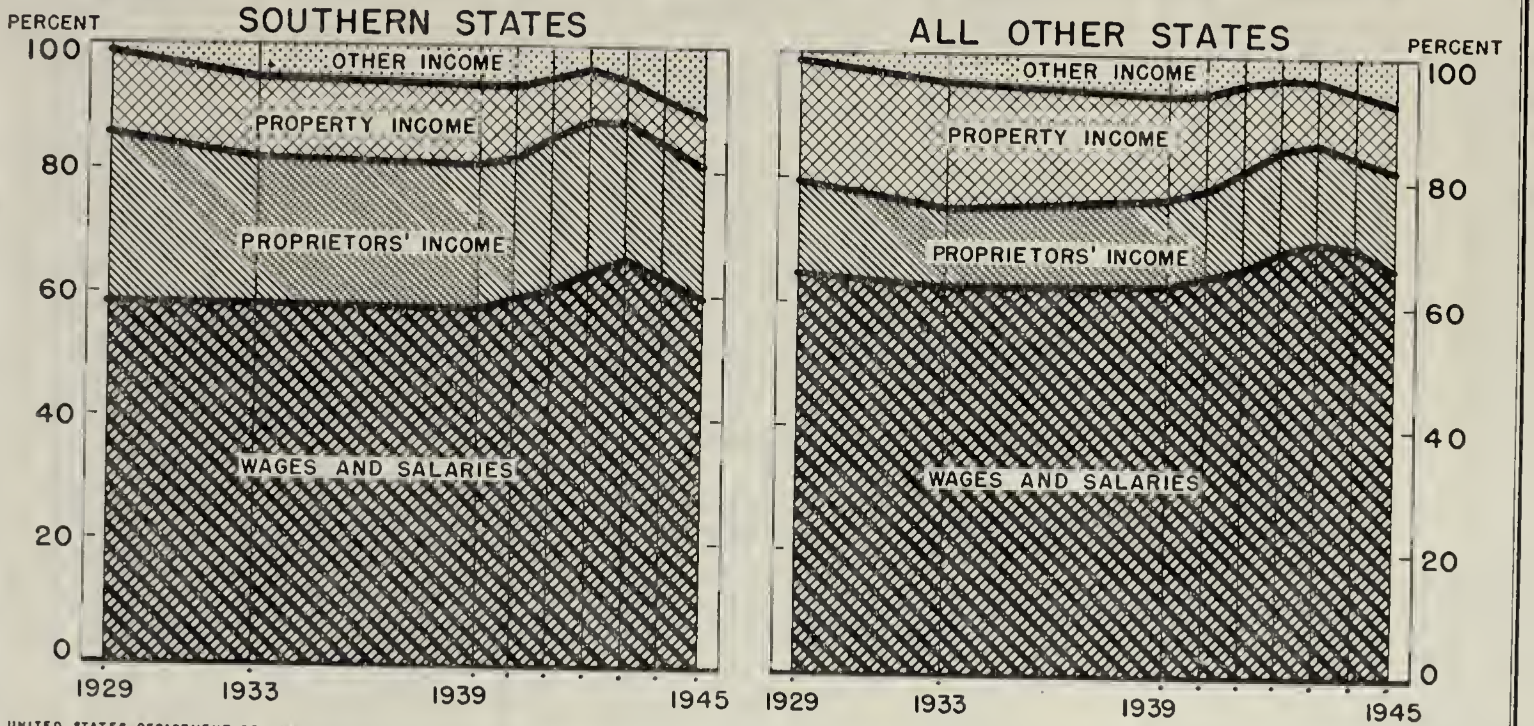
Some indication of the broad economic changes which have taken place within the country since the high level of business activity of the late 1920's is obtained from the changing proportions of the types of income which compose total income payments. Table 22 and chart 1 show four principal kinds of income and their relative importance in the South and the rest of the country for the period since 1929.

The discussion which follows deals with relative shares of income and not with total amounts. Thus, the absolute amount of property income in the South increased materially between 1929 and 1945, although property income, as a share of total income, declined. Similarly, wage and salary payments more than doubled during this period, despite the fact that the proportions of such payments in the income total showed little change.

In the years prior to World War II, wages and salaries in the South represented somewhat less than 60 percent of the total income of the population. During the war, the large volume of military pay rolls, together with increased earnings and greater employment in industry, brought wages and salaries to 66 percent of total income in 1943. Toward the end of the war, with the "shipping out" of military personnel and the increasing importance of family allotments and mustering-out pay, the proportion of wages and salaries was reduced to

CHART I

RELATIVE IMPORTANCE OF THE COMPONENTS OF INCOME PAYMENTS IN THE SOUTH AND REST OF THE COUNTRY



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its prewar relationship. In the other States, the proportion of income going to wage and salary earners has always been greater than in the South. This reflects the relatively greater number of industrial workers and smaller number of farmers and farm workers[7] in the States outside the South.

TABLE 22.—*Total Income Payments and Their Composition, the South and all Other States, 1929–45*[1]

Year	Southern States					All other States				
	Total income payments	Wages and salaries	Proprietors' income	Property income	Other income	Total income payments	Wages and salaries	Proprietors' income	Property income	Other income
	Amount (in millions)									
1929	$12,428	$7,234	$3,387	$1,656	$151	$70,189	$45,202	$10,429	$13,630	$928
1933	7,225	4,200	1,710	935	380	39,048	24,366	4,922	7,793	1,967
1939	11,764	6,778	2,748	1,467	771	58,837	37,072	8,225	9,556	3,984
1940	12,524	7,416	2,852	1,447	809	63,328	40,579	8,996	9,888	3,865
1941	15,805	9.570	3,830	1,586	819	76,464	50.373	11,954	10,697	3,440
1942	21,114	13.429	5.113	1,760	812	94,187	64,519	15.259	11,030	3,379
1943	26,633	17,523	5.740	1,941	1.429	112,649	78,871	17,679	11,728	4,371
1944	29,160	18,367	6,190	2,110	2,493	120,500	83,303	17,859	12,553	6,785
1945	29,787	17,732	6,384	2,227	3,444	122,917	80,962	19,010	13,537	9,408
	Percentage distribution									
1929	100.0	58.2	27.3	13.3	1.2	100.0	64.4	14.9	19.4	1.3
1933	100.0	58.1	23.7	12.9	5.3	100.0	62.4	12.6	20.0	5.0
1939	100.0	57.6	23.4	12.5	6.5	100.0	63.0	14.0	16.2	6.8
1940	100.0	59.2	22.8	11.5	6.5	100.0	64.1	14.2	15.6	6.1
1941	100.0	60.6	24.2	10.0	5.2	100.0	65.9	15.6	14.0	4.5
1942	100.0	63.6	24.2	8.3	3.9	100.0	68.5	16.2	11.7	3.6
1943	100.0	65.8	21.6	7.3	5.3	100.0	70.0	15.7	10.4	3.9
1944	100.0	63.0	21.2	7.2	8.6	100.0	69.1	14.8	10.4	5.7
1945	100.0	59.5	21.4	7.5	11.6	100.0	65.9	15.5	11.0	7.6

[1] Source: U. S. Department of Commerce, Survey of Current Business, August 1945 and August 1946.

The decreased importance of proprietors' income in the South which started in the depression years of the early 1930's continued throughout the war period. From 27 percent of total income payments in 1929, income to unincorporated business, including agriculture, declined to 23 percent in 1940 and to 21 percent in 1945. The relative increase in wages and salaries in the first part of the war and of "other income" toward its close, and the large decrease in the number of farm proprietors throughout the period, were important reasons for the smaller share of total income going to proprietors during the war. While this decline was taking place in the South, proprietors' income remained a much more stable component of the total in the rest of the country.

The proportion of income received from property, represented by net rents and royalties, interest, and dividends, has been decreasing throughout the country since 1929. The decrease received added impetus during the war with increased taxes, rent ceilings, and declining interest rates. In the South, income from property fell from 13 percent of total income in 1929 to 12 percent in 1940 and to 8 percent in 1945. The greater concentration of wealth in the rest of the country led to an even greater percentage decline in its proportion of property income.

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[7] In 1940, farmers and farm workers represented 34 percent of the employed labor force in the Southern States, compared with only 12 percent in the rest of the country.

The "other" type of income payments became substantially more important in all parts of the country after 1929. In the thirties, the increase resulted from the large volume of relief and work-relief payments and social-security benefits. The latter became significant toward the end of the decade. With many dependents of military personnel living in the Southern States during the war, the inclusion of family-allowance payments and allotments made the category of "other income" relatively more important in the South after 1942. The inclusion of mustering-out payments to veterans in 1944 and 1945 raised the proportion still higher in the Southern States.

Aggregate Income Payments

Although per capita income in the South is still considerably below the national average, as indicated earlier in this section, income payments showed remarkable gains in these States during the immediate prewar and war years. Not only has the income level of the population been raised in absolute terms, but an increasing share of the Nation's total income has been going to these 13 States. In 1929, 15 percent of the country's total income payments went to the South. By 1940, this proportion had gone up to 17 percent, and by 1945 to 20 percent (table 23).

Each of the nine Southeastern States increased its proportion of total income payments between 1929 and 1945. To this group of

TABLE 23.—*Total Income Payments and Percentage Distribution, by Region, 1929–45* [1]

Region	1929	1933	1939	1940	1941	1942	1943	1944	1945
	Total income payments (in millions)								
United States [2]	$82, 617	$46, 273	$70, 601	$75, 852	$92, 269	$115, 301	$139, 282	$149, 660	$152, 704
Southern States	12, 428	7, 225	11, 764	12, 524	15, 805	21, 114	26, 633	29, 160	29, 787
Southeastern States	7, 257	4, 361	7, 108	7, 703	9, 856	13, 133	16, 384	17, 986	18, 602
Southwestern States	5, 171	2, 864	4, 656	4, 821	5, 949	7, 981	10, 249	11, 174	11, 185
All other States	70, 189	39, 048	58, 837	63, 328	76, 464	94, 187	112, 649	120, 500	122, 917
	Percent of total United States								
United States [2]	100. 0	100. 0	100. 0	100. 0	100. 0	100. 0	100. 0	100. 0	100. 0
Southern States	15. 0	15. 6	16. 7	16. 5	17. 1	18. 3	19. 1	19. 5	19. 5
Southeastern States	8. 8	9. 4	10. 1	10. 1	10. 7	11. 4	11. 8	12. 0	12. 2
Southwestern States	6. 2	6. 2	6. 6	6. 4	6. 4	6. 9	7. 3	7. 5	7. 3
All other States	85. 0	84. 4	83. 3	83. 5	82. 9	81. 7	80. 9	80. 5	80. 5

[1] Source: U. S. Department of Commerce, Survey of Current Business, August 1946.

[2] Includes only payments to residents of the continental United States, therefore excluding pay of armed forces and Federal civilian employees stationed outside the country.

States in the aggregate went 9 percent of the country's total income payments in 1929, 10 percent in 1940, and 12 percent in 1945. The four Southwestern States raised their aggregate share of the Nation's income during the period after 1940 by about 1 percent.

The growth in the relative importance of the Southeast in manufacturing during the 1930's accounts largely for the increasing proportion of income payments going to the South in the years prior to the war. During the period of rearmament and war, the Southern States, with an important share of military establishments and other war activities, showed the tremendous gains indicated.

In dollar amounts of income, the South made more rapid progress than the rest of the country in recovering from the low point of the depression years. By 1940, the Southern States had recovered the 1929 level of income payments, whereas the remainder of the country was still 10 percent below that level. By 1945, southern income was 240 percent of the 1929 amount, compared with 175 percent for the rest of the country. The smallest relative increase among the Southern States was shown by Oklahoma—169 percent of the 1929 amount—the largest by Florida—343 percent of the 1929 amount.

WAGES AND SALARIES AND THEIR COMPOSITION

Aggregate wages and salaries.—The proportion of the country's total wages and salaries which were paid in the South increased steadily from 1929 to 1945—from 14 percent of the total in 1929 to 16 percent in 1940 and 18 percent in 1945 (table 24). The relationship of the South to the rest of the country, with respect to this most important component of income payments, paralleled very closely that of total income payments. The important changes in wages and salaries are reflected in total income.

TABLE 24.—*Wages and Salaries and Percentage Distribution, by Region, 1929–45* [1]

Region	1929	1933	1939	1940	1941	1942	1943	1944	1945
	Wages and salaries (in millions)								
United States	$52, 436	$28, 566	$43, 850	$47, 995	$59, 943	$77, 948	$96, 394	$101, 670	$98, 694
Southern States	7, 234	4, 200	6, 778	7, 416	9, 570	13, 429	17, 523	18, 367	17, 732
Southeastern States	4, 321	2, 580	4, 188	4, 678	6, 164	8, 537	10, 890	11, 380	11, 039
Southwestern States	2, 913	1, 620	2, 590	2, 738	3, 406	4, 892	6, 633	6, 987	6, 693
All other States	45, 202	24, 366	37, 072	40, 579	50, 373	64, 519	78, 871	83, 303	80, 962
	Percent of total United States								
United States	100. 0	100. 0	100. 0	100. 0	100. 0	100. 0	100. 0	100. 0	100. 0
Southern States	13. 8	14. 7	15. 5	15. 5	16. 0	17. 2	18. 2	18. 1	18. 0
Southeastern States	8. 2	9. 0	9. 6	9. 7	10. 3	10. 9	11. 3	11. 2	11. 2
Southwestern States	5. 6	5. 7	5. 9	5. 8	5. 7	6. 3	6. 9	6. 9	6. 8
All other States	86. 2	85. 3	84. 5	84. 5	84. 0	82. 8	81. 8	81. 9	82. 0

[1] Source: U. S. Department of Commerce, Survey of Current Business, August 1945 and August 1946.

Aggregate wages and salaries in the South rose from 7,234 million dollars in 1929 to 17,732 million dollars in 1945, an increase of 145 percent. This compares with an increase of only 79 percent for the rest of the country during the same period.

Changes in wages and salaries and their components from the period of rearmament to the end of the war are shown in tables 25 and 26 and chart 2. During this period all the important wage groups in the southern economy, except farm workers, increased their aggregate wage income faster than those in the rest of the country.

Manufacturing wages and salaries.—Manufacturing wages and salaries in the South increased from 1,562 million dollars in 1929, about 10 percent of total manufacturing pay rolls in the country, to 4,653 million dollars in 1945, 12 percent of the country's total (table 25). In general, the prewar gain is attributable to increased factory pay rolls in the Southeastern States. The gain during the war was largely caused by the growth of war manufacturing both in the Southeast and the Southwest.

The South responded to the Nation's need for war materials of all kinds by increasing the relative output of manufacturing in its economy (as measured by wages and salaries) from 23 percent of total pay rolls in 1940 to 28 percent in 1944, the year of greatest war production. While the increase in the Southeast was from 27 percent to 30 percent in 1944, the Southwestern States showed a remarkable change, from 16 to 26 percent. That these changes may not be entirely permanent is suggested by the fact that in 1945 manufacturing pay rolls declined to 29 percent of total wages and salaries in the Southeast and to 22 percent in the Southwest.

The States outside the South gave even greater emphasis to manufacturing during the war, increasing their proportion of manufacturing to total pay rolls from 34 percent in 1940 to 45 percent in 1944. The cessation of war production brought this proportion down to 41 percent in 1945.

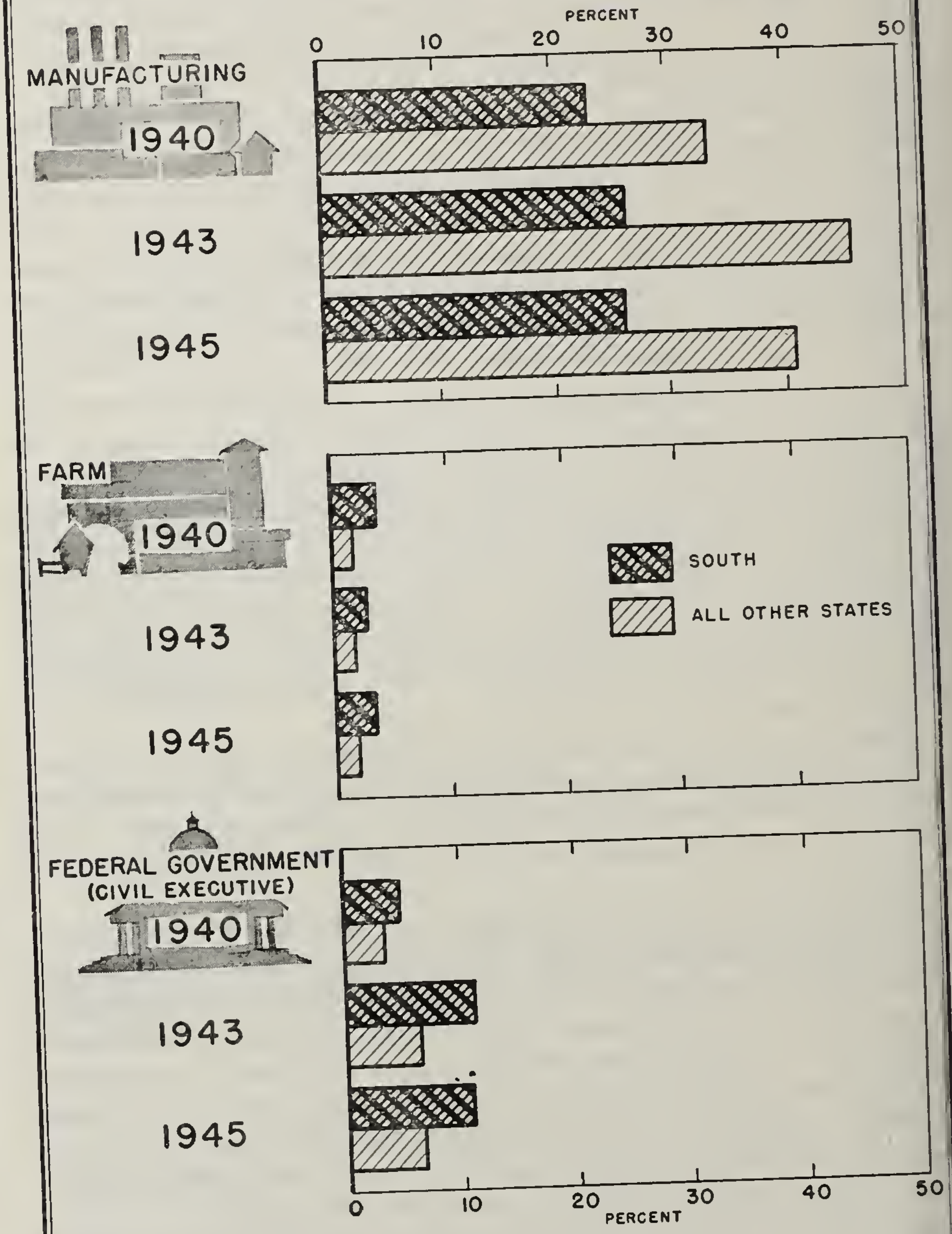
Farm wages.—The rise in industrial activity and the decrease in agricultural employment, during the war years, resulted in a decline in the relative importance of farm wages in total wage and salary payments in the South, despite a substantial increase in agricultural wage rates. From 4.4 percent of total wages and salaries in the South in 1929, farm wages declined to 3.9 percent in 1940 and to 3.4 percent in 1945. Agriculture is a less important part of the economy in the rest of the country, and farm wages remained a fairly stable component of total wages—about 2 percent from 1929 to 1945.

Approximately half the country's farm workers are in the Southern States; these workers receive less than 30 percent of total national farm-wage payments. The 319 million dollars paid southern farm

CHART 2

MANUFACTURING, FARM, AND FEDERAL GOVERNMENT WAGES AND SALARIES

AS PERCENTAGE OF TOTAL WAGES AND SALARIES IN THE SOUTH AND REST OF THE COUNTRY



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workers in 1929 was about a fourth of the farm wages paid in the country in that year. In 1940, southern farm wages were 29 percent of the country's total, and in 1945 the 596 million dollars paid in farm wages was 27 percent of all farm wages. The explanation for the discrepancy between the proportions of total farm workers and total farm wages lies not only in the farm wage differential but also in the large number of unpaid family workers in agriculture in the South.

Table 25.—*Wages and Salaries and Their Composition, by Region, 1940 and 1945* [1]

Region	Total [2]		Manufacturing [3]		Farm		Federal [4] (civilian executive)		All other	
	1940	1945	1940	1945	1940	1945	1940	1945	1940	1945
	Wages and salaries (in millions)									
United States	$47,995	$98,694	$15,372	$37,754	$1,000	$2,210	$1,797	$7,284	$29,826	$51,446
Southern States	7,416	17,732	1,717	4,653	288	596	358	1,935	5,053	10,548
Southeastern States	4,678	11,039	1,273	3,189	169	318	244	1,308	2,992	6,224
Southwestern States	2,738	6,693	445	1,464	119	277	114	627	2,060	4,325
All other States	40,579	80,962	13,655	33,101	712	1,615	1,439	5,349	24,773	40,897
	Percentage distribution									
United States	100.0	100.0	32.0	38.3	2.2	2.2	3.7	7.4	62.1	52.1
Southern States	100.0	100.0	23.2	26.2	3.9	3.4	4.9	10.9	68.0	59.5
Southeastern States	100.0	100.0	27.2	28.9	3.6	2.9	5.2	11.8	64.0	56.4
Southwestern States	100.0	100.0	16.2	21.9	4.4	4.1	4.2	9.4	75.2	64.6
All other States	100.0	100.0	33.6	40.9	1.8	2.0	3.5	6.6	61.1	50.5

[1] Source: U. S. Department of Commerce, Survey of Current Business, August 1946 and unpublished data.
[2] After deduction of employees' contributions under social insurance programs.
[3] Before deduction of social insurance contributions.
[4] Before deduction of civil service retirement.

Table 26.—*Percentage Increase in Wages and Salaries and Their Components, by Region, 1940 to 1945*

Region	Percent increase in wages and salaries				
	Total	Manufacturing	Farm	Federal (civilian executive)	All other
United States	106	146	121	305	73
Southern States	139	171	107	441	109
Southeastern States	136	151	88	436	108
Southwestern States	144	229	133	450	110
All other States	100	142	127	272	65

Federal civilian executive wages and salaries.—Between January 1940 and June 1944, Federal employment of civilians had tripled in the States outside the South; in the South, on the latter date, there were about four times the earlier number. During the war, Government pay rolls for civilian employees became an important component of the total wage bill in the Southern States. In 1940, 5 percent of all wages and salaries in this region were payments to Federal employees in the executive branch. This proportion more than doubled by 1945 and represented 11 percent of total wages and salaries in that year. Government pay rolls of civilian executive employees in the South were 358 million dollars in 1940 compared with 1,439 million in the States outside the South. By 1945, these pay rolls were 1,935 million dollars in the South and 5,349 million in the rest of the country. The increase of 441 percent in the South compares with an increase of 272 percent in the other States.

AGRICULTURAL INCOME

The Southern States, with half the farm population of the country, since the war have received less than a third of the country's agricultural income.[8] In 1929, agricultural income of 2,513 million dollars in these States was 36 percent of the total farm income of the country. By 1945, southern agricultural income was 4,821 million dollars, about 32 percent of the total (table 27).

TABLE 27.—*Agricultural Income Payments*[1] *and Percentage Distribution, by Region, 1929–45*[2]

Region	1929	1933	1939	1940	1941	1942	1943	1944	1945
	Agricultural income payments (in millions)								
United States	$6,965	$2,962	$5,302	$5,438	$7,718	$11,494	$14,211	$14,418	$15,091
Southern States	2,513	1,244	1,956	1,906	2,562	3.762	4,315	4,737	4.821
Southeastern States	1,448	757	1,186	1,138	1,472	2.249	2,612	2,917	3,129
Southwestern States	1,065	487	770	768	1,090	1,513	1,703	1,820	1,692
All other States	4,452	1,718	3,346	3,532	5,156	7.732	9,896	9,681	10,270
	Percent of total United States								
United States	100 0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Southern States	36.1	42.0	36.9	35.0	33.2	32.7	30.4	32.8	31.9
Southeastern States	20.8	25.6	22.4	20.9	19.1	19.6	18.4	20.2	20.7
Southwestern States	15.3	16.4	14.5	14.1	14.1	13.1	12.0	12.6	11.2
All other States	63.9	58.0	63.1	65.0	66.8	67.3	69.6	67.2	68.1

[1] Includes net income of farm proprietors, farm wages, and rents received by landlords living on farms.
[2] Source: U. S. Department of Commerce, unpublished data.

The greater dependence of this region upon agriculture is indicated by the considerably higher proportion of agricultural income to total income payments than in the rest of the country. Agricultural income was 20.2 percent of total income in the South in 1929, and 15.2 percent by 1940, as compared with 6.3 percent of total income in the remainder of the country in 1929 and 5.6 percent in 1940. In spite of the tremendously increased farm value of the South's principal crops—cotton and tobacco—the proportion did not rise much higher during the war years, being 16.2 percent in 1945 as compared with 8.4 percent in the other States.

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[8] Includes net income of farm proprietors, farm wages, and rents received by landlords living on farms.

MILITARY PAYMENTS

Military payments[9] during the war were a substantial part of total income payments in the Southern States. The presence in these States of many of the military training installations concentrated large numbers of military personnel and their families in the region. Since military pay is credited to the States in which the personnel are stationed, such payments considerably increased aggregate income in the South.

Military payments in the South rose from 142 million dollars in 1940 to 4,377 million in 1945. The importance of this type of payment is seen in its increasing percentage of total income in the South—from 1.1 percent in 1940 to 14.7 percent in 1945. These proportions were 0.3 percent and 6.8 percent, respectively, for the remainder of the country.

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[9] Include net pay of the armed forces, family allowance payments, voluntary allotment of pay to individuals, and mustering-out pay.

V.—Regional Wage Differentials[1]

Interest in geographical wage differentials in the United States has centered mainly on North-South deviations. In part, this approach oversimplifies the problem, since it obscures the fact that substantial wage differences also exist within the North as well as within the South.[2] There are many reasons, of course, why the difference between northern and southern wages has been the focus of so much attention. Insofar as wage rates are a determinant of worker income, differences in rates contribute to regional inequalities in standards of living and welfare. In highly competitive industries, such as cotton textiles, the movement of industry to the South and the difficulties faced by trade-unions in maintaining and raising northern textile wages have historically been closely related to regional differences in industry wage levels. Similarly, in other competitive industries, especially those in which a large proportion of the labor force is composed of unskilled and semiskilled workers (as in wooden-nonupholstered furniture, lumber, and cotton garments), the spread between northern and southern wages has been of great economic significance. Moreover, in legislative deliberations on minimum wages it has been apparent that the setting of national levels in various industries is influenced by the level of wages in the lowest wage region.

While the special position of the South's wage level impinges on many problems regarding wage determination in the United States, this analysis does not deal with geographic wage differentials primarily in terms of the North versus the South. Instead, an effort has been made to throw light on significant wage differentials among eight major regions. The data available for this purpose were collected and processed under uniform procedures in 1945 and 1946, and for each of the selected industries nine regional groupings are usually provided—two in the South and seven in the remainder of the country. In view of the fact that the Mountain States contain few large manufacturing industries, comparisons of wages are confined to the following regions: New England, Middle Atlantic, Border States,

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[1] Prepared by Harry Ober and Carrie Glasser of the Bureau's Wage Analysis Branch. The statistical work for this article was prepared under the direction of Samuel E. Cohen. This section incorporates minor revisions in the material on wage differentials that originally appeared in the October 1946 Monthly Labor Review. It should be noted that all wage figures used in this section are preliminary; necessary changes will appear in the individual Wage Structure reports.

[2] Several studies have shown that the dispersion of wages within the South is considerably greater than within the North. See Carrie Glasser: Wage Differentials, The Case of the Unskilled (New York, Columbia University Press, 1940); and Richard A. Lester: Diversity in North-South Wage Differentials and in Wage Rates within the South (in Southern Economic Journal, January 1946, pp. 238-262).

Southeast, Southwest, Middle West, Great Lakes, and Pacific.[3] It should be observed that these groupings do not imply that wages are uniform within each region. It is believed, however, that the use of eight regions permits a more accurate reflection of regional wage variations than would be obtained from a comparison limited to the North and South.

Characteristic Regional Wage Positions

For the purpose of determining what geographical wage differences are characteristic of the United States today, the data studied consist of straight-time average hourly earnings which exclude overtime payments and other forms of premium income. While these figures are not synonymous with hourly rates, they afford as close an approximation to rates as it is possible to secure with the available wage statistics. Although changes in straight-time hourly earnings owing to wage-rate increases have occurred throughout the country since 1945,[4] it is probable that, on the whole, the adjustments have had less effect on geographical differences than on the absolute level of wages in particular regions. However, to the extent that geographical relationships have been altered, the present findings deviate from the situation as it existed in August 1946.

The main groups of manufacturing and nonmanufacturing industries used in this analysis are shown in table 28. While the choice of industries was limited by the availability of recent information, it was also influenced by the desire to include as many important southern industries as possible, since the relative level of southern wages is a significant part of the present study. However, industries which are found almost entirely in the South, such as cigarette manufacturing, were excluded because meaningful comparisons with other regions were not possible. On the other hand, table 28 does not contain data for such important southern industries as lumber and bituminous-coal mining. For these industries the available wage statistics were not amenable to classification according to the eight broad economic regions. These industries are, however, treated separately in the following discussion. Despite the fact that the sample of industries used in table 28 gives major weight to industries typical of the South,

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[3] The States included in these regions are as follows: *New England*—Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont; *Middle Atlantic*—New Jersey, New York, and Pennsylvania; *Border States*—Delaware, District of Columbia, Kentucky, Maryland, and West Virginia; *Southeast*—Virginia, Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina, and Tennessee; *Southwest*—Arkansas, Louisiana, Oklahoma, and Texas; *Great Lakes*—Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin; *Middle West*—Iowa, Kansas, Missouri, Nebraska, North Dakota, and South Dakota; *Pacific*—California, Nevada, Oregon, and Washington.

Reference is made in footnote 6 to the wage level found in the Mountain States on the basis of such material as is available.

In the Wage Structure reports issued by the Bureau, Virginia was included in the Border States.

[4] The period covered by this analysis is from January 1945 to April 1946, except the railroad industry for which only 1944 data were available.

TABLE 28.—*Regional Indexes of Straight-Time Average Hourly Earnings [1] of All Workers in Selected Manufacturing and Nonmanufacturing Industries*

[United States industry average [2]=100]

Industry [3] and date of survey	Average straight-time earnings, United States [2]	Regional indexes of straight-time hourly earnings							
		New England	Middle Atlantic	Border States	Southeast	Southwest	Great Lakes	Middle West	Pacific
Manufacturing									
Metalworking (January 1945):									
Fabricated structural steel	$0.97	107.2	102.1	99.0	85.6	85.6	101.0	89.7	122.7
Iron and steel forgings	1.18	89.8	90.7	(4)	(4)	-------	105.1	(4)	111.0
Ferrous foundries	1.00	91.0	99.0	87.0	69.0	76.0	104.0	85.0	109.0
Machinery, miscellaneous	.98	94.9	99.0	85.7	75.5	92.9	102.0	89.8	116.3
Nonferrous metal foundries	1.03	99.0	94.2	91.3	70.9	78.6	103.9	85.4	108.7
Power boilers and related products	.98	93.9	91.8	89.8	88.8	86.7	106.1	89.8	122.4
Sheet-metal work	1.06	100.9	117.0	(4)	65.1	83.0	93.4	80.2	127.4
Apparel (April 1945):									
Men's and boys' dress shirts	.68	107.4	104.4	91.2	82.4	-------	98.5	85.3	126.5
Overalls and industrial garments	.64	109.4	112.5	103.1	84.4	96.9	109.4	100.0	131.3
Women's and misses' dresses	1.31	74.0	112.2	51.9	48.1	48.1	67.9	67.9	97.7
Work pants, cotton	.58	(4)	122.4	103.4	91.4	93.1	112.1	115.5	139.7
Work shirts	.52	-------	117.3	105.8	96.2	(4)	117.3	(4)	-------
Paper and allied products (October 1945):									
Corrugated and fiber boxes	.78	102.6	105.1	87.2	80.8	87.2	102.6	100.0	121.8
Fiber cans, tubes and similar products	.71	90.1	119.7	100.0	(4)	(4)	101.4	100.0	-------
Folding paper boxes	.79	94.9	101.3	88.6	77.2	75.9	101.3	86.1	126.6
Paperboard mills	.83	95.2	102.4	-------	92.8	(4)	107.2	-------	120.4
Pulp and paper mills	.82	95.1	100.0	95.1	96.3	100.0	100.0	-------	125.6
Set-up boxes	.68	91.2	105.9	80.9	79.4	77.9	100.0	92.6	120.6
Textiles, cotton (April 1946):									
Integrated spinning and weaving mills	.76	106.6	103.9	96.1	98.7	89.5	-------	-------	-------
Weaving mills	.98	104.1	108.2	-------	77.6	-------	86.7	-------	-------
Yarn mills	.71	112.7	107.0	-------	98.6	-------	-------	-------	-------
Bread and other bakery products (July 1945)	.76	100.0	107.9	93.4	75.0	81.6	101.3	96.1	126.3
Cigars (January 1946)	.73	106.8	100.0	87.7	101.4	71.2	98.6	-------	139.8
Footwear (October 1945)	.83	112.0	114.5	86.7	78.3	-------	86.7	79.5	139.8
Hosiery, full-fashioned (January 1946)	.97	93.8	111.3	92.8	89.7	101.0	103.0	-------	127.8
Hosiery, seamless (January 1946)	.63	111.1	106.3	87.3	98.4	(4)	114.3	-------	-------
Structural clay products (October 1945)	.80	105.0	112.5	102.5	76.3	71.3	102.5	96.3	118.8
Furniture, other than upholstered (October 1945)	.70	102.9	111.4	104.3	80.0	85.7	107.1	92.9	134.3
Furniture, upholstered (October 1945)	.96	99.0	121.9	82.3	76.0	83.3	96.9	94.8	135.4
Nonmanufacturing									
Retail (April 1945):									
Clothing stores	.79	86.1	107.6	87.3	77.2	88.6	103.8	91.1	116.5
Department stores	.67	86.6	104.5	82.1	86.6	97.0	103.0	97.0	109.0
Limited-price variety stores	.41	104.9	102.4	92.7	80.5	82.9	104.9	95.1	134.1
Electric light and power (July 1945)	1.03	101.9	101.0	(4)	84.5	84.5	102.9	87.4	107.8
Power laundries (July 1945)	.52	111.5	119.2	98.1	71.2	75.0	113.5	90.4	132.7
Telephones (October 1945)	.92	102.1	110.8	101.1	89.1	88.0	98.9	84.8	103.3

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[1] Excludes premium pay for overtime and night work.

[2] The national average included data for the Mountain region where coverage was obtained.

[3] Source of data: For all industries except telephone, information based on Bureau of Labor Statistics wage survey. Telephone data taken from wage distributions shown in the annual reports of Bell Telephone Companies to the Federal Communications Commission. The regions for this industry are not exactly identical with those for other industries. Virginia was included in the Border States and part of Idaho is contained in the Pacific region. Other minor variations were also necessary because of the nature of the carrier's field of operations.

[4] Insufficient coverage to warrant presentation of regional data. In assignment of ranks, however, the region's position in the industry was based on the small coverage.

and is therefore less representative of the industrial composition of other regions, the coverage in all regions is believed adequate for the purpose of determining the characteristic wage position of each area.

The national average of straight-time hourly earnings of all workers in each industry, shown in table 28, was used as the base (100) to convert the average straight-time hourly earnings for each region into relatives or indexes in order that percentage deviations from the base or national average can be seen easily. Differences in money terms can readily be computed from these figures. For example, the New England index of 99 for all workers in nonferrous foundries is 1 percent below the national average of $1.03 per hour. The actual average rate for New England in this industry was, therefore, $1.02.

With the exception of the Southeast and Pacific regions, table 1 shows that the position of each region in the national wage scale is not uniform from industry to industry. Indeed, it is somewhat difficult to judge, from examination of the table, where some of the regions fall. To assess how consistently a region maintained a certain position, all regions were ranked according to their level of straight-time average hourly earnings in each industry.[5]

The regional wage positions, based on straight-time average hourly earnings of all workers are shown below. Rank 1 represents the highest wage level.

Rank	*Region*	*Number of industries represented*
1	Pacific	29
2	Middle Atlantic	35
3	Great Lakes	33
4	New England	34
5	Middle West	27
6	Border States	32
7	Southwest	30
8	Southeast	35

The Pacific region with great consistency showed the highest wage level, while, with almost equal consistency, the Southeast had the lowest earnings in the country. In 25 out of 29 industries, the Pacific region came out highest; 4 other regions held top rank in a few cases—New England in 2 industries, Middle Atlantic in 4, Great Lakes in 1, and the Middle West in 2 industries each. The indisputably low position of the Southeast is evidenced by the fact that it ranked lowest in 22 out of 35 industries. The Southwest was lowest in 12 industries, New England in 1 (pulp and paper mills), the Middle West in 1 (telephone), and the Border States in 3.

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[5] The region with the highest average was assigned rank 1, second highest was called 2, and so on, with the lowest region bearing rank 8. Where 2 regions had the same average, the rank was split, e. g., if both were tied for highest place, each received the rank 1.5.

The next step involved the addition of all the ranks of a region; this sum was then divided by the number of industries represented in each region. The result obtained was then used to assign the 8 regions their average position in the national wage scale.

Regional data are not shown in table 28 where industrial coverage was too small or where no coverage was obtained. In some cases, a rank was assigned using the small coverage as a guide. Inequality in the number of industries covered in each region was taken into account by dividing the sum of the ranks of each region by the number of industries represented; the final rank was based on this average.

Only 1 of the 29 Pacific industries had average earnings lower than the national average, whereas in the Southeast only 1 of 35 industries came above the national average, in the Southwest only 1 out of 30, and in the Border States only 7 out of 32 industries (see table 28). New England's industries were almost equally divided (15 below and 18 above the national average) whereas more than two-thirds of the industries in the Middle Atlantic and Great Lakes States had average hourly earnings that exceeded the national average. It may also be noted that, in at least a third of their industries, New England, Great Lakes, Middle West, and the Border States were midway in the national wage scale.[6]

The actual size of the average wage differential between the South and other regions along with the relative importance of each industry in the South, as measured by employment, is shown in table 29, in which data for the Southeast and Southwest were combined. Following are what seem to be the major observations to be drawn from an analysis of these data.

(1) The wage spread between the South and other regions is quite different in various industries. In pulp and paper mills, for example, southern straight-time average hourly earnings in October 1945, exceeded earnings in the Border States and in New England and were exceeded by only 2.5 percent in the Middle Atlantic and Great Lakes States. An indication of an extremely wide differential is found in the women's dress industry where earnings in the Middle Atlantic States were more than double those in the South. In this industry differentiation with respect to product and types of labor utilized is undoubtedly in good part responsible for the great wage disparity. In the Middle Atlantic States, highly stylized and higher priced garments are produced, compared to the South (with approximately 3 percent of the workers) where house dresses and cotton garments predominate.[7] However, even within comparable price lines, a classification which helps to minimize product differences, the wage spread between northern and southern areas is wide.

(2) Pulp and paper mills have been cited as an industry in which southern average hourly earnings were above those in another region.

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[6] On the basis of a small number of industries, the position of the Mountain States would fall between New England and the Middle West.

[7] While differences in products and character of the labor force make for regional wage variations, there are other important contributing factors such as degree of urbanization, unionization, and method of wage payment. Further study is needed to determine the specific influence of each of these factors on regional wage levels.

To this may be added cigar manufacturing in which the Great Lakes and Border States showed 1.4 percent and 12.3 percent lower wages, respectively. In seamless hosiery, average earnings in the Border States were 11.3 percent less than in the South, while workers in department stores averaged nearly 10 percent less per hour. New England department store workers showed nearly 5 percent lower hourly wages, on the average, than comparable southern workers. It will be observed that in the few industries where the South had a wage advantage, it was mainly with respect to the Border States, a region with the second lowest wage position (when the Southeast and Southwest are merged into one group).

(3) On the basis of the industry data presented in table 29, there appears to be a slight tendency for the wage differential between the South and other regions to be widest in industries which pay comparatively low wages everywhere in the country. Important exceptions include seamless hosiery in which industry-wide straight-time hourly earnings in January 1946 averaged 63 cents as against 62 cents for southern workers. In two relatively high wage industries, electric light and power and fabricated structural steel, the national averages were $1.03 and 97 cents, respectively, compared with averages of 87 cents and 83 cents in the South.

(4) Where the South occupies a dominant position in an industry, the wage differential appears to be considerably less than in many other industries in which only a minor proportion of total employment is in the South. However, important exceptions are evident so that the relationship cannot be said to be consistent throughout. Thus, in cotton-textile yarn mills, wages in New England were 14.3 percent higher than in the South where nearly 92 percent of the workers were employed. In integrated spinning and weaving mills (83 percent of total employment in the South) wages were 2.7 percent lower in the Border States compared with the South and only 8 percent and 5 percent higher in New England and the Middle Atlantic States, respectively. In seamless hosiery the differential varied from 11 percent below the southern average to 16 percent above. On the other hand, in such leading southern industries as furniture (other than upholstered) and cotton garments, southern wages were surpassed by a considerably greater margin. Relatively unimportant southern industries, from the standpoint of employment (such as the metalworking group), showed differentials greatly in excess of those indicated above.

From the preceding analysis the low wage position of the southern regions is clear. This finding can be further supported by an examination of other leading southern industries such as lumber, railroads, bituminous-coal mining, and the building and printing trades.

TABLE 29.—*Straight-Time Average Hourly Earnings[1] of All Workers in Selected Industries in the South, Compared With Other Regions*

Industry and date of survey	South[2]		Percent by which given region exceeds South					
	Percent of total industry employment	Straight-time average hourly earnings	Border States	New England	Middle Atlantic	Great Lakes	Middle West	Pacific
Manufacturing								
Metalworking (January 1945):								
Fabricated structural steel	19.6	$0.83	15.7	25.3	19.3	18.1	4.8	43.4
Ferrous foundries	3.7	.72	20.8	26.4	37.5	44.4	18.1	51.4
Machinery, miscellaneous	4.1	.83	1.2	12.0	16.9	20.5	6.0	37.3
Nonferrous foundries	1.7	.78	20.5	30.8	24.4	37.2	12.8	43.6
Power boilers and related products	17.9	.86	2.3	7.0	4.7	20.9	2.3	39.5
Sheet metal	17.7	.76	(3)	40.8	63.2	30.3	11.8	77.6
Apparel (April 1945):								
Men's and boys' dress shirts	18.7	.56	10.7	30.4	26.8	19.6	3.6	53.6
Overalls and industrial garments	34.0	.55	20.0	27.3	30.9	27.3	16.4	52.7
Women's and misses' dresses	2.6	.63	7.9	54.0	133.3	41.3	41.3	103.2
Work pants, cotton	63.1	.53	13.2	(3)	34.0	22.6	26.4	52.8
Work shirts	69.9	.50	10.0	--------	22.0	22.0	(3)	--------
Paper and allied products (October 1945):								
Corrugated and fiber boxes	12.1	.65	4.6	23.1	26.2	23.1	20.0	46.2
Fiber cans, tubes, and similar products	5.7	.61	16.4	4.9	39.3	18.0	16.4	--------
Folding paper boxes	9.2	.61	14.8	23.0	31.1	31.1	11.5	63.9
Paperboard mills	38.3	.75	(3)	5.3	13.3	18.7	--------	33.3
Pulp and paper mills	21.4	.80	−2.5	−2.5	2.5	2.5	--------	28.8
Set-up paper boxes	6.0	.54	1.9	14.8	33.3	25.9	16.7	51.9
Textiles, cotton (April 1946):								
Integrated spinning and weaving mills	82.6	.75	−2.7	8.0	5.3	--------	--------	--------
Weaving mills	18.1	.76	--------	34.2	39.5	11.8	--------	--------
Yarn mills	91.9	.70	--------	14.3	8.6	--------	--------	--------
Bread and other bakery products (July 1945)	19.2	.59	20.3	28.8	39.0	30.5	23.7	62.7
Cigars (January 1946)	47.4	.73	−12.3	6.8	0.0	1.4	--------	39.7
Footwear (October 1945)	6.4	.65	10.8	43.1	46.2	10.8	1.5	78.5
Hosiery, full-fashioned (January 1946)	43.5	.87	3.4	4.6	24.1	14.9	--------	42.5
Hosiery, seamless (January 1946)	76.1	.62	−11.3	12.9	8.1	16.1	--------	--------
Structural clay products (October 1945)	18.0	.60	36.7	40.0	50.0	36.7	28.3	58.3
Furniture, other than upholstered (October 1945)	38.4	.56	30.4	28.6	39.3	33.9	16.1	67.9
Furniture, upholstered (October 1945)	27.0	.74	6.8	28.4	58.1	25.7	23.0	75.7
Nonmanufacturing								
Retail (April 1945):								
Clothing stores	12.4	.65	6.2	4.6	30.8	26.2	10.8	41.5
Department stores	12.2	.61	−9.8	−4.9	14.8	13.1	6.6	19.7
Limited price variety stores	22.5	.33	15.2	30.3	27.3	30.3	18.2	66.7
Electric light and power (July 1945)	14.3	.87	(3)	20.7	19.5	21.8	3.4	27.6
Power laundries (July 1945)	31.2	.38	34.2	52.6	63.2	55.3	23.7	81.6
Telephones (October 1945)	20.5	.81	14.8	16.0	25.9	12.3	−3.7	17.3

[1] Excludes premium pay for overtime and night work.
[2] Includes Southeast and Southwest.
[3] Insufficient number of workers to justify presentation of an average.

These industries, for the reason already indicated, were excluded from tables 28 and 29.

The significance of the lumber industry in the South can be gaged from the fact that in 1944 approximately a quarter of a million workers found employment in lumbering operations in that region; this represents over half of total employment in the entire industry. In August 1944, the most recent period for which regional data are available, straight-time average hourly earnings of workers in logging camps, sawmills, veneer mills, plywood mills, and cooperage-stock mills were 13 to 53 percent higher in the North than in the South. In all branches except veneer and cooperage-stock mills, western wages were more than double those in the South (table 30).[8] This wide spread between the South and West is a reflection not only of differences in the general wage levels of the two regions but also of the fact that southern lumbering operations are smaller in scale, are less mechanized, and utilize a higher proportion of unskilled workers.

TABLE 30.—*Straight-Time Average Hourly Earnings of Workers in the Basic Lumber Industry, by Region, August 1944* [1]

Industry branch	West [2]	North [3]	South [4]	Percent South is of North
Basic lumber: Total	$1.18	$0.73	$0.52	71
Logging camps	1.37	.81	.53	66
Sawmills	1.04	.69	.51	74
Veneer mills	------------	.62	.49	79
Plywood mills	1.03	.62	.49	79
Cooperage-stock mills	------------	.59	.52	88

[1] Based on selected occupations. See Bulletin No. 854—Wages in the Basic Lumber Industry.
[2] Includes 3 Pacific Coast States and 8 States in the Rocky Mountain area.
[3] Includes Midwest, Great Lakes, Middle Atlantic, and New England regions.
[4] Includes 9 Southeastern and 4 Southwestern States.

In underground bituminous-coal mines in the fall of 1945, straight-time hourly earnings in northern and southern coal production districts differed very little, contrary to the general pattern in many industries.[9] However, in both of these regions, earnings were on the whole lower than in the West, where less than 10 percent of the tonnage is produced. Table 31, which presents the wage data for this industry, does not show a single rate for each region because of the difficulty of subdividing coal production districts where boundaries crossed regional lines. For this reason the average earnings for each of the districts in the three regions are shown separately. It will be seen that, although the highest southern earnings (District 7) did not exceed the highest earnings in the North or West, several districts within the South had averages which equaled or exceeded those in the North.

In strip mines the spread in earnings between the North and South was noticeably greater than in underground mines. The highest southern strip mining earnings were 12 cents below the highest northern earnings, whereas in underground mines only a 1-cent difference separated the highest district in each of these regions. Strip mining, it may be noted, employs approximately 18,000 workers nationally as against more than 300,000 in underground bituminous mines.

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[8] For a full report of wages in this industry, see Bureau of Labor Statistics, Bulletin No. 854—Wages in the Basic Lumber Industry, 1944.

[9] A comprehensive (mimeographed) report on wages in this industry is available from the Bureau upon request: Wage Structure of Bituminous-Coal Mines, 1945.

In brief, the pattern of geographical wage differentials in bituminous-coal mining is similar to that observed earlier, to the extent that wages in the West are higher than in the North and South. However, this industry varies from the general pattern, in that differences between northern and southern underground mines are considerably less marked.

Table 31.—*Straight-Time Average Hourly Earnings in Bituminous-Coal Mining, by Coal Production Districts in Three Regions, Fall 1945*[1]

[Number in parentheses identifies Coal Production District]

Branch	North[2]	South[3]	West[4]	Branch	North[2]	South[3]
Underground mines	$1.12 (10)	$1.11 (7)	$1.21 (19)	Strip mines	$1.29 (10)	$1.17 (3)
	1.09 (11)	1.10 (3)	1.18 (20)		1.27 (2)	1.14 (7)
	1.08 (4)	1.07 (8)	1.15 (16)		1.26 (11)	1.12 (15)
	1.07 (2)	1.05 (6)	1.09 (17)		1.21 (4)	1.11 (9)
	1.05 (1)	.95 (14)	------------		1.07 (1)	.96 (13)
	.97 (12)	.91 (9)	------------		.78 (12)	
	------------	.91 (13)	------------			
	------------	.86 (15)	------------			

[1] Average hourly earnings for each district based on a selected number of occupations.

[2] Coal Production Districts within the North include *District 1*—Eastern Pennsylvania, *District 2*—Western Pennsylvania, *District 4*—Ohio, *District 10*—Illinois, *District 11*—Indiana, *District 12*—Iowa.

[3] Southern Districts include *District 3*—Northern West Virginia, *District 6*—Panhandle of West Virginia, *District 7*—Southern West Virginia, *District 8*—Other West Virginia counties and parts of Virginia, Tennessee, and North Carolina, *District 9*—Counties in Kentucky, *District 13*—Alabama, *District 14*—parts of Oklahoma and Arkansas, *District 15*—Kansas and parts of Oklahoma.

[4] Western Districts include *District 16*—Northern Colorado, *District 17*—Southern Colorado, *District 19*—Wyoming and Idaho, *District 20*—Utah. For more exact delineation of district boundaries, see Wage Structure in Bituminous-Coal Mines, 1945.

Wages of southern railroad workers on class I line-haul steam railroads are also lower than elsewhere. Straight-time hourly earnings in 1944 averaged 93.5 cents in the Eastern District, 85.0 cents in the Southern District, and 87.5 cents in the Western District (for the 93 percent of all employees in the industry, on which the Interstate Commerce Commission gives hourly data).[10] It will be observed that unlike most other industries, workers on western railroads had lower hourly earnings than Eastern District workers; in fact the wage spread between the East and West was greater than that between the South and West.

For the building and printing trades regional wage comparisons are based on average union hourly rates of pay, since data are not available currently on wages paid on all types of jobs, both union and nonunion. In table 32 these rates are shown for only two broad geographic regions but with subdivisions within each region by size of city.

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[10] Based on Railway Statistics for 1944 (preliminary), Interstate Commerce Commission. The Eastern District comprises the Great Lakes, Central Eastern, and New England States; the Western District, the entire area west of the Mississippi, and the Southern District, all States east of the Mississippi and below the Eastern District.

With certain minor exceptions, the basic wage rates paid to train and engine service employees have been uniform throughout the United States since 1944. Among other railway employees, usually called the nonoperating employees, variations in rates do exist from region to region. Generally the differentials are less in the skilled occupations such as shop mechanics than they are in the unskilled jobs such as sectionmen and extra gangmen. In the former the regional differentials between the Eastern and Southern Districts are about 1 cent per hour while in the latter occupations the rates in the Southern District are 8 to 10 cents per hour less than in the Eastern District. The Western District tends to pay better rates to unskilled occupations in the Northwest than in the Southwest.

In all but the smallest cities, union rates in July 1945 were lower in the South than in the North. In the smaller cities (40,000 to 100,000 population) journeymen in the building trades averaged the same in both regions, while in book and job printing, union workers in the South had higher rates than workers in the North in cities of this size.

It will also be observed that the North-South differential for skilled journeymen in the building trades was considerably less than for the less skilled helpers and laborers. In the largest southern cities, journeymen's rates were 9 percent below the North while helpers and laborers' rates were 31 percent lower. The differentials for the least skilled jobs were less in the medium and smallest sized cities but even here they exceeded the wage spread for the skilled job.

TABLE 32.—*Average Union Hourly Rates in the Building and Printing Trades by Population, Group, and Region, July 1945*

Trade	Cities of 250,000–500,000 population			Cities of 100,000–250,000 population			Cities of 40,000–100,000 population		
	North and Pacific (13 cities)	South and Southwest (8 cities)	Percent South is of North	North and Pacific (18 cities)	South and Southwest (7 cities)	Percent South is of North	North and Pacific (7 cities [1])	South and Southwest (6 cities [1])	Percent South is of North
Building trades	$1.49	$1.30	87	$1.38	$1.26	91	$1.31	$1.19	91
Journeymen	1.58	1.44	91	1.48	1.33	90	1.37	1.37	100
Helpers and laborers	1.02	.70	69	.93	.67	72	.89	.77	87
Printing trades	1.22	1.20	98	1.23	1.13	92	1.15	1.19	103
Book and job	1.10	1.08	98	1.14	.96	84	1.02	1.11	109
Newspapers	1.48	1.35	91	1.35	1.28	95	1.29	1.25	97

[1] In the printing trades 6 cities were covered in the North and Pacific and 5 cities in the South and Southwest.

Variations in Wages at Various Skill Levels

To answer the question whether workers on the same general level of skill receive the same straight-time average hourly earnings in all regions or whether there are characteristic geographical differences, three occupations, believed to be fairly representative of the skilled, medium skilled, and least skilled jobs in each industry, were chosen for analysis.[11] For example, for the telephone industry the jobs selected were PBX installers, experienced switchboard operators, and cable splicers' helpers; for the work-shirt industry, the jobs included sewing-machine repairmen, sewing-machine operators, and work distributors; for full-fashioned hosiery, single-unit knitters, toppers, and janitors. This was done for most of the industries shown in table 28.[12] Some industries could not be covered in this manner because occupational data were not available.

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[11] The choice of a single occupation to represent all skilled, semiskilled, or unskilled jobs in an industry, of course, limits the validity of the comparison. The margin of error would have been reduced if the selection of occupations had been based on a detailed study of occupational wage relationships in each industry. The Bureau of Labor Statistics (Wage Analysis Branch) has undertaken such studies, a few of which have already appeared in a series of mimeographed reports entitled, "Occupational Wage Relationships." These studies are now available for machinery, machine-tool accessories, foundries, and electric light and power. For purposes of the present analysis, it was necessary to choose occupations prior to a detailed study of each industry. For this reason, the chance of error cannot be entirely dismissed.

Following the procedure used previously, the regions were ranked according to their relative level of straight-time average hourly earnings for each occupation in each industry. The final or average regional wage positions with respect to the three grades of labor are shown below. Rank 1 represents the highest wage level.

	Skilled job	*Semiskilled job*	*Unskilled job*
Pacific	1	1	1
Middle Atlantic	2	2	3
Great Lakes	3	3	2
New England	[1] 4	4	4
Border States	[1] 4	5	5
Southwest	6	[1] 7	7
Middle West	7	6	6
Southeast	8	[1] 7	8

[1] Tied with another region for same position.

The Pacific and Southeast rank highest and lowest, respectively, on this basis, just as they did in terms of the level of wages for all workers in each industry. The Southeast, however, was tied with the Southwest for last position in the case of semiskilled jobs, while New England and the Border States were found to be at the same level with respect to skilled jobs. At the upper end of the wage scale, the Middle Atlantic, Great Lakes, and New England also retained the places shown on the basis of all workers. The major change was for the Middle West; although it is fifth in terms of all workers, it has next to the lowest rates for skilled and semiskilled jobs and third lowest in the case of unskilled jobs. The shift indicated is not too significant since, in the ranking of regions on the basis of the over-all averages, the Middle West preceded the Border States by a very small margin.

The consistency with which the Southeast appeared in a low wage position is evidenced by the fact that in more than half of the industries represented it was lowest in skilled as well as in semiskilled and unskilled jobs.[13]

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[12] Owing to space limitations, it is not possible to present the detailed tables containing occupational wage rates for the various industries in each region. This material is, however, available upon request.

[13] While in none of the industries covered did skilled workers in the Southeast show the highest wage rates in the country, in a few industries their rates were above those in New England. Thus, production machinists in the machinery industry earned $1.06 per hour in the Southeast in January 1945 compared with $1.02 in New England Adjusters and fixers of seamless hosiery machinery had an hourly rate of 97 cents and 99 cents in New England and the Southeast, respectively.

It is clear from the above that there are characteristic regional wage differences, whether the analysis is made on the basis of all workers or in terms of various skill levels. The Southeast was the lowest wage area from the viewpoint of average wages of skilled and lesser skilled workers and, at the opposite extreme, was the Pacific region, with the highest wages for workers at comparable levels of skill.

WAGE SPREAD BETWEEN SKILLED AND UNSKILLED GRADES

The fact that each region has a characteristic wage position with respect to workers at different skill levels does not necessarily mean that the spread between wages for the highest and lowest grades of work is uniform for all regions even in a single industry. Intra-industry differences are affected not only by the peculiar regional conditions governing the supply of and demand for labor but also by the fact that products manufactured in a single industry are not uniform regionally, the organization of production varies in degree of mechanization and size of operation, and these, in turn, affect the character of the labor force. Within a single industry, also, differences in degree of unionization and methods of wage payment influence not only the general wage level but the relationship of wages among occupations as well.

An analysis of straight-time average hourly earnings of the selected skilled and unskilled job in each of the industries included in this study revealed the following:

(1) Although in all regions the skilled job paid more than the unskilled, the differential in each industry varied from region to region.

(2) On the whole, the wage spread was narrowest in the highest wage region, the Pacific, and widest in the lowest, the Southeast and Southwest.

(3) While the Great Lakes States and New England, two other high wage regions, also showed a narrower skilled-unskilled wage spread than the lowest wage regions, the Middle Atlantic States, second highest in the national wage scale, appeared to have, on the average, as wide a differential as the southern regions but for different reasons.

(4) In the Pacific region the comparatively narrow spread was more the result of the relatively high level of unskilled wages than of the position of skilled wages.

(5) In the Middle Atlantic, the opposite situation seemed to prevail, with earnings of skilled workers (compared to the national average in each industry) considerably higher than those of unskilled workers.

(6) In the Southeast, the wages of both groups varied considerably from the national average for each industry, with a somewhat larger

difference indicated by the wages of unskilled workers. It is interesting to observe the opposite tendencies in cotton textiles and lumber, the two most important industries in this region. In lumber in 1944 the differential against the South among unskilled workers was considerably greater than among skilled jobs. For example, skilled headrig sawyers in the North had only a 16-percent wage advantage over southern workers in this group; among semiskilled edgermen, the northern differential was 37 percent and for unskilled off-bearers the spread was 43 percent. In cotton textiles, according to a Bureau survey made in April-May 1946, the differentials against the South in straight-time average hourly earnings for the least skilled jobs were decidedly smaller than differentials among the skilled jobs. For example, loom fixers, maintenance carpenters, and maintenance electricians earned from 13 to 31 percent more per hour in New England than in the Southeast, whereas among unskilled filling hands, battery hands, and scrubbers and sweepers, the New England advantage did not exceed 8 percent and in some jobs average rates in both regions were identical.

Among the 26 other industries examined in the Southeast, 14 showed that the differential between average hourly earnings in this region and the national average was greater for the unskilled than for the skilled job; for the remaining 12 industries the opposite relationship seemed to prevail. It will be observed from table 33 that all 5 garment industries had a larger differential for skilled workers, whereas in the metalworking industries the spread was greatest for the unskilled. The two branches of the hosiery industry showed different relationships. In the full-fashioned branch the differential was larger for skilled workers, while in seamless hosiery the national average was equaled for the skilled job but fell short by 2 percent in the case of the unskilled job.

In brief, although the difference between skilled and unskilled wages in the Southeast was in general affected to a greater extent by

TABLE 33.—*Percent Southeast Average Straight-time Hourly Earnings Are of United States Averages for Selected Skilled and Unskilled Jobs in 26 Industries*

Industry	Skilled job	Unskilled job	Industry	Skilled job	Unskilled job
Ferrous foundries	70	63	Women's and misses dresses	43	72
Nonferrous foundries	71	70	Men's and boys' dress shirts	73	86
Power laundries	85	79	Overall and industrial garments	83	85
Footwear, other than rubber	86	85	Work pants	85	91
Electric light and power	87	81	Work shirts	87	96
Limited price variety stores	89	88	Sheet metal	87	89
Clothing stores	78	73	Structural clay products	69	74
Machinery, miscellaneous	89	69	Bakeries	71	78
Paperboard mills	92	79	Telephone	72	99
Fabricated structural steel	93	72	Wood furniture, not upholstered	82	91
Upholstered wood furniture	92	88	Cigars	82	94
Department stores	96	77	Full-fashioned hosiery	86	92
Power boilers	98	74			
Seamless hosiery	100	98			

the low wages of unskilled workers, in a significant number of industries skilled wages showed a greater deviation from the national average than did unskilled wages. It is highly probable that the situation observed in 1945–46 represents a considerable change from the prewar situation because of the fact that wages of the lowest paid workers in many industries during the war tended to rise faster than those of the more highly skilled.

Some Conditions Affecting Southern Wages

The low-wage level of the South is accounted for in large measure by the predominance of agriculture and the relatively large supply of unskilled labor competing for jobs in comparatively few industries. Other important factors include a large population relative to employment opportunities, decentralization of industry, comparative lack of unionization, and limited degree of protective-labor legislation by the States.

Changes in these underlying conditions act to alter the southern wage level. The growth of industry, which received considerable impetus during the war, exerts an upward pull on wages, depending upon the interaction of such factors as the natural rate of population increase in the South, labor displacement in agriculture, migration out of the region, and the rapidity of southern industrial development. The extension of unionization and the raising of the legal minimum wage also contribute toward the establishment of a higher wage level. The prewar 40-cent minimum wage has already been rendered obsolete in many industries by war and postwar wage changes, bringing rates above this minimum.

A strong downward pull on the southern wage level may be exerted as a result of an accelerated growth in the number of workers looking for industrial jobs. This could be effected, for example, by a great displacement of agricultural workers if cotton harvesting and other farm operations were generally more mechanized.[14] If such a revolutionary technological development is not accompanied by a large increase in the industrial and related demand for labor, the pressure on the southern nonagricultural wage level could be considerable. One offsetting factor, of course, would be the extent to which the size of the southern labor force was affected by out-migration.

This brief indication of a few of the many elements that enter into wage determination is sufficient to reveal the complexities of the problem and the difficulties involved in anticipating what the southern wage level—or that of any region—is likely to be in the future in relation to other areas.

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[14] See Peter F. Drucker: Exit King Cotton (in Harper's Magazine, May 1946, pp. 473–480).

VI.—Wages in Specific Industries in the South[1]

This section contains relatively brief accounts of wages in an important group of southern industries.[2]

The detailed wage surveys on which these analyses are based were made at various times during 1945 and 1946.[3] Hence the data in most cases are not strictly current. Nevertheless, they provide valuable insight into the structure of wages in the South and therefore supplement the discussion of regional wage differentials, which dealt mainly with wage levels.

Cotton Textiles

The manufacture of cotton textiles (woven goods and yarn) is the most important single industry in the South. Although most of the industry is concentrated in an irregular belt extending from southern Virginia through North and South Carolina and Georgia to central Alabama, scattered textile mills are found in all Southern States[4] except Florida.

The South has approximately 50 percent of the total employment in the manufacture of all textile-mill products, including woolens, rayon and other synthetics, and knit fabrics and hosiery, but has a larger proportion in cotton textiles (80 percent) than in the related industries.

Although the manufacture of textile products requires many clearly differentiated operations, it is convenient to make a complete break in the operations at only two points: At the conclusion of the spinning process, at which time the yarn is wound on cones or spools and can be transported easily; or at the conclusion of the weaving or knitting process, at which time the cloth can be transported, if necessary, to a separate plant for dyeing and finishing. Individual mills may, therefore, consist of any of these three general divisions alone or in combination. The typical southern cotton-textile mill is an integrated establishment, combining the spinning and weaving departments. Some of these integrated mills also have finishing departments, and others do a limited amount of simple dyeing. The typical plant produces a relatively standard type of cloth, such as sheetings, twills, drills, duck, or print cloth. In lesser quantities there appear other fabrics, such as ginghams, chambray, napped goods, gauze, or toweling. Although some large establishments produce a variety of goods, most mills have found it advantageous to limit their output to only a few related items. A number of cotton mills are also producing fabrics composed wholly or in part of spun rayon.

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[1] The analysis of cotton-textile wages in this section was prepared by Alan Ritter of the Bureau's regional office in Atlanta, Ga.; except for coal mining and railroad transportation, the remaining parts of the section were contributed by various members of the Bureau's Wage Analysis Branch.

[2] For each of the industries summarized in the following pages (except railroad transportation), further detail and basic tables with a description of the methods used and information for numerous other industries, is available in a series of wage-structure bulletins. In addition, the Bureau publishes separate tabulations by industry for the more important cities in which each industry is located. Except where otherwise indicated, the Southeast includes Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina, and Tennessee; and the Southwest includes Arkansas, Louisiana, Oklahoma, and Texas. Virginia, which was included in the Southeast in the section on regional wage differentials (see p. 1) is not normally included in the data summarized in these notes.

[3] These same surveys provided much of the basic data for the analysis of wage differentials in the preceding section.

[4] For the purposes of this analysis, the Southeast includes Virginia, North Carolina, South Carolina, Georgia, Florida, Tennessee, and Alabama; the Southwest includes Mississippi, Oklahoma, Arkansas, Louisiana, and Texas.

Somewhat smaller in total employment but still important are the region's cotton yarn (spinning) mills. These mills sell yarn to weaving mills or to plants knitting seamless hosiery or underwear fabrics. Some of the yarn mills produce combed yarn, which has gone through an additional preparatory process that removes the shorter fibers, making the yarn stronger and of better appearance. Combed yarns are desirable for knit goods.

Independent weaving mills are not found in large number in the South, being more important in certain Northern States. Such mills usually produce the less common types of cloth, such as plush or upholstery fabrics which may require several varieties of yarn.

There are deviations, of course, from these general classifications. Some integrated mills do not maintain an exact balance between spinning and weaving departments and may sell or buy yarn as a result. The tendency toward the operation of multiple plants under one management has resulted in the increased integration of production under a given company, though separate processes may still be carried on in individual establishments.

For a number of years the Bureau of Labor Statistics has made periodic studies of wage rates and wage practices in the cotton-textile industry. The results of the latest study, based upon an April-May 1946 pay-roll period, form the basis for this summary analysis.[5]

Data are provided in this report for three types of mills—integrated establishments and independent yarn and independent weaving mills. Dyeing and finishing departments connected with integrated establishments are included, but independent dyeing and finishing plants are not included.[6]

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[5] Earlier reports covering pay-roll periods in 1941, 1943, and 1944 may be obtained from the Bureau of Labor Statistics on request.

[6] A separate study of dyeing and finishing plants was made in July 1946 and copies of the report based upon this study may be obtained from the Bureau of Labor Statistics on request.

The 1946 survey included about one-third of the cotton-textile mills in the South and about the same proportion of the total employment. However, since the various establishments in each of the local areas were not sampled in the same proportion, it was necessary in combining the data for the region as a whole to assign proper weights in proportion to each area's importance in the industry. All of the figures in the tables in this report represent results after such weighting.

AVERAGE HOURLY EARNINGS

Average straight-time earnings of southern cotton-mill workers in April–May 1946 were 74 cents an hour, 27 percent above those for April 1944, and 83 percent above the April 1941 earnings.[7]

The average earnings of all workers were dominated by the integrated mills, where earnings averaged 75 cents an hour. Earnings in southeastern weaving mills were slightly above the general average and those in yarn mills throughout the South were below it, but the number of workers in these two types of mills was not large enough to have an appreciable effect on the general average. Most of the occupations related to the initial preparation and spinning of cotton require less skill and are paid at lower rates than those related to weaving. The varying proportions of higher- and lower-skilled workers among spinning mills, weaving mills, and integrated mills account, therefore, for most of the differences in average earnings. However, workers in the spinning departments of integrated mills frequently earn more than employees in the same jobs in spinning mills.

Average earnings were higher in southeastern mills than in those in the Southwest, owing partly to differences in products manufactured and partly to the fact that recent wage increases had reached fewer southwestern mills. The over-all earnings of men workers exceeded those of women by about 5 cents an hour. Proportionately, more men are employed in the higher-skilled jobs, but, again, men frequently receive more than women workers in the same jobs in all types of mills.

Some operations in cotton-textile mills require relatively little skill and often may be handled satisfactorily by beginners. As a result, large numbers of workers employed in such occupations as scrubbers and sweepers, hand truckers, roving haulers, filling haulers, and battery hands receive rates at or only slightly above the base or minimum rate.

During the past few years, wage adjustments have centered about the minimum rate. The Fair Labor Standards Act, which went into effect in October 1938, originally set 25 cents an hour as the

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[7] Earnings in Cotton-Goods Manufacture During the War Years, in Monthly Labor Review, October 1944 (p. 823); and Hours and Earnings in Manufacture of Cotton Goods, September 1940 and April 1941, in Monthly Labor Review, December 1941 (p. 1490).

minimum rate for the cotton-textile industry and provided for gradual increases to 40 cents an hour in 1944. However, successive increases recommended by the Textile Industry Committee established under the act, and approved by the Administrator, raised the minimum rate to 32.5 cents an hour in October 1939, to 37.5 cents in June 1941, and to the 40-cent level by April 1942. During the period in which the National War Labor Board was in operation, additional increases in the minimum rate occurred. The rulings of the National War Labor Board affecting the cotton-textile industry took the form of general increases raising the minimum rate to a specified level, with equal or graduated increases in cents to all workers above the minimum. These rulings usually applied directly to only small segments of the industry, but most of the other plants soon adjusted wages in accordance with the rulings. This Board and its successor, the National Wage Stabilization Board, approved increases in the minimum rate to 47.5 cents[8] an hour in August 1942, to 50 cents an hour in February 1944, to 55 cents in February 1945, and to 65 cents in January 1946. Although slightly less than half of the southeastern mills studied reported a 65-cent minimum rate in April–May 1946, this group included most of the larger mills and represented much more than half of the workers.

The distribution of earnings reflects the importance of the minimum rate. In the Southeast only 14 percent of the plant workers received less than 65 cents, but the hourly earnings of almost 50 percent of the workers fell within the 10-cent range from 65 cents to 74.9 cents, and two-fifths of this group were at the 65-cent rate or not more than 2.5 cents above it. A number of southwestern mills reported 55- and 62-cent minimum rates, however, so that about 45 percent of the workers in the Southwest were receiving less than 65 cents an hour in April–May 1946; 17 percent were at the 65-cent rate or slightly above; and only about 30 percent of the workers received rates between 65 and 75 cents an hour. The effects of the lower minimum in the Southwest are also noted in the higher wage brackets. In the Southeast 62.5 percent of the workers received less than 75 cents an hour compared with 77.6 percent in the Southwest; and, similarly, 81.2 percent of the southeastern workers received less than 85 cents an hour, but 91.3 percent of those in the Southwest received less than that amount. An hourly rate of $1 constituted the practical upper limit for both sections, with only 4.3 percent of the southeastern workers and 2.1 percent of the southwestern workers receiving $1 or more.

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[8] The 47.5-cent minimum was not as generally effective as the others and many southern mills gave increases of more than 2.5 cents in order to attain the 50-cent level of the next increase. See Average Hourly Earnings of Selected Occupations in Cotton Textile Mills, Before and After Wage Increases Granted by the Fourth Regional War Labor Board, February 3 to November 15, 1944, Atlanta Regional Office, Bureau of Labor Statistics, Serial No. IV–22.

A larger proportion of women than men workers were found at or just above the minimum rate. In the Southeast, for example, 16 percent of the women workers received less than 65 cents an hour, and 70.7 percent received less than 75 cents; but 13.2 percent of the men received less than 65 cents and only 57.1 percent received less than 75 cents an hour. To continue up the scale, only 0.9 percent of the women received $1 or more, but 6.6 percent of the men exceeded this rate.

OCCUPATIONAL WAGE STRUCTURE

Average earnings of workers in key occupations in southern cotton-textile mills were obtained in the course of the 1946 wage survey.[9] On the basis of general levels of skill and earnings, these occupations may be grouped as follows:

(1) Higher-skilled maintenance workers, including those with general skills such as electricians, and those with particular skills such as loom fixers. This group, whose occupational earnings averaged more than 90 cents an hour in April–May 1946, is composed exclusively of men workers.

(2) The lower-skilled maintenance workers such as carpenters and card grinders, and the higher-skilled processing workers such as weavers, slasher tenders, and certain dye-house employees, whose occupational average rates ranged between 89 and 80 cents an hour. A large number of women, employed as weavers, appear in this group.

(3) Semiskilled processing workers, illustrated by doffers, spinners, and winders, whose occupational earnings ranged from 79 cents down to 69 to 70 cents.

(4) Relatively unskilled processing workers such as battery hands, custodial workers, and the great number of workers who are engaged in transferring goods in process,[10] whose rates of pay approximated or were slightly above the minimum rate and whose average earnings did not rise above 67 to 68 cents.

As suggested above, southeastern workers generally were paid higher rates than southwestern workers in the same occupations. Men workers also received higher average earnings than women in the same occupations. The average differences were not great, however, and for several occupations in the Southwest women workers received more than men workers.

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[9] Detailed reports showing occupational earnings for individual areas may be obtained from the Bureau of Labor Statistics on request.

[10] Truckers, filling hands, and roving men.

Regional averages, of course, conceal the usual and significant differences in occupational rates among individual mills, even within the same labor market area.

In addition to differences in the rates paid to individual workers and minor differences among mills in equipment and processes, certain broad factors are generally considered to influence earnings in various mills. The effects of three such factors—method of wage payment, unionization, and size of establishment—may be discussed briefly in terms of selected occupations.[11] Although there are some exceptions, incentive workers, within the occupations compared, received higher average rates than time workers; union plants paid higher rates than nonunion plants; and larger establishments paid higher rates than smaller establishments. Moreover, integrated mills paid higher rates than yarn mills in the occupations for which comparison was made.

Incentive wage plans (predominantly piece rates) appeared in more than three-fourths of the mills visited and affected 36 percent of the total number of workers. Plant-wide incentive plans are rare in the textile industry, but certain occupations are paid almost exclusively on a time basis and other occupations are predominantly incentive.

OCCUPATIONAL WAGE RELATIONSHIPS

In preparing material for table 34, the average earnings for each occupation in each mill were expressed as a percentage of the average earnings of male janitors in the respective mills. Separate computations were made for men and women workers and for time and incentive workers in each occupation. Thus, the pattern of rates in each mill was related to an appropriate base within the mill's own rate structure, and variations in wage levels among mills were eliminated. The average (median) of the relatives for the key occupations studied in the southeastern mills are presented, together with the range within which half of the establishment relatives fell.[12] No attempt was made to adjust these averages to take account of differences in size among the mills, but each establishment was given an equal weight in the positional average. The use of the median also tends to eliminate extreme variations caused by peculiarities in certain mills which would tend to distort the general pattern of occupational relationships.[13]

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[11] The selected occupations are battery hands, card tenders, ring frame spinners, plain automatic loom weavers, and box loom weavers.

[12] Some occupations which appeared in only a few plants were omitted from this analysis. It was not possible to present a similar tabulation for the Southwest because the small number of plants studied in that region, as well as variations in product, introduced considerable instability into the occupational data.

[13] A detailed discussion of occupational wage relationships will appear in a forthcoming bulletin.

TABLE 34.—*Indexes of Wage Rates*[1] *for Selected Occupations in the Cotton-Textile Industry,*[2] *Southeast, April–May 1946*

[Wage rates for male janitors=100]

Occupation, method of wage payment,[3] and sex	Number of establishments	Wage-rate indexes	
		Median	Middle range within which half of the establishments fell
Men			
Battery hands, T	34	105	102–106
Card grinders, T	183	137	126–141
Card tenders, T	180	108	104–111
Carpenters, maintenance, T	148	128	117–145
Doffers, spinning frame, T	94	112	105–119
Doffers, spinning frame, I	113	128	122–135
Electricians, maintenance, T	106	147	137–159
Filling hands, T	109	103	100–107
Inspectors, cloth, hand, T	33	112	106–116
Inspectors, cloth, machine, T	37	110	105–114
Loom fixers, other than jacquard, T	107	153	146–157
Machinists, maintenance, T	114	147	138–157
Maintenance men, general utility, T	54	131	115–143
Mechanics, maintenance, T	130	140	132–148
Roving men, T	179	103	100–105
Second hands, T	145	159	142–171
Slasher tenders, T	120	129	120–137
Slubber tenders, T	47	111	105–120
Slubber tenders, I	140	129	123–135
Spinners, ring frame, I	27	117	113–123
Stock clerks, T	97	123	110–134
Truckers, hand, general, including bobbin boys, T	151	102	100–105
Twister tenders, T	70	111	105–116
Twister tenders, I	32	126	120–134
Watchmen, T	187	103	100–108
Weavers, plain automatic loom, T	20	126	118–131
Weavers, plain automatic loom, I	103	133	126–138
Weavers, dobby loom, I	25	140	129–148
Winders, yarn, T	28	106	102–109
Winders, yarn, I	19	110	105–120
Women			
Battery hands, T	96	105	102–107
Battery hands, I	27	108	106–110
Doffers, spinning frames, T	19	107	104–114
Doffers, spinning frames, I	21	121	114–126
Inspectors, cloth, hand, T	64	106	105–109
Inspectors, cloth, machine, T	62	105	103–111
Janitors, T	87	100	98–100
Roving men, T	20	103	102–105
Slubber tenders, I	36	125	115–132
Spinners, ring frame, T	68	108	103–115
Spinners, ring frame, I	137	115	109–121
Stock clerks, T	19	112	108–117
Twister tenders, T	37	107	105–113
Twister tenders, I	18	122	111–132
Weavers, plain automatic loom, I	105	129	123–136
Weavers, dobby loom, I	25	134	126–142
Winders, yarn, T	109	106	101–108
Winders, yarn, I	137	115	109–121

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[1] Excluding premium pay for overtime and shift work.
[2] Including integrated, yarn, and specialized weaving mills—200 establishments.
[3] T=time, and I=incentive, method of wage payment.

WAGE PRACTICES

Increasing attention has been paid during recent years to certain practices which affect gross income of the workers but which do not appear in the wage scales. At the time of this study 151 of the 222 establishments visited in the South reported paid vacations of 1 week after 1 year of service. Similarly, 101 plants reported insurance or pension plans applicable to plant workers. About nine-tenths of the plans included life insurance and about one-half included some form of health insurance. In addition to the average hourly earnings presented in this report, approximately one-fourth of the plants visited reported the payment of some type of nonproduction bonus, predominantly Christmas bonuses. If the total amount of such nonproduction bonuses was averaged over all plant workers in the industry, approximately 0.3 cent would be added to the average earnings.

Table 35.—*General Wage Increases in Cotton Textiles, in Southeastern Areas;*[1] *April–May 1946 to Aug. 15, 1946, Averaged Over All Workers Studied*

Area	Hourly wage increase		Area	Hourly wage increase	
	Average amount	Percentage		Average amount	Percentage
	Cents			*Cents*	
Charlotte, N. C	7.8	10.5	Augusta, Ga.-Aiken, S. C	7.3	9.9
Statesville, N. C	8.1	10.8	Gainesville-Athens, Ga	7.6	10.4
Winston-Salem, N. C	6.6	8.5	Northwest Georgia	7.1	9.9
Other areas, North Carolina	5.3	7.3	West Central Georgia	8.1	11.3
Greenville-Spartanburg, S. C	8.1	10.9	Other areas, Georgia	7.4	10.1
Laurens-Greenwood-Newberry, S. C	7.9	10.5	Anniston-Talladega-Gadsden, Ala	3.8	5.0
Gaffney-York-Chester-Union, S. C	8.2	11.9	East Central Alabama	8.0	10.7
Other areas, South Carolina	7.4	10.3	Other areas, Alabama	7.9	11.0

[1] Similar information is not available for the Southwest.

RECENT WAGE CHANGES

Subsequent to the April–May 1946 pay-roll period covered in the Bureau's last complete survey of the cotton-textile industry, a large proportion of the textile mills granted wage increases. Most of these adjustments were in the form of a general increase of 8 cents an hour, raising the minimum rate to 73 cents. A large number of these increases became effective in late July or early August. A brief resurvey of the mills included in the original survey was made to determine the increases that had occurred between April–May and August 15 (table 35).

Adjustments of the occupational wage data by the factor presented in this table will not normally result in the same average hourly earnings as would be obtained by a completely new field survey since it does not take into account other factors affecting earnings. Such factors as changes in output of incentive workers, different rates of turn-over, and employment shifts among plants are not included in the general wage changes.

Additional plants have made wage adjustments since August. Average hourly earnings (including overtime) for the United States as a whole for the cotton-textile industry rose from 80.3 cents in July 1946 to 87.5 cents in August, reflecting the general increase of 8 cents. These average earnings rose further to 88.8 cents an hour in September and to 89.2 cents in October 1946. These latter changes indicate that the general increase has been extended to other plants, rather than imply continued increases in plants which had reported raises prior to August 15.

Hosiery

The hosiery industry is composed broadly of two branches—full-fashioned and seamless. A relatively wide differential in wage level exists between these two branches of the industry, reflecting dissimilarities in manufacturing processes, skill requirements of the labor force, location, unionization, and other factors.

Women's full-fashioned hosiery, produced on costly and complicated knitting machines, was made principally from silk before the war. Rayon was the wartime substitute. Since September 1945, nylon has been available in increasing quantities and three-fifths of the full-fashioned mills studied by the Bureau of Labor Statistics in January 1946 reported nylon hosiery as their major product. This proportion probably will increase and, to some extent, affect wage levels.

Seamless (circular knit) hosiery mills use cotton yarns predominantly, and are engaged largely in the manufacture of men's and children's hosiery, although some women's hosiery is also produced.

FULL-FASHIONED HOSIERY

In January 1946, plant workers in full-fashioned hosiery mills in the Southeast averaged 88 cents an hour, exclusive of premium pay for overtime and night work. The corresponding average for workers in the Middle Atlantic States was $1.08; plant workers nationally averaged 97 cents. Approximately a third of the southeastern workers had straight-time average hourly earnings of less than 65 cents as compared with approximately 16 percent in the Middle Atlantic States.

Occupational earnings of men in the Southeast ranged from 56 cents an hour (straight time) for watchmen to $1.58 for one category of knitters. The largest group of knitters numerically (single-unit and backrack [14]) averaged $1.28. Men's earnings in the Middle Atlantic States ranged from a straight-time average of 59 cents for watchmen to $2.06 for a comparatively small group of footers.

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[14] Backrack knitter operates a legger machine with a backrack attachment that permits knitting the complete stocking in one operation.

Single-unit and backrack knitters in the Middle Atlantic States averaged $1.62.

Among women employees in the Southeast, earnings ranged from 48 cents for inexperienced loopers, toe and heel, to $1.06 for single-unit knitters; the corresponding averages in the Middle Atlantic States were 61 cents and $1.44. In terms of employment, the most important occupations for women were seamers and toppers. Women averaged 73 cents and 70 cents, respectively, in these occupations in the Southeast and 92 cents and 94 cents in the Middle Atlantic States.

Wages were slightly higher, on the whole, in union as compared with nonunion mills. More striking differences were apparent, however, when mills were grouped by size and by size of community; wages tended to vary directly with size of plant and size of community.

The most usual weekly work schedule in January 1946 was 40 hours. Extra-shift operation was reported by a majority of the mills; a differential generally of 5 cents was paid to second-shift workers in about half the mills operating on a multishift basis. Insurance and pension plans were more prevalent in the Southeast than in the Middle Atlantic region, while paid vacations were more common in the latter area.

SEAMLESS HOSIERY

In the seamless branch of the industry, the straight-time average hourly earnings of plant workers in the Southeast were 62 cents in January 1946. This figure compares with 67 cents in the Middle Atlantic States, 57 cents in the Border States,[15] and 63 cents in the Nation as a whole. About 63 percent of the workers in the Southeast received less than 65 cents and hour; the corresponding percentages for the Middle Atlantic and Border States were 52 and 78, respectively. In contrast with the full-fashioned branch, a comparatively small proportion of the workers in seamless hosiery had straight-time earnings of $1 or more.

Women predominate in the seamless industry. Their average earnings by occupation in the Southeast in January 1946 ranged from 44 cents an hour for loopers with less than 1 year of experience and 46 cents for janitors to 65 cents for automatic knitters. Occupational earnings were generally somewhat lower in the Border States and somewhat higher in the Middle Atlantic. For men in the Southeast, earnings by occupation ranged from 53 cents for watchmen to 99 cents for knitting machine adjusters and fixers with more than 4 years of experience.

Union organization was considerably less extensive in seamless than in full-fashioned hosiery, but the wage advantage of union workers was somewhat greater. Earnings for both men and women tended to be highest in the largest mills and in the medium-sized cities.

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[15] Includes Delaware, Kentucky, Maryland, and West Virginia.

The workweek in seamless hosiery in January 1946 was typically 40 hours. Although a majority of the mills operated more than one shift at this time, shift differential pay was infrequent. Less than half of the seamless mills granted vacations with pay to plant workers or had instituted sickness- or life-insurance benefit plans.

Wood Furniture

Straight-time hourly earnings of plant workers in establishments making wood and upholstered furniture in October 1945 averaged 60 cents in the Southeast region and 64 cents in the Southwest, compared with the national average of 76 cents an hour. In those plants primarily manufacturing wood furniture, hourly earnings of plant workers were 56 and 60 cents in the Southeast and Southwest, respectively, while the earnings of upholstered furniture workers in these regions averaged 73 and 80 cents hourly.

While the earnings of plant workers ranged upward from under 40 cents to more than $1.80 in wood furniture plants, and to more than $2.80 in upholstered furniture plants, the majority of the workers had comparatively low hourly earnings. In wood furniture plants, nearly 80 percent of the workers in the Southeast and over 70 percent of those in the Southwest earned less than 65 cents an hour; in upholstered furniture the corresponding proportions in these regions were over 50 percent and over 33 percent of the plant force. Minimum entrance and job rates in these regions were mainly 40 to 50 cents an hour.

The earnings of men frequently were substantially higher than those of women with comparable work duties. In upholstered furniture, for example, a study of seven jobs in which both men and women were employed in the Southeast in important numbers showed that men's earnings exceeded those of women in the same jobs by 5 to 125 percent.

Hourly earnings of men plant workers in those southern cities in which wood furniture production was most important, Winston-Salem–High Point, Morganton–Lenoir, and Hickory–Statesville, were 60, 66, and 59 cents, respectively; the corresponding averages for upholstered furniture in Winston-Salem–High Point and Hickory–Statesville were 83 and 72 cents an hour. The earnings of women in these areas were significantly below those of men.

In southern wood furniture the higher earnings were generally found in plants with 51 or more employees, but in upholstered furniture small plants reported the higher pay levels. Considering size of community, upholstered furniture plants in areas with 100,000 or more population paid rates about 10 percent higher; in wood furniture manufacture, workers in smaller communities enjoyed an advantage of about 5 percent. No differences in hourly earnings attributable to unionization were found in either region or in either type of furniture manufacture. In the Southeast, incentive workers whose pay varied with individual or group output earned about 9 and 64 percent more, respectively, than time workers in wood and upholstered furniture establishments. In wood furniture the proportions of the labor force paid on an incentive basis were 8 percent in the Southeast and 15 percent in the Southwest; in upholstered furniture in these regions the corresponding proportions were 42 and 36 percent. Most of the plans provided for individual piece rates.

The majority of the Southeast wood furniture plants and Southwest upholstered furniture plants provided for determination of wage rates on an individual basis, the majority in the remaining groups had formal rate structures providing for single rates or a range of rates for each job.

Except for upholstered furniture in the Southeast, the greater number of plants scheduled 44 or more hours per week for first-shift workers. However, very few workers were employed on later shifts and few of these received extra pay for such work. None of the establishments studied reported paid lunch periods for first-shift workers.

Nonproduction bonuses, usually granted at Christmas, were comparatively frequently reported in the Southeast but added only a half cent to the average hourly earnings of plant workers; such bonuses were less common in the Southwest.

Formal provisions for paid vacations, though commonly granted to office workers, were infrequent for plant workers. The most usual provisions offered 1 week's vacation with pay. Only one upholstered furniture plant offered paid sick leave, and only office workers benefited. About a third of the plants in the Southeast had life- or health-insurance provisions, such plans were infrequent in the Southwest. No retirement pension plans were reported.

Tobacco Products

Cigar manufacturing workers in the Southeast, constituting about 40 percent of the Nation's cigar employment, averaged 75 cents per hour in January 1946. The corresponding figure for the country as a whole was 2 cents less. Southern women, who outnumbered men 2 to 1 in the industry, exactly equaled the 69-cent national average for their sex. These favorable comparisons, insofar as the region is concerned, were primarily attributable to the relatively large proportion of workers engaged in making cigars by hand as contrasted to the proportion in other regions where machine methods were predominant. Hand workers require a greater degree of skill than those working on machines and consequently command higher wage scales. Illustrative of the interplay of wages and method of production are the "hand" occupations of bunch making and rolling, which included well over half of the male labor force in the South and whose average earnings of $1.00 and 82 cents, respectively, influenced the southern over-all average for men to a great degree. Nationally, men workers in these two occupations amounted to only about a third of their total in the industry. Because of the large proportion of workers in these occupations in the Southeast, the averages for the country as a whole were the same as those quoted for the region. In most of the other selected occupations studied, the national averages exceeded those of the Southeast. The Southwest region, which had only about 3 percent of the industry's workers, had the lowest regional average in the country—52 cents. Differences in quality of product, combined with a very small proportion of men workers, probably accounted for a great deal of this variation.

Tampa, Fla., is not only the leading southern cigar manufacturing center, insofar as employment is concerned, but also exceeds every other city in the country in this respect. The over-all average earnings for Tampa cigar workers (86 cents) exceeded the regional average for the Southeast by 11 cents and the national average by 13 cents. Tampa women, as a group, bettered the regional and national figures for their sex by 13 cents. Furthermore, on an occupational basis, the averages for Tampa women exceeded the corresponding national averages in most of the cases.

The cigarette industry is concentrated almost exclusively in the States of Virginia, North Carolina, and Kentucky. Plant workers in this industry, numbering somewhat less than 30,000, earned approximately 80 cents an hour on the average, with men averaging about 85 cents and women, slightly more numerous, 75 cents. Two of the main centers of production, Richmond, Va., and Louisville, Ky., had respective over-all average earnings for plant workers of 83 and 74 cents. Richmond men exceeded those in Louisville by only 4 cents but there was a 10-cent difference in the over-all earnings for women.

The third and least important tobacco industry, measured by employment, is the production of chewing and smoking tobacco and snuff. Slightly less than a third of the industry's total estimated employment of about 7,200 workers is located in the Southern States. These southern workers earned about 63 cents an hour, on the average, in January 1946, or about 8 cents an hour less than the national average. Men in the South received 66 cents and women 60 cents.

The respective averages for the country as a whole were 77 and 66 cents. In only 1 of the 12 jobs for which comparisons were made did the earnings of southern men exceed the respective national average. Women's earnings in the South equaled the figure for the country as a whole in but 1 out of 10 jobs.

Workers engaged in the manufacture of tobacco products received specific benefits which supplemented their wages. Four out of every 7 cigar manufacturing establishments, 10 of the 12 cigarette plants, and 6 of the 7 chewing and smoking tobacco plants in the South granted vacations with pay to their employees. One week's vacation was typical in the cigar industry, a two-week's vacation was awarded in all but one cigarette plant, while the chewing and smoking tobacco establishments were equally divided between the two vacation periods. Two-thirds of the cigarette plants had health insurance and/or pension plans. However, only a small proportion of the plants in the other two branches granted this type of benefit to their workers.

Pulp, Paper, and Paperboard Industry

More than one-fifth of the pulp, paper, and paperboard workers in the United States were employed in southeastern and southwestern mills during 1945. The two regions combined produced over 4 million tons of wood pulp and about 4 million tons of paper and paperboard, which represented 42 percent of the pulp and 23 percent of the paper and paperboard produced in the United States for the year.[16] While data for 1946 are not complete, indications are that both production and employment will be substantially higher than for 1945, and it is anticipated that the industry in the South will continue to expand as rapidly as equipment becomes available.

Straight-time hourly earnings for all workers in pulp and paper mills averaged 82 cents in the Southwest and 80 cents in the Southeast region, according to a wage survey conducted by the Bureau in October 1945. These averages were in line with the 82-cent average for the United States as a whole and with those for the Middle Atlantic and Great Lakes regions. Both southern regions exceeded the average of 78 cents in New England and of 73 cents in the Border States, but were surpassed by the Pacific region with $1.03. The proportion of workers in pulp and paper mills earning below 65 cents and $1.00 or above were 37 and 21 percent in the Southeast and 31 and 22 percent in the Southwest, respectively, compared with 15 and 17 percent for the country as a whole. Hourly averages for paperboard mill workers in the Southeast region [17] were 77 cents, with 45 percent of the workers earning less than 65 cents and 17 percent $1.00 or more, compared with 18 and 19 percent earning below and above these amounts for the country as a whole; the national average was 83 cents an hour. Some regional variations not measured by the survey may be attributable to type of paper or paperboard produced.

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[16] Source: U. S. Bureau of the Census.

[17] The Southwest is omitted because of insufficient paperboard mills to justify presentation of averages, but is included in the averages for the country as a whole.

Earnings of workers in skilled maintenance and in a number of skilled processing occupations tended to be slightly higher for the Southeast and Southwest regions than for the United States as a whole in pulp and paper mills. In the various skilled maintenance occupations, for example, hourly earnings ranged from $1.13 to $1.25 in the Southeast and $1.22 to $1.32 in the Southwest, compared with a range of 99 cents to $1.11 in national averages. Skilled stock preparers averaged $1.17 and $1.16 for the Southeast and Southwest and $1.15 for the United States. Working foremen in processing departments earned $1.15 and $1.22, respectively, in the two southern regions and $1.06 in the country as a whole.

A comparison of earnings in skilled occupations in the two southern regions with those in New England, where earnings were generally considerably lower, clearly reflects the more recent development of the industry in the South with the advantage of modern, wider and higher-speed machines. While these demand greater skill and responsibility of the machine tending and maintenance crews, they also result in higher productivity per worker. Differences in machines are apparent from a comparison of New England paper machine tenders with those of the Southeast and Southwest by machine widths and speeds. In the former region only about one-seventh were tending machines with screens over 150 inches in width and/or operating more than 700 feet per minute, while in the latter two regions combined over two-thirds were tending machines of this type. In all regions, hourly rates of machine crews appeared to be related to machine width and speed in the pulp and paper branch; the same relationship did not exist in the paperboard segment.

Women in the industry in the southern region represented about the same proportion as the 1 out of 8 plant workers reported for the country as a whole. Differences in earnings of men plant workers compared with women workers were somewhat wider than the 29-percent favorable differential for men in pulp and paper mills of the United States, but corresponded closely to the national picture of 22 percent for paperboard mills. As was true for the industry as a whole only a few women were found in skilled occupations and these were confined almost entirely to such work as inspection and paper testing.

Weekly pay of many workers was supplemented by overtime earnings and by shift differential payments. A scheduled workweek of 48 hours for both men and women was reported by about three-fourths of both the pulp and paper mills and the paperboard mills of the two southern regions at the time of the survey. Furthermore, approximately two-thirds of the establishments studied in these two regions paid shift differentials, generally 4 cents to second-shift and 6 cents to third-shift workers in addition to the first-shift hourly rates.

About six-sevenths of the pulp and paper mills and two-thirds of the paperboard mills studied in the two southern regions had union agreements, which were somewhat higher than the national average proportion for pulp and paper mills and about the same as that for paperboard mills. In general, however, unionization was more prevalent in the larger mills, which had a high representation in the southern regions.

Nearly all mills studied in the two southern regions granted paid vacations of 1 week to plant workers and generally 2 weeks to office workers. Almost all plants also had some type of insurance plan for both plant and office workers. Life insurance plans were most common, though some type of health insurance plan was also provided by half the establishments studied in these two regions.

Ferrous and Nonferrous Foundries

Workers in independent foundries comprised one of the largest groups of metalworking employees in the South. In January 1945 these foundry workers numbered about 8,300 and their straight-time hourly earnings averaged 74 cents, compared with $1.01 for the country as a whole.

Average hourly earnings tended to be higher in the Southwest—where three-fifths of these southern foundry workers were employed in January 1945—than in the Southeast. About a third of the ferrous foundry workers and about a fifth of the nonferrous foundry workers earned less than 65 cents in the Southwest, whereas about half of the foundry employees in the Southeast earned less than this amount. The minimum entrance rate for common labor in foundries was most frequently reported as 50 cents in the Southeast and 50 to 60 cents in the Southwest.

Some of the widest variations in average rates among the two regions occurred in molders' earnings. In ferrous foundries, rates of bench molders were $1.05 in the Southwest, about 35 percent higher than the corresponding rates in the Southeast, and the average for floor molders was $1.07 in the former region and 93 cents in the latter. Most of the molders in nonferrous foundries were producing castings by machine; the average for machine molders for the Southwest was about a fifth above that for the Southeast—$1.27 compared with $1.06. Among the lower-paid jobs, the averages for shake-out men in the Southeast were 55 cents in ferrous and 58 cents in nonferrous foundries; comparable averages in the Southwest were 60 and 66 cents, respectively.

In general, workers on nonferrous metals, who accounted for only 1 out of every 8 foundry workers in the South, received higher average hourly rates than employees in establishments casting ferrous metals.

Approximately a third of the ferrous foundries and half of the nonferrous foundries were unionized. Workers in these unionized plants averaged 5 to 10 percent higher than those in nonunionized foundries. Practically all workers in southern foundries were paid on a time basis, although in the country as a whole over a fifth of the workers worked under incentive systems.

At the time of the survey, straight-time hourly earnings of southern foundry workers were appreciably supplemented by premium pay for overtime but not by extra pay for night work. More than three-fifths of the foundries had scheduled workweeks of 48 hours or more. One-third of the ferrous foundries in the Southwest and one-fourth of those in the Southeast operated two or more shifts but less than half of these establishments provided extra pay (typically 5 cents an hour) for this late-shift work. Extra-shift operations were uncommon in nonferrous foundries.

Bonus payments, such as Christmas bonuses, not directly related to the output of individual workers or groups of workers were important in individual plants, but when averaged over all foundry workers in the region, they had little effect on average hourly earnings. In southwestern ferrous foundries, where they were highest, these payments increased the average plant worker's hourly earnings by only a half cent.

Paid vacations for plant workers with a year of service, typically 1 week in length, were provided by one-third of the foundries in the South. Provision for insurance or pensions were fairly common although not as widespread as paid vacation plans; practically all such plans provided for life insurance.

Southern Electric Light and Power Systems

In July 1945, over 60 privately owned light and power systems supplied electric power and transportation, gas, or other allied services to consumers in the Southeast and Southwest. The production and distribution of electricity engaged approximately 24,000 workers in plant and office; about 10,000 more were employed in the subsidiary operations, largely in the Southeast. Southeast systems, although fewer in number, were considerably larger on the average than those in the Southwest and, in total, employed more workers.

A study in July 1945 of electric light and power workers in representative systems showed that men[18] in maintenance, operating, and custodial jobs averaged 87 cents an hour in the Southeast and 89 cents in the Southwest, as compared with an industry average of $1.04. About a fifth of the men in each region earned less than 65 cents an hour, but a greater proportion of Southwest light and power workers earned $1.20 or more (13 percent of the men in the Southwest as against 5 percent in the Southeast).

Occupation by occupation, men generally averaged higher earnings in the Southwest than in the Southeast. For example, journeymen linemen earned $1.09 an hour in the former region as against $1.04 in the latter, district representatives $1.07 and 93 cents, boiler operators 96 and 93 cents. In a few occupations, however, the advantage was in favor of the Southeast.

On the other hand, wage rates of women office workers were higher in the Southeast than in the Southwest. General clerks earned 71 cents an hour in the Southeast and 59 cents in the Southwest; the averages for accounting clerks were 81 and 73 cents, respectively; and those for class A stenographers, 87 and 81 cents.

An examination of system wage scales to determine the prevailing ranking of occupations and the differentials between occupations, percentagewise rather than in terms of cents per hour, showed that the wage pattern of the southern systems differed significantly from that for the industry as a whole. The spread between occupational rates was considerably wider in the South than nationally. The lesser-skilled jobs occupied lower positions, relative to other occupations, in Southern wage scales when compared with the industry-wide pattern; the higher-skilled, on the other hand, held a greater percentage advantage over other occupations in the South than was found nationally. A simplified but representative illustration of these significant features of southern wage scales is afforded by contrasting the spread between selected occupations at distintly different wage levels. Thus, in the South, maintenance electricians, a high-wage group, were paid approximately 23 percent more than substation operators; for the industry as a whole, the advantage amounted to 16 percent. Groundmen, a relatively low-wage group, were paid only 70 percent of the rates for substation operators in southern light and power systems, as against 79 percent nationally. Illustrating another significant aspect of southern wage practices is the fact that office occupations were rated markedly higher, relative to nonoffice jobs, in southern wage scales than in the industry-wide pattern.

The practices of southern light and power systems with regard to related or fringe wage issues can be briefly summarized. Although round-the-clock operation is an industry-wide characteristic, none of the southern systems—and only about a fourth of all systems studied—paid premiums for night work. In about half of the Southern systems studied, the scheduled workweek for first-shift workers was 40 hours; in the rest, more than 40 hours of work was scheduled. Although paid vacations were almost universally offered to light and power plant and office workers, vacation policy of southern systems was more liberal than general industry practice; four out of every five southern systems granted 2-week vacations to their labor force. Formal provisions for paid sick leave were found in almost all the southeastern systems and in less than half of the southwestern systems. Insurance or pension plans paid for in whole or in part by the company were set up in almost all southern systems; nonproduction bonuses, on the other hand, were not common.

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[18] Few women were employed in nonoffice jobs.

Warehousing and Storage

Plant workers in warehousing and storage establishments in southeastern cities of at least 100,000 population averaged 57 cents an hour on a straight-time basis in July 1945, 30 cents below the national level for the industry but only 3 cents less than plant workers earned in southwestern cities at that time. Miami, Fla., with an average of 78 cents for all plant occupations ranked highest among nine southeastern cities and Charlotte, N. C., the lowest (51 cents). In six southwestern cities, earnings ranged from 56 cents in San Antonio, Tex., to 72 cents in Oklahoma City and Tulsa, Okla.

In each group of cities, 90 percent of the plant workers received less than 75 cents an hour in contrast to 22 percent for the country as a whole. The relatively few higher-paid southern workers included maintenance mechanics, checkers, and working foremen. Handlers and stackers, who accounted for a third of all plant workers in southeastern cities, averaged 53 cents an hour. In the next two numerically important occupations studied by the Bureau, truck drivers' helpers received the same earnings as handlers and stackers, whereas truck drivers earned 60 cents. For comparable work, wage earners in southwestern cities had only a 1- or 2-cent advantage in hourly pay over the southeastern workers.

Undoubtedly, unionization has had a more direct effect on wage levels in the southwestern cities, where 44 percent of the plant workers as compared to 26 percent in the Southeast were employed in union establishments in July 1945. Earnings of union workers in the Southwest either matched nonunion pay levels or bettered them by 1 to 11 cents per hour in 11 key occupations that could be compared. In southeastern cities, however, nonunion workers received higher hourly rates (4 or 7 cents more per hour) in 3 out of 7 comparable jobs.

Because of the heavy nature of work involved in moving and storing goods, men dominate the plant labor force. Their typical workweek exceeded 40 hours; in southeastern cities 35 out of 67 plants had a workweek of 44 to 48 hours, but in southwestern cities 25 out of 53 establishments surveyed scheduled men to work over 52 hours a week.

Paid vacations have become a fairly widespread practice in recent years and in both the southeastern and southwestern cities two-fifths of the establishments had such a policy, offering usually 1 week with pay after 1 year of service. Insurance or pension plans for plant workers were less prevalent in the Southeast, where only 5 plants had such provisions; but 21 out of 53 southwestern establishments had some type of plan, most frequently life insurance. Over two-fifths of the southeastern plants as compared to about one-third of those located in southwestern cities gave their workers a nonproduction bonus, usually at Christmas.

Retail Stores

In April 1945, large southern cities of 100,000 or more population employed some 52,000 (or over 10 percent) of the country's department and men's and women's clothing store employees, and maintained more than 15 percent of all such establishments (with 8 or more workers) in communities of comparable size. The Southeast and Southwest regions combined, including all cities regardless of size, accounted for almost twice this proportion (20 percent) of the limited-price variety store workers, who were employed in almost 30 percent of the country's 5- and 10-cent stores over the minimum size, many of which are affiliated with national chains.

Although none of the characteristic features of these retail establishments is peculiar to the South, interesting variations in wage structure were disclosed within that broad economic area. Unionization, while not extensive in any of these industries throughout the country, was particularly rare in the South. Here, as elsewhere in the Nation, department, clothing, and limited-price variety store workers were predominately women, who, for the most part, were employed in selling jobs that require little or no training or experience. Owing to seasonal factors, part-time work assumes an importance equaled in few other industries.

According to the Bureau's studies, department and clothing store workers (excluding office and executive personnel) in large southern cities earned, on the average, 57 and 61 cents an hour, respectively, in the Southeast and 65 and 70 cents in the Southwest in April 1945. Limited-price variety store employees (in all-sized cities) averaged 33 and 34 cents in the respective regions, with over one-third of the workers receiving less than 30 cents an hour and only 1 percent earning 65 cents or more.

Percentage distribution of department and clothing store workers' earnings disclosed a wide rate range—less than 25 cents an hour to over $2—with proportionately more clothing than department store workers at the high earnings levels. Moreover, 18 to 39 percent of the men in both branches as against 5 to 9 percent of the women earned at least $1 an hour; in department and clothing stores, respectively, men earned over one-third and about one-half more per hour than women.

In general, occupational earnings varied between the two regions in the same manner as over-all earnings did; however, in several important jobs, workers in the Southeast earned more. Notable among these were furniture salesmen who, as the highest-paid men in department stores, averaged $1.65 an hour in the Southeast and $1.34 in the Southwest. Similarly, men selling men's suits, coats, and pants in clothing stores, the most important men's job numerically, as well as the highest-paying, averaged $1.53 in the Southeast and 9 percent less in the Southwest. Women in the two types of stores were most numerous in departments selling women's dresses and coats, averaging from 84 to 90 cents an hour in the South as a whole; a few relatively unimportant selling departments among those studied paid more. Part-time saleswomen in dress and coat departments averaged substantially less than the full-time clerks; in one instance—clothing stores in the Southeast—they earned just half as much. Nationally, the earnings difference in part-time and full-time work was roughly 20 percent in favor of the latter.

Variety store salesgirls, most numerous and perhaps least skilled of all retail clerks studied, averaged 34 and 35 cents for full-time work in the Southeast and Southwest, respectively. Part-time workers, accounting for over half of the total in this job, earned 5 to 6 cents an hour less. Section supervisors averaged the most.

Non-selling workers in the three types of stores were most numerous, in janitorial, stockwork, and cashiering jobs and earned somewhat less than other store workers, including office personnel.

Among 9 large southern cities (100,000 or more population), the level of earnings for department store employees (excluding office and executive personnel) in the highest-wage city was about 20 cents greater than in the lowest-wage city; the range in wage level, by city, in clothing stores was 26 cents and in limited price variety stores 7 cents. Dallas and Houston were, with one exception, the highest paying. The former paid workers in department stores an hourly average of 70 cents; in clothing stores, 68 cents; and in limited-price variety stores, 42 cents. In like order, Houston retail store workers received 65 (Birmingham paid 66), 75, and 42 cents an hour. Tampa and Knoxville were lowest. Among the smaller cities where 5- and 10-cent stores were covered, Miami paid the most—44 cents—and Nashville the least—33 cents an hour

The Bureau's study further revealed that among limited-price variety stores, earnings were higher in the larger communities than in the medium- or small-sized cities, and in the three groups of stores the size of the establishment (as measured by employment) showed a similar relationship to wage levels. Extreme variations in earnings by method of wage payment were apparent in many selling occupations in department and clothing stores, but were less evident in limited-price variety stores where less than 5 percent of the store workers were paid on an incentive basis as compared to over a third in the other two branches. Nationally, incentive workers' earnings in the latter establishments were estimated to be about 35 to 40 percent higher than those of time workers.

The lowest rates paid to qualified workers in each establishment varied little from minimum entrance rates, and in department and clothing stores were concentrated for the most part between 30 and 45 cents an hour; most of the variety stores with established minima had rates falling between 25 and 40 cents. Forty-eight hours per week was the most frequently reported work schedule; however, longer or shorter hours were fairly common. A substantial number of variety stores scheduled men to work 54 hours and over, particularly in the Southwest.

Nonproduction bonuses (generally paid at Christmas) were paid to department store workers in a majority of the establishments studied. The practice was equally widespread among clothing and limited-price variety stores but the bonus tended to be somewhat smaller.

Most of the southern stores provided vacations with pay after 1 year of service; 1 week was most common, with office workers occasionally receiving 2 weeks. Paid sick leave was uncommon among department and clothing stores, but was frequently reported by limited-price variety stores. Two weeks was the most common period allowed in the Southwest variety stores, and 3 weeks in the Southeast.

Of all the establishments, department stores participated most extensively in plans for insurance or pensions for their employees; life insurance was the plan most widely adopted in these as well as in the clothing and variety stores providing such benefits.

Coal Mining

The Southern States produce all types of coal except anthracite and subbituminous. Semianthracite is mined in Virginia and Arkansas; low-volatile bituminous, or semibituminous or smokeless coal, in Virginia, Alabama, Arkansas, and Oklahoma; and high-volatile bituminous, in nearly all of the southern coal-producing States. Lignite, the lowest grade of coal, is produced mainly outside of the Southern States, although the Texas seams are mainly lignite.

The wide distribution of coal resources in the South, combined with the wide range of types of coal, gives to the Southern States a favorable basis for industrial development. The proximity of coking coal in Alabama to abundant iron ores and fluxing materials gives to the Birmingham area an advantage enjoyed by no other region in the country. The down-grade haul of coal to tidewater and cheap coastal transportation facilities vastly broaden the marketing area of southern Appalachian coals. There are exceptional possibilities of by-product industries from the volatile coals of the South.

United States Bureau of Mines figures indicate that the Southern States (excluding West Virginia and Maryland) produced about 18 percent of all coal, including anthracite, in 1944, the proportion rising from about 17 percent in 1939. The States producing more than 1 percent were Kentucky (10.4 percent), Virginia (2.9), Alabama (2.7), and Tennessee (1.1). Output in Texas, which produces lignite, fell from 826,000 tons in 1939 to 109,000 tons in 1944.

The output per man per day, as computed by the United States Bureau of Mines for bituminous-coal for the country as a whole, averaged 5.67 tons in 1944. The average for Kentucky was 5.08 tons; for Oklahoma, 4.92; for Virginia, 4.08; for Tennessee, 4.02; for Arkansas, 3.53; and for Alabama, 3.03. The average for the country as a whole is raised somewhat by the relatively high averages for strip mines and for lignite. There is relatively little strip mining in the South, and southern lignite is limited mainly to Texas. Recent advances in mechanization have placed the South on a basis not radically different from other mining areas. In Kentucky, for example, only 3.2 percent of underground production was mined by hand in 1944, in Virginia 2.6 percent, in Alabama 2.1 percent, and in Tennessee 6.6 percent, as compared with 5 percent in the country as a whole.

Employment in bituminous-coal mining in the South (as defined in this connection) averaged more than 100,000 production workers in 1944. Approximately half of these were in Kentucky; Alabama employed about 22,000; Virginia, about 16,000; Tennessee, about 7,000; and Arkansas and Oklahoma each, between 2,000 and 3,000.

The wages of bituminous-coal miners, as of other groups, have traditionally been lower in the South than in the country as a whole. In 1936, the national average of hourly earnings was $0.733, in contrast to $0.543 in Alabama. The following tabulation shows the averages of leading Southern States in descending order, together with those of West Virginia, Pennsylvania, Utah (which had the highest average), and the national average:

	Average hourly earnings, 1936		*Average hourly earnings, 1936*
Kentucky	$0.719	Alabama	$0.543
Virginia	.679	West Virginia	.801
Oklahoma	.659	Pennsylvania	.799
Arkansas	.635	Utah	.955
Tennessee	.631	United States	.733

Average hourly earnings, even when there is little premium pay for overtime, reflect imperfectly the regional differences in basic occupational rates. The occupational differentials were narrowed from time to time and notably by the wage agreement of 1941. Under that agreement, certain basic day occupations, such as drivers, brakemen, trackmen, and timbermen, received $1.00 per hour in both the Northern and the Southern Appalachian districts of the UMWA and in several other districts. In a few of the western districts the rate was higher; in southern districts outside of the Appalachian territories, as defined for collective bargaining, the rate was lower: in Tennessee, $0.945; in western Kentucky, Arkansas, and Oklahoma, $0.857; in Alabama, $0.821. Rates below $1.00 were also paid in Iowa and Missouri. The removal of the wage differentials between the Northern and Southern Appalachian districts in 1941 applied only to day rates; tonnage differentials remained.

Differences in straight-time hourly earnings of certain occupational groups in the fall of 1945 are shown in table 36. The figures are available only for producing districts as defined by the Bituminous Coal Act of 1937, but they indicate approximately the averages in the South as compared with those of western Pennsylvania, a high-wage Western district (Utah), and the country as a whole.

The averages as given in the table were raised by the increase of 18.5 cents in basic rates made by the 1946 agreement. On a percentage basis, the relatively low southern averages were raised more than the higher averages in other areas.

The averages in the accompanying table include unorganized as well as union mines. The extent of unionization declined in the twenties, especially in the South, but under the National Industrial Recovery Act and the National Labor Relations Act, most of the workers were organized and the unions (primarily the UMWA) obtained collective agreements for substantially all of the workers except in some of the smaller mines. Late in 1941 the union shop was extended to "captive" mines—mines operated by companies, such as steel corporations, which use most of the coal instead of marketing it. Operators of "commercial" mines had earlier accepted the union shop.

TABLE 36.—*Straight-Time Hourly Earnings in Selected Occupations in Bituminous-Coal Mining, Fall 1945*

[Source: U. S. Bureau of Labor Statistics, Wage Structure Series 2, No. 12, Bituminous Coal Mines, 1945, table 6]

Occupation	United States	District number (under Bituminous Coal Act) 2 (Western Pennsylvania)	8 (Eastern Kentucky, southeastern West Virginia, and adjacent areas)[1]	9 (Western Kentucky)	13 (Alabama, Georgia, and southeastern Tennessee)	14 (Arkansas and part of Oklahoma)	20 (Utah)
Underground mines							
Car dumpers, outside	$0.99	$1.03	$1.01	$0.83	$0.82	$0.91	$1.13
Electricians, maintenance:							
Inside	1.21	1.28	1.22	1.04	1.06	----------	----------
Outside	1.17	1.27	1.17	1.01	1.02	----------	----------
Loaders, hand, inside, incentive	1.06	1.04	1.08	.84	1.07	1.00	1.30
Miners, pick, inside, incentive	1.03	1.14	.91	.99	.88	----------	----------
Slate pickers, outside	.95	.98	.96	.83	.80	.91	1.02
Trackmen, inside	1.00	1.00	1.00	.87	.87	.91	----------
Strip mines							
Power-shovel operators	1.64	1.82	----------	1.51	1.38	----------	----------
Slate pickers	.97	.97	----------	.88	----------	----------	----------
Truck and tractor operators	1.03	1.05	----------	.99	.84	----------	----------

[1] District 8 includes southeastern West Virginia but wage rates were substantially uniform throughout the district and for day workers were for the most part the same as in Districts 1 to 7 (the other Appalachian areas). The average earnings, especially of incentive workers, vary with local conditions. The tonnage rates of loaders, for example, are higher in district 2 than in district 8, but straight-time hourly earnings are somewhat higher in district 8 because of conditions which make possible the loading of more coal per hour.

Railroad Transportation

More than 300,000 employees were engaged in the provision of railroad transportation in the 13 southern States in September 1945.[19]

Railway employees are divided into two broad groups, operating and nonoperating. The so-called operating employees include those who actually man and run the trains, such as conductors, engineers, and brakemen. The nonoperating employees embrace all other workers in the railway industry, such as sectionmen, clerks, shopmen, signalmen, and telegraphers. About three out of every four railway workers fall in this nonoperating group.

Prior to 1943 there were slight differentials between the basic daily wage rates paid to operating employees in the East and in the South.[20] The rates in the South were 4 to 7 cents less than those paid in the East; the West usually paid about the same as the South. Through agreements signed during 1943 and 1944 between the carriers and the railway labor organizations, the basic daily wage rates for operating employees were almost completely standardized throughout the United States. As a consequence, the rates in the South today are the same as they are in the East.

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[19] Monthly Labor Review, May 1946 (p. 754).

[20] As defined by the Interstate Commerce Commission, the Southern District is the area south of the Potomac and Ohio Rivers and east of the Mississippi River. The Eastern District is set off from the Western District by a line drawn from Chicago to St. Louis and then down the Mississippi River to the point where it is joined by the Ohio River.

An illustration of the change which took place during the 1943–44 period may be found in the case of an engineer handling an engine with 200,000 to 250,000 pounds weight on drivers in passenger service. As of April 1, 1943, this engineer received a basic daily wage rate of $8.49 in the East and $8.42 in the South and West. By December 1, 1944, this 7-cent differential had been eliminated and wage rates had been adjusted upward so that the same engineer received the same basic daily wage rate ($8.89) anywhere in the United States. Since that time all operating employees have received an increase of $1.48 in their basic daily wage rates under agreements signed on May 25, 1946. Thus, today the engineer used in the above example would be receiving $10.37 per basic day.

As regards the nonoperating employees, there is far less standardization of wage rates throughout the United States. This group of workers are paid on the basis of hourly rates, while the operating employees are paid on a dual basis of pay (i. e., they earn their basic daily wage whenever they work a certain number of hours or run a certain number of miles, whichever occurs first).

For the most part, there is a tendency for the wage rates paid to the skilled occupations within the non-operating group to be closer to uniformity than is the case in the less-skilled categories. As a consequence, between the South and the East there are greater differentials in wage rates paid the less-skilled workers. For example, the predominant rate in the South and West paid to extra gangmen is 75½ cents per hour, whereas in the East the predominant rate is 83½ cents per hour. The term "predominant rate" means the rate paid to the largest percentage of workers.

Section men also fall in the less-skilled class of nonoperating employees. Their predominant rate in the South and West is 75½ cents per hour, as compared with 85½ cents in the East.

By contrast there is very little variation in the hourly rates paid to shop mechanics, who are members of highly skilled crafts. Shop mechanics include blacksmiths, boilermakers, electricians, machinists, sheetmetal workers, and carmen. The predominant rate for shop mechanics in the South is $1.22½ cents per hour as compared with $1.23½ in the East and the West. Thus, in this skilled group there is only a 1-cent differential but in the less-skilled categories, the differential between the South or West and the East is 8 to 10 cents per hour.

VII.—The Fair Labor Standards Act and the South[1]

The Fair Labor Standards Act of 1938 has as its objective the elimination "in industries engaged in commerce or in the production of goods for commerce, of labor conditions detrimental to the maintenance of the minimum standard of living necessary for health, efficiency, and general well-being of workers . . . without substantially curtailing employment or earning power." Specifically, the act seeks to protect workers engaged in interstate commerce by fixing a minimum level of wages, and establishing a maximum workweek beyond which overtime compensation is required. In addition, provision is made for the elimination of oppressive child-labor conditions.

With adoption of this legislation the Nation endorsed the general principle that there are minimum labor standards to which workers are entitled as a matter of social policy. Today the bitter controversy which preceded the passage of the act is history and there is widespread agreement on the desirability of minimum-wage and maximum-hours requirements. Currently, attention centers on proposals to liberalize the minimum wage provisions of the act and to extend its coverage. That a minimum-wage for workers should be guaranteed by law is no longer seriously questioned.

Because wages in the South at the time of the passage of the act were relatively low, as compared with wages in other geographical regions, southern workers as a group benefited particularly from the wage provisions of the act. At the same time, the economic impact of the act, at the outset, was felt particularly by southern industries.

Information is not available to appraise in precise terms the effect of the act upon workers and industry in the South. Long before the time specified by the act for the implementation of the 40-cent minimum wage, other factors were exercising an upward pull on the general wage level. The effect of defense and war production upon employment and wage levels after the spring of 1941 substantially minimized the economic significance of the legally established minimum. For most covered industries in the South, as elsewhere, minimum rates substantially above the level required by law were voluntarily established. On the basis of available information, however, an effort is made to appraise the significance of the act for the South, following a review of its major provisions.

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[1] Prepared by Mary N. Hilton of the Bureau's Labor Economics Staff.

The Provisions of the Fair Labor Standards Act

The Fair Labor Standards Act, as approved on June 25, 1938, established minimum-wage and maximum-hours requirements applicable to all employees engaged in interstate commerce or in the production of goods for interstate commerce, with certain specific exemptions. To implement these provisions, the act provided for the creation within the Department of Labor of a Wage and Hour Division which is under the direction of an Administrator appointed by the President, by and with the consent of the Senate.

The act established a legal minimum wage of 40 cents an hour after October 23, 1945, and set up a basic schedule for the gradual achievement of this goal. This schedule required payment of 25 cents an hour from October 24, 1938, to October 23, 1939, and 30 cents an hour from October 24, 1939, to October 23, 1945.

The basic schedule for the implementation of the 40-cent minimum over a period of 7 years represented, in effect, the minimum statutory requirement. With a view to achieving the 40-cent objective as rapidly as was economically feasible, provision was made for the appointment of tripartite industry committees who could recommend for individual industries a minimum higher than that specified in the schedule, but not in excess of 40 cents.[2] The effect of this provision was to make the institution in any industry of a minimum rate in excess of 30 cents during the period from October 1939 to October 1945 contingent upon the recommendation of an industry committee representing labor, industry, and the public. Actually, through the action of industry committees the 40-cent minimum wage for all covered employees in the continental United States was achieved late in July 1944, over a year in advance of the date when it would have become effective automatically under the act.

The hours provisions of the act establish a maximum workweek beyond which payment at time and a half the regular rate is required. The maximum workweek schedule set up by the act provided for a 44-hour workweek from October 24, 1938, to October 23, 1939, a 42-hour workweek from October 24, 1939, to October 23, 1940, and a 40-hour workweek thereafter.

The child labor provisions of the act make it illegal to ship or deliver for shipment in commerce any goods produced in an establishment employing "oppressive child labor." Oppressive child labor is defined as the employment of any person under the age of 16, or between the ages of 16 and 18 in any occupation found and by order declared to be particularly hazardous for the employment of children between such ages or detrimental to their health or well-being. The administration of the child labor provisions of the act rests with the chief of the U. S. Children's Bureau.

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[2] For a discussion of the working of the industry committees see Minimum Wage Fixing Under the United States Fair Labor Standards Act, by Harry Weiss, *in* International Labour Review, January 1945.

The Importance of the Wage and Hour Provisions to Southern Workers

The economic situation has undergone marked changes since the Fair Labor Standards Act was enacted over 8 years ago. The wage provisions of the act do not have the same economic significance today that they had in 1938. During the war years the hours provisions took on a new meaning. Consequently, the act needs to be viewed in historical perspective.

At the time the act was passed a substantial proportion of the Nation's labor force was unemployed and the earnings of many who were employed stood at low levels. Viewed against this background the broad social objectives of the Fair Labor Standards Act at the time of its passage are clear. Its most important purpose was to assure workers engaged in interstate commerce a reasonable minimum level of wages and to protect workers from excessively long hours of labor. At the same time, it sought through the minimum wage provisions to increase purchasing power and through the overtime pay requirement to create additional employment opportunities.

The minimum wage provisions had immediate importance in terms of higher wage rates for many workers. In view of the fact that a substantially greater proportion of southern workers were earning less than the minimum wage than were workers in any other part of the Nation, the act had particular significance for southern workers in terms of the immediate wage increases which it required.

The only available estimate regarding the total number of workers whose wages were immediately affected by the act relates to April 1939 and the probable impact of the 30-cent minimum.[3] This information indicates that a total of 411,200 workers, or 18 percent of all southern workers covered by the act, were receiving less than 30 cents in the spring of 1939 (6 months prior to the effective date for the establishment of the 30-cent statutory minimum) as compared with approximately 3 percent for the remainder of the country. The 13 Southern States accounted for over 50 percent of all covered workers receiving less than 30 cents per hour as of that date.

Data affording some indication of the immediate significance of the 25- and 30-cent minima to unskilled workers in the South and

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[3] Bureau of Labor Statistics: Estimated Number of Workers in April 1939, Subject to Provisions of the Fair Labor Standards Act Effective October 24, 1939. (Mimeographed report.) Washington, 1939.

TABLE 37.—*Distribution of Workers Receiving Less Than 30 Cents an Hour, All Industries, April 1939*

[Source: Department of Labor, Report of the Administrator of the Wage and Hour Division for 1939]

Region or State	Estimated number of workers subject to FLSA	Workers receiving less than 30 cents an hour	
		Estimated number	Percent of covered employees
Total, all States	[1] 12,652,700	[2] 690,000	5.5
All States except Southern States	10,367,300	278,800	2.7
Total, Southern States	2,285,400	411,200	18.0
Alabama	173,300	38,200	22.0
Arkansas	66,600	17,100	25.7
Florida	102,700	23,800	23.2
Georgia	215,000	57,000	26.5
Kentucky	181,500	13,500	7.4
Louisiana	136,500	22,600	16.6
Mississippi	71,400	26,000	36.4
North Carolina	322,200	60,600	18.8
Oklahoma	104,600	5,700	5.4
South Carolina	156,200	41,400	26.5
Tennessee	212,000	43,200	20.4
Texas	330,000	35,500	10.8
Virginia	213,400	26,600	12.5

[1] The United States total includes 41,000 covered employees of mail-order houses. These employees are not included in the State figures. The United States total also includes a roughly estimated total of 11,000 covered employees in the Territories of Alaska and Hawaii.

[2] Does not include homeworkers, longshoremen, and employees of mail-order houses.

Southwest[4] are also available. This information, which relates to average hourly entrance rates for adult male common laborers in July 1938 and July 1939, shows that in July 1938 the average hourly entrance rate for 13 percent of the adult male common laborers in the South and Southwest was under 25 cents as compared to less than a tenth of 1 percent for the North and West.

By July 1939, following the establishment of the 25-cent minimum, the percentage below 25 cents for the South and Southwest amounted to less than a half of 1 percent while 34.6 percent were receiving less than 30 cents an hour.[5]

The information summarized above provides an indication of the importance, in terms of the number of workers affected, of the 25-cent minimum wage of 1938 and the 30-cent minimum of 1939 to wage earners in the South. Comparable information is not available regarding the number of workers who received direct pay increases as a result of wage orders establishing minimum wages above 30 cents an hour. The 40-cent minimum was reached at varying times in different industries and in some instances involved a succession of intermediate steps. In the case of cotton textiles, for example, three steps were required. For the Nation as a whole, an estimated 1,600,000 workers received direct pay increases as a result of 40-cent wage orders, while the total number of all wage increases resulting directly from the issuance of wage orders is estimated at nearly 2,700,000.[6] In addition, many other workers who were earning more than the established minimum received indirect pay increases as a result of the wage orders.

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[4] The South and Southwest region includes the following States: Alabama, Arizona, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, New Mexico, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, and Virginia.

[5] Entrance Rates of Common Laborers in July 1939, in Monthly Labor Review, December 1939.

Today the 40-cent legal minimum applies to all workers covered by the minimum wage provisions of the act, except, in some industries, to workers classified as learners, apprentices, or handicapped. Indeed, as has been pointed out, this goal was achieved more than a year in advance of the October 24, 1945, deadline set by the act. In marked contrast with the early years of the act, the legal minimum is presently of relatively minor significance as a positive factor in the determination of wage rates. For most industries and areas, prevailing minimum rates are well above the 40-cent hourly rate required by law.

In this connection if is of interest to consider the experience of the National War Labor Board, the agency which administered the wage stabilization program during the war years. One of the few grounds on which the Board could approve or order wage increases was the elimination of substandards of living. The Board at the outset approached the question of the rate that could be approved on the substandard criterion on a case by case basis. As experience accumulated, however, the Board found it desirable to establish a definite substandard rate up to which increases could be made without Board approval. The details of the development of this policy will not be traced here. The significant fact to be noted is that during the period from 1943 through 1945 the Board gradually raised its substandard minimum from 40 cents per hour to 55 cents per hour. Subsequently, the National Wage Stabilization Board [7] early in 1946 increased the substandard minimum to 65 cents.

The substandard minima established by the War Labor Board must be carefully distinguished from the minimum wage provisions of the Fair Labor Standards Act. The payment of the 40-cent minimum set forth in the act is now compulsory for the employees covered; the substandard minima established by the War Labor Board were permissive. Employers could raise wages up to the substandard level but were not required to do so. In dispute cases involving substandards of living, the Board proceeded largely on a case-by-case basis in determining the appropriate minimum rate.

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[6] U. S. Department of Labor, Wage and Hour and Public Contracts Divisions, Annual Report for the Fiscal Year Ended June 30, 1944.

[7] Successor agency to the National War Labor Board.

The practical result of the War Labor Board's substandard policy was a widespread upward movement in prevailing minimum rates in industries and areas where existing rates were below the substandard minimum established by the Board. In the Board's southern region,[8] in particular, the substandard criteria provided an important basis for wage increases. In many plants the common labor rate was raised from the neighborhood of 40 cents an hour to 55 cents or more under the stabilization program.

The history of the substandard policy of the War Labor Board contributes to an understanding of the waning significance of the legal minimum during the period when stabilization of wages was the established Government policy. The increases permitted under the Board's substandard policy, together with post VJ-day wage-rate advances, have greatly reduced the importance of the legal minimum as an economic factor influencing the minimum wage level.

As indicated earlier, Congress in enacting the Fair Labor Standards Act sought to protect workers from wage rates so low that they would not provide a reasonable minimum standard of living. The 40-cent minimum which would provide an annual wage of $832 at full time—40 hours a week for 52 weeks—was considered the best approximation to this goal that was practicable in the light of economic conditions in 1938. Even if this amount were considered adequate to meet the minimum cost of living at prices which existed at that time, it is clear that the statutory minimum does not at the present time serve to protect workers from substandards of living. The rise in the cost of living alone as measured by the Bureau's consumers' price index would require a minimum of approximately 60 cents as of November 1946 as the equivalent of the 1938 objective.

As early as 1944 the Administrator of the Wage and Hour and Public Contracts Divisions of the United States Department of Labor recommended "that the Congress consider raising the limit of the wage which the industry committee may recommend to some higher figure than 40 cents."[9] When Congress in 1945 had under consideration a bill to amend the Fair Labor Standards Act to permit an immediate upward revision of the statutory minimum to 65 cents, with an ultimate adjustment to 75 cents, the Department of Labor favored the adoption of these provisions.

Economic Effect of the Wage Provisions on Southern Industries

In the foregoing section attention was focused upon the importance of the Fair Labor Standards Act to southern workers in terms of the number who benefited as a result of the establishment of a legal minimum wage. A question of equal importance concerns the economic consequences of the wage provisions of the act to southern industries.

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[8] The region included the following States: Alabama, Florida, Georgia, North Carolina, Mississippi, South Carolina, Tennessee, and Virginia.

[9] U. S. Department of Labor, Wage and Hour and Public Contracts Divisions, Annual Report for the Fiscal Year Ended June 30, 1944 (p. 9.).

The establishment of a legal minimum wage represents both a social and an economic judgment concerning the lowest wage for which labor should be hired. An economically sound minimum wage level benefits not only employees but industry and the economy as a whole. Experience reveals that a properly established minimum wage tends to increase the productive capacity of workers as a result of the improvements in physical well-being and morale that higher wages make possible. Moreover, the imposition of a legal minimum wage may serve to stimulate improvements in managerial efficiency and to give impetus to the introduction of technological improvements that serve to enhance labor output. Substantial increases in productivity thus may result from lifting the wages of the workers at the low end of the wage scale. From the standpoint of the economy as a whole, the establishment of a minimum wage level is also beneficial to the extent that aggregate purchasing power in the hands of employees is increased.

An indication of the economic impact of the Fair Labor Standards Act on wages and employment in the South for the period 1938–41—that is, for the period prior to the great changes in wage and employment levels caused by the demands of the defense program and of the war—is provided by studies which have been made of particular industries.

Early wage orders under the Fair Labor Standards Act established a minimum rate of 32½ cents an hour for a number of relatively low-wage industries, including seamless hosiery, cotton textiles, and men's cotton garments.[10] Table 38 is designed to throw light on what happened to the general level of wages and the wage structures of these industries in the South following the effective date of these orders.

The earnings data presented in table 38 for each of the two periods shown relate to identical plants in the seamless hosiery and men's cotton garment industries, and the data for the two periods in the cotton goods industry are generally comparable. For both cotton textiles and seamless hosiery, wage studies were made by the Bureau of Labor Statistics just prior to the effective date of the Fair Labor Standards Act, and again in the fall of 1940, approximately a year after the 32½-cent wage orders had been issued.[11] For men's cotton garments, detailed wage data are available for the spring of 1939, when

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[10] The term "men's cotton garment industries" as used in this discussion includes two industry groups: dress and sport shirts, collars and nightwear; and cotton pants, overalls, and work shirts.

[11] See Monthly Labor Review, June 1941, Earnings in Seamless-Hosiery Industry Under 32.5-Cent Minimum Wage; and December 1941, Hours and Earnings in Manufacture of Cotton Goods, September 1940 and April 1941.

Table 38.—*Percentage Distribution of Workers in Specified Industries in the South, by Average Hourly Earnings for Selected Periods*

[Source: U. S. Bureau of Labor Statistics]

Average hourly earnings	Seamless hosiery		Cotton goods		Men's cotton garments	
	September 1938	September 1940	August 1938	September 1940	Spring 1939	Spring 1941
Under 32.5 cents	57.4	3.9	44.2	1.3	73.6	2.9
32.5 and under 35.0 cents	8.4	35.7	14.5	47.4	6.0	48.8
35.0 and under 37.5 cents	7.4	14.3	10.3	12.6	5.2	8.5
37.5 and under 40.0 cents	5.5	10.6	7.1	9.1	5.2	20.9
40.0 and under 42.5 cents	4.9	8.5	5.7	6.9	2.5	4.8
42.5 and under 47.5 cents	6.0	11.1	8.4	9.7	3.5	6.6
47.5 and under 52.5 cents	3.5	6.5	5.5	6.6	1.8	2.9
52.5 and under 57.5 cents	2.0	3.4	2.6	3.6	.8	1.3
57.5 and under 62.5 cents	1.2	1.5	.9	1.6	.5	1.1
62.5 and under 67.5 cents	1.2	1.5	.4	.6	.3	.7
67.5 and under 72.5 cents	.7	.7	.2	.2	.3	.5
72.5 and under 77.5 cents	.6	.7	.1	.2	.1	.4
77.5 and under 82.5 cents	.4	.4	.1	.1	.1	.1
82.5 and under 87.5 cents	.1	.2	(1)	.1	(1)	.1
87.5 and under 92.5 cents	.3	.5	(1)	(1)	.1	.2
92.5 and under 100.0 cents	.2	.2	(1)	(1)	(1)	.1
100.0 cents and over	.2	.3	(1)	(1)	(1)	.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
Average hourly earnings	$0.331	$0.402	$0.348	$0.385	$0.307	$0.372

[1] Less than a tenth of 1 percent.

the 25-cent statutory rate was in effect, and for the spring of 1941, about 9 months after 32½-cent wage orders were made effective in these industries.[12]

It is clear that the establishment of the 32½-cent minimum exercised a decisive influence on the wage structures of these industries. Immediately prior to the effective date of the Fair Labor Standards Act considerably over half (57.4 percent) of the seamless hosiery workers in the South and over two-fifths (44.2 percent) of the cotton goods workers were earning less than 32½ cents an hour. In the spring of 1939 with the 25-cent statutory rate in effect, almost three-fourths (73.6 percent) of the men's cotton garment employees had averaged hourly earnings of less than 32½ cents.

The effect of the wage orders was to compress the lower segments of the old wage structures, with the result that customary differentials in the lower wage brackets often were not maintained. Thus, in the seamless-hosiery industry in September 1940 over a third of the workers were earning between 32½ and 35 cents an hour, while almost half of the cotton-goods workers were found in the same interval. Similarly, in the men's cotton garment industries about half of the workers were in this wage bracket in the spring of 1941. Small proportions of the workers in each industry were earning less than 32½ cents an hour. Most of these workers were employed at subminimum rates under the terms of learner or handicapped worker certificates.

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[12] See Monthly Labor Review, August 1942, Earnings in the Men's Cotton-Garment Industries, 1939 and 1941.

At the same time the wage adjustments which occurred were more extensive than can be accounted for solely by the raising of the lowest paid workers to 32½ cents. For example, in each of the industries the proportion of workers earning 40 cents an hour or more increased appreciably after the introduction of the 32½-cent minimum. In seamless hosiery, the proportion of workers earning 40 cents an hour or more increased from 21.3 percent in September 1938 to 35.5 percent after the introduction of the 32½-cent minimum.

By September 1940, average hourly earnings in the seamless hosiery industry had increased by 21 percent and in cotton goods by 11 percent over the levels prevailing just prior to the effective date of the act. By the spring of 1941, wages in the men's cotton-garment industries were 21 percent above the average for the spring of 1939 when the 25-cent minimum was in effect. The extent of this latter increase is partially accounted for by the fact that over the 2-year period the volume of public contracts, for which a 37½-cent or 40-cent minimum wage was fixed, increased substantially.

Some information is also available on the employment experience in these industries in the South, following the establishment of the 32½-cent minimum, and is summarized in table 39.

TABLE 39.—*Changes in Employment in Identical Plants in Specified Industries in the South for Selected Periods*

[Source: U. S. Bureau of Labor Statistics]

Industry	Number of workers		Changes in employment	
			Number	Percent
	1938	1940	1938 to 1940	
Seamless hosiery	13,431	12,689	−742	−5.52
	1939	1941	1939 to 1941	
Men's cotton garments	8,597	9,741	+1,144	+13.3
Dress and sport shirts, collars, and neckwear	2,901	2,890	−11	−.4
Cotton pants, overalls, and work shirts	5,696	6,851	+1,155	+20.3

Employment in 61 identical seamless-hosiery establishments in the South surveyed in both 1938 and 1940 fell from 13,431 to 12,689. Analysis of changes in employment by plant wage groups indicates that it was among the low-wage plants (those with plant average hourly earnings of less than 32½ cents prior to the effective date of the Fair Labor Standards Act) that worker displacement occurred. Such plants were apparently forced to make the most drastic changes in machinery and methods in adjusting to the legal minimum. On the other hand, those plants in the South with plant average hourly earnings of more than 32½ cents in 1938 employed 1.1 percent more workers in 1940.[13]

In the men's cotton garment industries, employment in 14 identical plants in the dress-shirt industry in the South remained practically unchanged between the spring of 1939 and the spring of 1941. In the work-clothing industry, employment in the South increased by 20 percent during the same period. In both of these industries, the stimulus of the defense program was being widely felt by the spring of 1941.

A study of separations of subminimum workers in the cotton-garment industry in the South between March 1939 and March 1941 indicates that for the 2-year period 29.7 percent of the workers earning less than 30 cents an hour in the spring of 1939 were separated as compared to 26.4 percent of the workers earning over 30 cents. The conclusion is that "the earnings of the workers exercised a constant though moderate influence on separations."[14]

In the cotton-goods industry no data on employment changes in identical establishments have been tabulated for this period.

In general, the available evidence regarding the impact of the 32½-cent minimum on wages and employment in the seamless-hosiery, the cotton-goods, and the men's cotton-garment industries in the South indicates that wage adjustments somewhat more extensive than those required to raise subminimum wages to the minimum were made without any substantial adverse effect on employment.

There were, of course, other types of adjustments concerning which little information is obtainable. Undoubtedly the establishment of minimum wage standards resulted, in many firms, in managerial effort to increase labor efficiency and in the introduction of technological improvements.

Effect of the Hours Provisions on Southern Industries

The hours provisions of the Fair Labor Standards Act, by requiring the payment of time and a half for covered employees for weekly hours in excess of 44 during the first year of the act, 42 during the second year, and 40 hours thereafter, were designed to discourage the existence of a longer workweek. The act reflected the generally accepted view that a maximum workweek of not more than 40 hours was socially desirable, and that its widespread adoption would tend to increase employment.

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[13] U. S. Department of Labor, Wage and Hour Division, Minimum Wages in the Seamless-Hosiery Industry (mimeographed, April 1941).

[14] Effects of a Minimum Wage in Cotton-Garment Industry 1939–41, in Monthly Labor Review, February 1942 (p. 327). Reprinted as Serial No. R. 1415.

Available information regarding the impact of the hours provisions upon southern industry is very limited. As of April 1939, 6 months prior to the effective date for the 42-hour workweek, it was estimated that of the 2,285,400 southern workers subject to the provisions of the Fair Labor Standards Act, 560,100 or 24.5 percent were working more than 42 hours per week. Of those persons who were working more than 42 hours, 420,400 workers or 75.1 percent were receiving less than time and a half for hours worked in excess of 42.

TABLE 40.—*Distribution of Workers Covered by FLSA Working More Than 42 Hours, and Workers Not Receiving Time and a Half for Hours Worked Over 42, April 1939*

[Source: First Annual Report of the Administrator of the Wage and Hour Division, 1939]

Region and State	Estimated number of workers subject to FLSA	Workers with workweek of over 42 hours		Workers receiving less than time and a half for hours worked over 42	
		Estimated number	Percent of total subject to FLSA	Estimated number	Percent of total working over 42 hours
Total, all States	[1] 12, 652, 700	[2] 2, 382, 500	18. 8	[3] 1, 663, 500	69. 8
All States except Southern States	10, 367, 300	1, 822, 400	17. 6	1, 243, 100	68. 2
Total, Southern States	2, 285, 400	560, 100	24. 5	420, 400	75. 1
Alabama	173, 300	45, 100	26. 0	38, 000	84. 3
Arkansas	66, 600	20, 500	30. 8	14, 500	70. 7
Florida	102, 700	33, 600	32. 7	23, 800	70. 8
Georgia	215, 000	55, 700	25. 9	46, 700	83. 8
Kentucky	181, 500	28, 700	15. 8	22, 200	77. 4
Louisiana	136, 500	31, 600	23. 2	22, 300	70. 6
Mississippi	71, 400	22, 700	31. 8	19, 100	84. 1
North Carolina	322, 200	71, 100	22. 1	56, 000	78. 8
Oklahoma	104, 600	20, 500	19. 6	11, 800	57. 6
South Carolina	156, 200	25, 700	16. 5	19, 600	76. 3
Tennessee	212, 000	59, 400	28. 0	49, 500	83. 3
Texas	330, 000	102, 100	30. 9	66, 500	65. 1
Virginia	213, 400	43, 400	20. 3	30, 400	70. 0

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[1] Includes 41,000 covered employees in mail-order houses, not included in State figures, and a roughly estimated total of 11,000 covered employees in the Territories of Alaska and Hawaii.

[2] Does not include homeworkers, longshoremen, or covered employees in the Territories.

[3] Does not include homeworkers, longshoremen, and covered employees in mail-order houses and in the Territories.

It will be noted from table 40 that the impact of the overtime requirement in relation to the 42-hour week was not markedly greater in the South than in all other States combined.

With the coming of the war and the urgent necessity for the production of war goods, the overtime provisions of the act ceased to serve their peacetime purpose of discouraging work beyond 40 hours a week and operated instead to enable war industries, in which production needs required the establishment of a longer scheduled workweek, to attract the needed manpower without making undue increases in basic rates. On this point the Wage and Hour Division has pointed out:

> The constructive part played by the Fair Labor Standards Act itself in the shift over to war production has not been generally understood. In the first place, as has been said, in the 4 years that the act has been in force, it led to the use of new workers, providing a larger number of skilled hands than would otherwise have been available when our war need for industrial expansion came upon us. Industry committees under the act, bringing together employers, labor, and the public with equal representation, charged with setting the highest minimum wage up to 40 cents that would not substantially decrease employment, have over the years helped to develop in leadership and mutual confidence many of those who now have emerged to guide the national industrial effort. But the greatest contribution has been made by the overtime provisions of the act in attracting labor in a democratic way, without compulsion, to the war industries where it was needed. [15]

ENFORCEMENT

Between October 1938 and June 1946, over $18,000,000 in restitution of wages illegally withheld under the Fair Labor Standards Act had been agreed to or ordered paid to over 570,000 workers in 28,070 establishments in the 13 Southern States. Over half of these cases involved failure to pay the appropriate minimum wage.

Column 1 of table 41 summarizes the combined results of inspections under the Fair Labor Standards Act from its enactment in 1938 and under the Public Contracts Act[16] during the period from October 1942, when the Wage and Hour and Public Contracts Divisions were consolidated to June 1946. Comparable information broken down for three separate time periods is shown in columns 2, 3, and 4. It should be noted that the information presented does not relate exclusively to the enforcement of the Fair Labor Standards Act although that act, in view of its much broader coverage, accounts for the bulk of the enforcement work.

During the period since the enactment of the Fair Labor Standards Act the percentage of inspected establishments found to be in violation of the minimum wage and/or overtime provisions was 45 percent for the Southern States as compared with 49 percent for all other States combined. For the most recent period for which information is available, July 1945 to June 1946, the comparable percentages were 51 for the Southern States and 47 for all other States combined. It is to be noted that violations of the minimum wage provisions are

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[15] U. S. Department of Labor, Wage and Hour and Public Contracts Division, Annual Report for the fiscal year ended June 30, 1942, (pp. 3–4).

[16] The Public Contracts Act applies to all contracts made by the Government for the manufacture or the furnishing of materials, etc., in the amount of more than $10,000. Certain prescribed labor standards must be maintained by the contractor, including a basic 8-hour day and 40-hour week (overtime is permitted provided time and a half the workers' regular rate is paid for daily or weekly overtime, whichever results in the greater compensation), and the maintenance of the prevailing minimum rate of wages in the locality where the work is to be performed where such a minimum wage determination has been issued by the Secretary of labor.

TABLE 41.—*Results of Inspection Under the Fair Labor Standards Act, October 1938–June 30, 1946, and Under the Public Contracts Act, October 1942–June 30, 1946* [1]

[Source: Wage and Hour and Public Contracts Divisions, Economics Branch]

Results of inspection	(1) October 1938–June 1946 [2]		(2) October 1938–June 1943		(3) July 1943–June 1945		(4) July 1945–June 1946	
	Southern States	Other States	Southern States	Other States	Southern States	Other States	Southern States	Other States
Estimated number of covered establishments, April 1946	114,350	442,680	114,350	442,680	114,350	442,680	114,350	442,680
Total number of establishments inspected	90,704	245,415	56,909	136,676	25,020	73,682	8,775	35,057
Inspected covered establishments: [3]								
Number	81,217	226,381	49,359	122,386	23,469	70,322	8,389	33,673
Percent of total covered			43	28	21	16	7	8
Total establishments in violation of one or more provisions	64,408	175,268	38,293	94,688	18,560	51,089	7,555	29,491
Establishments in violation of minimum wage and/or overtime provisions:								
Number	40,904	119,521	25,065	67,222	11,376	35,711	4,463	16,588
Percent of total inspected establishments	45	49	44	49	45	48	51	47
In violation of minimum wage provisions:								
Number	(4)	(4)	(4)	(4)	4,963	8,396	1,470	3,206
Percent of total inspected establishments	(4)	(4)	(4)	(4)	20	11	17	9
Establishments agreeing or ordered to pay restitution:								
Number	28,070	99,915	15,513	55,704	9,128	30,558	3,429	13,653
Percent of total in monetary violation	69	84	62	83	80	86	77	82
In violation of minimum wage provisions:								
Number	15,030	35,662	9,988	25,666	3,892	7,243	1,150	2,753
Percent of establishments paying restitution	54	36	64	46	43	24	34	20
Employees underpaid: Total number	570,444	2,099,715	348,554	1,073,189	172,282	804,656	49,608	221,870
Underpaid under minimum wage provisions:								
Number	(4)	(4)	(4)	(4)	58,379	125,137	11,401	26,633
Percent of total	(4)	(4)	(4)	(4)	34	16	23	12
Amount of restitution	$18,327,054	$80,530,706	$10,785,478	$40,266,710	$5,541,765	$28,902,981	$1,999,811	$11,361,015
Average per establishment agreeing or ordered to pay	$653	$806	$695	$723	$607	$946	$583	$832
Average per underpaid employee	$32	$38	$31	$38	$32	$36	$40	$51

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[1] The statistics include information on 35,000 establishments inspected under the Public Contracts Act since the consolidation of the Wage and Hour and Public Contracts Divisions. Most of these were inspected concurrently under both acts. The figures on violations and restitution represent the compliance record of these establishments under either or both acts.

[2] Since some of the establishments were inspected more than once, the 336,119 establishments inspected represent a somewhat smaller number of *separate* establishments.

[3] Excludes establishments out of business or with no covered employees. Some of the inspected establishments are not represented in the estimates of total coverage, since many have gone out of business since inspection.

[4] Not available.

more widespread in the Southern States than elsewhere. Thus, for the year ending July 1946, 17 percent of the establishments inspected in the Southern States were found to be in violation of the minimum wage provisions as compared with 9 percent for all other States combined.

Of the establishments found to be in violation of the minimum wage and/or hours provisions of the act during the period October 1938 to June 1946, 69 percent of the establishment in the Southern States agreed (or were ordered by the court in a few cases) to pay restitution compared with 84 percent in other States. Comparable figures for the year ending June 1946 show that 77 percent of the southern establishments and 82 percent of the establishments in other States found to be in monetary violation agreed or were ordered to pay restitution. Thus, over the whole period there has been a marked increase in the proportion of southern firms in monetary violation that have agreed to restitution. This is important, since many employees cannot risk or afford to bring suit against their employers for back wages in accordance with their rights under the Act.[17]

In considering the information presented in table 41 it should be emphasized that there is no reason to believe that the compliance conditions found upon inspection are representative of compliance conditions generally, or that the inspected establishments are equally representative of all establishments in a particular area. It should be noted, in particular, that many inspections are made on specific complaint and hence the proportion of violations to total inspections does not accurately reflect compliance conditions in an industry or area.

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[17] The Administrator of the Wage and Hour and Public Contracts Divisions recommended to Congress in his Annual Report for the fiscal year ended June 1946 that he be granted the power to bring suit on behalf of underpaid employees.

VIII.—Living Costs in Large Cities in the South[1]

From the outbreak of war in Europe until June 1946, retail prices of goods and services used by moderate-income families rose more rapidly in most large cities in the South[2] than the national average for large cities in the United States. Increased industrial activity and concentrations of military establishments in the South during the war gave rise to sharp advances in consumers' prices in southern cities, large and small. Living costs are still somewhat lower in southern cities, however, than costs in a number of northern cities, but the differences are not as great as they were before the war.

Long before the United States entered World War II, the South was beginning to assume a new role in the American economy. It became evident after the beginning of the war that the South was to become an important training center for the armies of the United States and to contribute mightily to the rearming of the Nation. As large military installations were established and production facilities were multiplied many times over, families of soldiers and war workers flocked into many southern cities. Population increases were tremendous. Between 1940 and 1944, 313,000 additional residents settled in the Hampton Roads area in Virginia, an increase of 91 percent over 1940; Mobile's population increased by 68 percent; and Charleston's, 57 percent. Communities that had but small excess capacity to accommodate additional population found their normal population increase of 10 years appearing overnight. Housing shortages immediately became severe, vacancies disappeared, and the pressures for higher rentals and prices of scarce goods accumulated week by week. New residents had to have housing and household goods, food, clothing, hospital care, dental services, and many other living essentials. As areas became more congested[3] the prices of living essentials rose sharply in both large and small southern cities.

Between August 1939 and June 1946, consumers' prices of goods and services used by moderate-income city families advanced more rapidly in 7 of the 10 largest cities in the South than the national average for the 34 large cities usually surveyed for this purpose by the Bureau of Labor Statistics. Savannah, Jacksonville, New Orleans, and Norfolk—heavy shipbuilding centers—and Birmingham—the steel city of the South—were among the cities showing the largest increases. In Savannah and Jacksonville, consumers' prices rose more between the outset of war in Europe and June 1946 than in any other city surveyed, 41.6 and 40.5 percent, respectively. Retail prices in Memphis and Atlanta also advanced more rapidly than the national average; prices in Mobile increased only slightly less than the 34-city average. In Houston and Richmond—two cities on the edge of the South—the rises in prices were among the smallest for all large cities in the United States between August 1939 and June 1946. Table 42 shows the rise in consumers' prices in 34 large cities ranked by percentage change between August 1939 and June 1946. There is a difference of 12 percentage points between the southern city having the largest rise during this period and the southern city having the smallest rise.

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[1] Prepared by Floyd C. Mann, of the Bureau's Prices and Cost of Living Branch.

[2] The South is defined here as including Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Kentucky, Tennessee, Arkansas, Louisiana, Oklahoma, and Texas.

[3] One measure of the impact of the war on southern cities is the number of southern cities designated as "congested areas" by the President's Committee for Congested Production Areas. Eight of the 15 production areas defined as congested were in the South. These were Charleston, S. C.; Mobile, Ala.; Brunswick, Ga.; Key West, Fla.; Hampton Roads, Va.; Knoxville, Tenn.; Pascagoula, Miss.; and Beaumont, Tex.

TABLE 42.—*Rise in Consumers' Prices in Large Cities, Ranked by Percentage Change Between August 1939 and June 1946*

City	Percent increase, August 1939 to June 1946	City	Percent increase, August 1939 to June 1946
Savannah, Ga	**41.6**	Philadelphia, Pa	35.5
Jacksonville, Fla	**40.5**	Los Angeles, Calif	35.4
Portland, Oreg	40.2	Milwaukee, Wis	35.3
San Francisco, Calif	38.8	Average of 34 large cities:	35.2
Birmingham, Ala	**38.6**	**Mobile, Ala**	**34.8**
Detroit, Mich	38.5	Buffalo, N. Y	34.6
New Orleans, La	**38.4**	Indianapolis, Ind	34.6
Norfolk, Va	**38.2**	St. Louis, Mo	33.7
Manchester, N. H	37.7	Denver, Colo	33.6
Scranton, Pa	37.7	Chicago, Ill	32.6
Memphis, Tenn	**37.5**	Portland, Maine	32.5
Baltimore, Md	37.4	Boston, Mass	31.7
New York, N. Y	37.2	Kansas City, Mo	31.2
Pittsburgh, Pa	36.9	**Richmond, Va**	**30.8**
Seattle, Wash	36.6	Minneapolis, Minn	29.8
Atlanta, Ga	**38.5**	**Houston, Tex**	**29.6**
Cincinnati, Ohio	35.9		
Cleveland, Ohio	35.7		
Washington, D. C	35.7		

Consumers' prices have risen less in Houston than in other large cities because of a smaller rise in the costs of food and clothing and a decline of almost 7 percent in fuel, electricity, and ice costs. Gas and electricity rates have dropped sharply in Houston since the fall of 1939. Meat prices have not risen as rapidly in Richmond as in most other large cities. This, combined with a less than average rise in residential rents, has resulted in Richmond being 1 of the 3 cities with smallest increases during the period.

Further evidence of the rapid rise of consumers' prices in the South as compared with other areas can be obtained from special surveys of prices in 13 small southern cities and war production centers conducted by the Bureau of Labor Statistics during the war period. Between mid-1940 and early 1945, the earliest and latest dates for which indexes are available for all 13 cities, prices advanced more rapidly than the national average in all but 1, and in 8, prices rose from 6 to 13 percentage points more than the average for the 34 large cities. Increases ranged from 25 percent in Stillwater, Okla., to 39 percent in Vicksburg, Miss., while during the same period—June 15, 1940, to March 15, 1945—consumers' prices rose only 26 percent on the average in 34 large cities throughout the United States. The second part of table 43 shows percentage changes in consumers' prices in selected southern cities for all items combined and each major group from mid-1940 to the spring of 1945.

Food prices, which represent approximately two-fifths of the moderate-income city families' budget, increased more rapidly in most southern cities than the national average for 34 large cities. Seven of the 10 largest cities had increases greater than the national average for the 7-year period August 1939 to June 1946; in 12 of the 13 selected southern cities and war production centers the increase in food prices between 1940 and 1945 was more than the average rise for all large cities.

Food prices in the South rose rapidly during the fall of 1941 and the early months of 1942 prior to the establishment of the General Maximum Price Regulation in May 1942. After that, further increases in the prices of uncontrolled items pushed the level of food prices to a wartime high in May 1940, before the President's "hold-the-line" order checked the advance. From that date through June 1946 food prices on the average remained stable. With the temporary removal of subsidies and price controls in mid-1946, food prices rose more in Atlanta and New Orleans between June 15 and July 15 than the national advance of 13.8 percent. For the other 8 large southern cities, the advance ranged from 9.3 percent in Mobile to 13.7 percent in Memphis.

Food shortages became progressively more severe in all large cities in the fall of 1944, and in the spring months of 1945 and 1946, but supplies in large southern cities were consistently smaller than in other regions. To some extent these shortages reflected the failure of distributors to alter their distribution of supplies in accordance with the shifts in population. From February 1943 through November 1945, the Bureau of Labor Statistics made surveys of food supplies in independent stores in 56 large cities. Throughout most of this period, food supplies were less adequate in the large cities in the Southeastern States than in any other region in the United States. In the spring of 1945, it was not uncommon to find 85 to 90 percent or more of the independent stores regularly visited without any meat.

The increase in clothing prices in southern cities, large and small, was less than the average rise for 34 large cities during the war. Increases ranged from 49 percent in Houston to 56 percent in New Orleans between August 1939 and June 1946, as compared with a national average of 57 percent. Between June 1940 and March 1945, clothing costs in Vicksburg and Goldsboro advanced almost as much as the national average (41 percent). In all other selected southern cities and war production centers, clothing prices rose less rapidly. About two-thirds of the rise in clothing prices in the South occurred before May 1943. However, continued shortages and the disappearance of lower price lines have been reflected in the steady advances in clothing costs since May 1943.

TABLE 43.—*Consumers' Price Changes in Large and Small Southern Cities and War Production Centers, August 1939 to June 1946 and June 1940 to March 1945*

City	All items	Food	Clothing	Rent	Fuel, electricity, and ice	Housefurnishings	Miscellaneous
	Percent change, August 15, 1939, to June 15, 1946						
Large southern cities:							
Savannah, Ga	+41.6	+63.9	+54.9	+11.3	+11.8	+71.8	+33.6
Jacksonville, Fla	+40.5	+57.4	+49.5	[1] +10.5	+22.6	+51.5	+40.0
Birmingham, Ala	+38.6	+62.8	+53.1	+10.0	+21.7	+50.0	+28.0
New Orleans, La	+38.4	+61.5	+56.2	+4.8	+7.7	+41.2	+24.7
Norfolk, Va	+38.2	+56.0	+52.0	+7.7	+23.8	+55.5	+33.6
Memphis, Tenn	+37.5	+71.2	+53.5	[1] +10.5	+12.1	+38.9	+20.2
Atlanta, Ga	+36.5	+52.4	+53.5	[1] +3.2	+19.8	+58.6	+37.5
Mobile, Ala	+34.8	+56.9	+52.6	[2] +9.8	+9.6	+43.4	+20.8
Richmond, Va	+30.8	+50.1	+50.9	[1] +1.5	+13.4	+52.8	+22.1
Houston, Tex	+29.6	+47.2	+48.9	[1] +2.2	−6.8	+46.9	+26.4
Average of 34 large cities	+35.2	+55.7	+56.7	+4.0	+13.3	+55.2	+27.4
	Percent change, June 15, 1940, to March 15, 1945						
Other selected southern cities and war production centers:							
Vicksburg, Miss	+38.8	+73.4	+40.4	+6.8	+12.7	+24.1	+30.3
Gadsden, Ala.[3]	+37.6	+65.4	+38.0	+10.2	+27.1	+35.7	+29.0
Corpus Christi, Tex.[3]	+36.5	+61.0	+34.9	+6.8	−3.8	+46.2	+35.8
Jonesboro, Ark	+36.3	+70.2	+33.3	+5.1	+8.0	+43.7	+30.1
Knoxville, Tenn.[4] [5]	+34.0	+62.8	----------	+3.5	+11.8	----------	----------
Chester, S. C	+33.5	+67.0	+35.7	+7.4	+8.6	+37.2	+15.8
Goldsboro, N. C	+32.8	+47.3	+40.9	+5.1	+5.6	+52.1	+34.7
Newport News, Va.[6]	+31.9	+56.6	+32.4	+4.9	+11.4	+30.2	+24.3
Little Rock, Ark.[4]	+28.3	+42.8	----------	+12.4	+15.5	----------	----------
Dallas, Tex.[4]	+27.9	+46.7	----------	+3.1	−1.5	----------	----------
Louisville, Ky.[4] [5]	+27.0	+37.2	----------	+8.4	+9.0	----------	----------
Charleston, S. C.[3]	+26.5	+39.4	+27.0	+12.7	+11.8	+16.4	+26.7
Stillwater, Okla	+25.0	+47.3	+37.0	−1.4	0	+37.8	+19.8
Average of 34 large cities	+26.2	+38.3	+41.3	+3.5	+11.6	+44.4	+22.9

[1] Change to March 1946.
[2] Change to May 1946.
[3] Changes from June 15, 1940, to April 15, 1945.
[4] Estimated, based on changes in food, rent, gas, and electricity costs in this city, and on changes in other costs in large cities in U. S.
[5] Changes from October 15, 1940, to March 15, 1945.
[6] Changes from September 15, 1940, to March 15, 1945.

Residential rents rose more sharply in most large and small cities in the South than in all large cities in the Nation. Rents in 34 large cities combined advanced 4 percent on the average between the outset of war in Europe and June 1945; increases were greater than this in 7 of the 10 large southern cities, and in the heavy industry cities of Birmingham, Jacksonville, Memphis, and Savannah they advanced more than 10 percent. In Atlanta, Houston, and Richmond the increases in rents were less than the national average. Ten of the thirteen selected southern cities and war production centers had increases in residential rents greater than the national average from mid-1940 to March 1945. In Charleston, one of the most important shipbuilding centers of the South, rents jumped 12.7 percent during the 5-year period 1940 to 1945.

At the outset of war in Europe, southern cities in comparison with many large northern cities had a relatively small reserve of housing to accommodate additional population. The tremendous influx of war workers and their families in a wartime boom of employment quickly exhausted the small excess capacity that was available and augmented the pressures on already heavily strained facilities. The characteristics of the population increase in southern cities during the war were also significantly different from what would be expected under normal conditions, and these differences tended to intensify the congestion problem. Heavy Negro migration into urban areas that lacked adequate housing accommodations in 1940 compounded the overcrowding. A marked increase in the proportion of women in the southern cities also caused a greater strain than would otherwise have been the case. The range of housing accommodations acceptable to women is narrower than it is for men.

Residential rents rose rapidly in the early part of the war until rent controls were imposed and rents were rolled back to their 1941 or 1942 maximum rent dates. Birmingham, Jacksonville, Mobile, and the Norfolk area—all shipbuilding centers—were among the first cities in the Nation for which controls were established. Prior to the date at which the areas were brought under control, rents rose sharply for all types of housing, but the greatest increases were for those renting to whites at less than $30 per month and for those occupied by nonwhite tenants.

One measure of the severity of the housing shortage in the South during the war was the amount of public and private construction of housing for war workers that was allowed by a Nation conserving building materials for only the most essential needs. Between July 1, 1940, and September 30, 1945, Mobile and Norfolk increased their total dwellings by about 45 and 37 percent, respectively. During the same period, the total number of family accommodations completed with priority assistance in Savannah and Jacksonville amounted to 19 and 13 percent of their prewar housing facilities. Relatively large numbers of dwellings were also added in Atlanta, Houston, and New Orleans.

Contract monthly rents for tenant-occupied, privately financed residential dwellings rose sharply in many southern cities between the Census of Housing in April 1940 and the National Housing Agency dwelling surveys in 1945. The following tabulation shows the percentage increase in average monthly contract rents between 1940 and 1945 for a selected list of southern cities.[4]

	Survey date	*Percent increase, April 1940 to survey date*
Pine Bluff, Ark	May 1945	136
Charleston, S. C	April 1946	131
Brownsville, Tex	August 1945	130
Mobile, Ala	May 1945	66
Little Rock, Ark	April 1946	46
Newport News, Va	December 1945	46
Portsmouth, Va	December 1945	38
Louisville, Ky	November 1945	33
Knoxville, Tenn	November 1945	28
Dallas, Tex	May 1945	24
Norfolk, Va	December 1945	22
New Orleans, La	June–July 1945	17
Houston, Tex	November 1945	16

These percentage changes are based on the average contract monthly rent for rental dwellings at the time of each survey. They reflect in addition to changes in rents shown in the consumers' price index, changes in the size and type of dwellings, and changes in the services and household equipment included in the contract rent.

Statistics on the number of evictions from tenant dwellings show that there was no significant difference between the South and North in 1944 and June 1946. In spite of this fact, however, the problem was more acute in the South because of the intensity of the congestion in southern cities.

There were great increases in the number of dwellings occupied by owners throughout the United States during the war but the largest change in the proportion of owner-occupied dwellings between April 1940 and early 1945 occurred in the Southeastern States where the increase was 34 percent compared with 28 percent for 122 cities throughout the United States.

Changes in fuel, electricity, and ice costs varied sharply among the large and small southern cities during the war. In general, gas and electricity rates declined throughout the country and the South was no exception. Gas and electricity costs, which have more than usual importance in the budgets of families living in Houston, Corpus Christi, and Dallas, declined enough to cause an average decrease for the fuel, electricity, and ice group in these cities since the beginning of the war. These costs, taken as a group, rose on the average for all other cities surveyed except for Stillwater, Okla., where they remained unchanged.

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[4] The rental data presented in this tabulation are not comparable with the figures on changes in rents given in table 43 of this section. The figures given in table 43 are based on the Bureau of Labor Statistics consumers' price index which reflects changes in rent charged for the same dwelling with the same services and facilities.

On the average, the cost of housefurnishings in the southern cities have risen less than the national average during the war, but the cost of miscellaneous goods and services in the South increased more than the average rise for 34 large cities combined.

City-to-City Comparisons

The over-all costs of equivalent goods, rents, and services important in the budgets of moderate-income families are slightly lower on the average in the large cities of the South than in other large cities throughout the country. The differences, however, are not great. Variations in costs among cities of the same size within the same region are greater than any differences found between regions. Relative differences in the cost of equivalent goods and services in the 33 large cities for which comparable figures are available for March 1945 are shown in table 44.

Living costs in the large cities in the South ranged from 88 to 95 percent as great as in Washington, D. C. (taken as the base or 100). Food prices were generally higher in southern cities than in Washington, but the cost of clothing, miscellaneous goods and services, and particularly housing was considerably lower in the southern cities than in Washington. Variations in requirements owing to climate were taken into account in making these comparisons. Thus, lower housing costs in southern cities are attributable in part to the smaller quantities of fuel needed for house heating and differences in requirements of heavy and light clothing also have some effect on comparative clothing costs.

Comparisons of March 1945 and prewar living costs show that the relative differences in the costs of equivalent goods, rents, and services in large cities in the South and in other large cities of the United States have been reduced.

The March 1945 comparisons show smaller percentage differences in costs among individual cities than indicated by estimates for the prewar years. Costs in nearly all of the large southern cities have moved up in relation to costs in Washington during this period. In the 8 southern cities for which data are available costs were 5 to 12 percent lower than in Washington; whereas in 1939 costs in these cities were from 10 to 15 percent below Washington. This tendency toward equalizing differences in costs is consistent with the greater rise in wartime prices in cities—particularly in the South—where costs were relatively low before the war.

The cost of identical food items in southern cities ranged from 98 percent of the Washington cost in Houston to 104 percent in Jacksonville and New Orleans. With the exception of Houston, where food costs were 2 percent lower, retail prices of identical foods were higher in all of the southern cities surveyed than in Washington in March

TABLE 44.—*Relative Differences in Cost of Equivalent Goods, Rents, and Services in Large Cities in the South and Other Selected Large Cities, March 1945*

[Costs in Washington, D. C.=100]

City	Total	Identical foods	Equivalent clothing	Housing: Average rental for 4- and 5-room dwellings with standard facilities; fuel, utilities, and housefurnishings [1]	Other
Washington, D. C	100	100	100	100	100
Large cities in the South:					
Houston, Tex	88	98	86	68	94
New Orleans, La	91	104	89	66	101
Savanah, Ga	92	106	90	73	96
Birmingham, Ala	92	102	89	75	96
Norfolk, Va	93	102	94	73	99
Memphis, Tenn	93	101	91	80	97
Jacksonville, Fla	93	104	90	76	96
Atlanta, Ga	93	101	92	78	95
Richmond, Va	95	100	93	87	94
Other large cities surveyed:					
Scranton, Pa	90	100	97	67	97
Kansas City, Mo	91	102	97	71	97
Buffalo, N. Y	92	102	95	71	97
Indianapolis, Ind	92	99	87	79	94
Baltimore, Md	93	103	97	76	96
Cincinnati, Ohio	93	100	99	74	99
Denver, Colo	93	102	93	76	98
Manchester, N. H	93	103	96	73	98
Los Angeles, Calif	94	102	90	71	107
Minneapolis, Minn	94	101	96	81	96
Philadelphia, Pa	94	103	96	77	98
Cleveland, Ohio	95	101	100	75	103
St. Louis, Mo	95	102	89	83	98
Boston, Mass	96	104	91	84	98
Detroit, Mich	97	102	96	79	105
Milwaukee, Wis	97	100	93	85	104
Pittsburgh, Pa	97	102	104	81	102
Portland, Maine	97	103	95	83	101
Portland, Oreg	97	103	90	75	111
Chicago, Ill	98	103	96	84	104
San Francisco, Calif	100	105	97	80	112
New York, N. Y	102	104	97	93	106
Seattle, Wash	103	109	96	83	117

[1] Includes rents for 4- and 5-room dwellings with standard facilities—kitchen with sink, hot and cold running water, private bath, electric lighting, and installed heating equipment—and relative costs of fuel, utilities, and housefurnishings. Dwellings reported as needing major repairs or located in neighborhoods containing specified hazards or nuisances were not included in the comparisons. This concept of comparable rental costs does not take account of differences in the supply of rental housing that would meet these standard specifications or in the availability of such housing for rent. Thus, in some cities there are many homes without indoor plumbing, and the proportion of homes with standard facilities is small. No account is taken of this fact.

[2] Medical care, personal care, recreation, transportation, automobiles, and durable goods. The effect of differences in prices of automobiles, mechanical refrigerators, and other durable equipment not available for pricing in March 1945 is estimated by assuming a continuation of prewar differentials in costs of these items.

1945. Costs of equivalent clothing, however, ranged from 6 to 14 percent lower in the cities in the South than in Washington.

Housing costs, which are based on average rents for dwellings with standard facilities and relative costs of fuel, utilities, and housefurnishings, were below the Washington level in all southern cities surveyed. Housing costs were lowest in New Orleans, where they were 34 percent below Washington in March 1945; they were 32 percent lower in Houston, and 23 percent lower in Savannah and Norfolk.

Other costs, which include medical care, personal care, recreation, transportation, automobiles, and durable goods, were below those in Washington in practically all southern cities.

IX.—State Labor Legislation in the South[1]

The purpose of this summary is to give briefly the principal provisions of labor laws now on the statute books of 13 Southern States.[2] No effort has been made to trace historically the development of labor legislation in the South. However, State action in this field did not become a vital issue in the region until about 1900, when interest in child labor legislation began to develop. The first child labor laws in the South were passed in 1903. Laws limiting the hours of labor of women in industry date, roughly, from 1909, and the beginnings of workmen's compensation legislation are found a few years later.

For many years, private organizations, groups of officials charged with administration of labor laws, and trade-unions have worked toward securing agreement on what constitutes adequate protection under labor laws. One of these groups is the International Association of Governmental Labor Officials—an organization of State administrators of labor law. A second is the International Association of Industrial Accident Boards and Commissions, which gives consideration to problems in the field of workmen's compensation. A third group, composed of labor law administrators and representatives of labor organizations appointed by the Governors of the States, called into annual conference by the United States Secretary of Labor for the past 12 years, has reached agreement on matters of policy and administration of labor laws.

The general thinking of these various groups is represented in a declaration of the Fifth National Conference on Labor Legislation. Every State, according to the recommendation of the conference, should have a department of labor under a full-time commissioner or commission to enforce its labor laws properly. The administration of all laws relating to labor should be centralized in such a department; its administrator should have authority to protect the safety and health of workers. The labor department should be provided with an adequate appropriation and with a trained and competent inspection staff selected on a merit basis to administer all its laws. The report further recommended that the labor laws of every State should make provision for at least the following: For all workers, compulsory workmen's compensation for accidents and occupational diseases; unemployment insurance; wage and hour standards; provision for prompt and regular wage payment and for the collection of unpaid wages by the labor department; and adequate child labor standards. In addition, the suggested labor code should make provision for public employment agencies and for the regulation of private employment agencies; for the control of industrial home work; and for machinery to handle industrial disputes by State mediation and voluntary arbitration boards and by State labor relations boards.

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[1] Prepared by Charles F. Sharkey and Marian L. Mel, of the Division of Labor Standards, U. S. Department of Labor.

[2] The States are Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, and Virginia.

No State fully meets these recommendations. Over the entire country there is the widest possible variation in the number and effectiveness of the labor laws which have been adopted. The recommended standards are here included because they provide, in a sense, a model code against which the actual development of labor legislation in these or in any other States may be examined.

State Labor Departments

All the Southern States, except Mississippi, have labor departments. In most of these States, however, some labor laws are administered by agencies outside such departments. In Alabama and Louisiana, for example, the workmen's compensation acts are administered by the courts. Agencies separate from the labor departments also administer workmen's compensation in Arkansas, North Carolina, Oklahoma, South Carolina, Texas, and Virginia. In this same group of States and in Tennessee, unemployment compensation is administered by separate agencies. The employment service is within the departments of labor only in Alabama, Arkansas, Florida, Georgia, Kentucky, and Louisiana. Coordination of administrative activity in the field of labor legislation clearly has not been fully achieved in the group of States under consideration.

No picture of the protection offered workers is complete without including the facts as to the size of the labor department appropriations, the extent of its staff, and other matters concerning administration which are not included in this article. Nevertheless, as the enactment of laws is basic in the protection of workers, a general picture of the status of labor legislation in any State may be gained by the following discussion of specific types of labor laws.

Hours of Work

The National Conferences on Labor Legislation recommend that all workers be protected as to working hours, suggesting, as a reasonable standard, an 8-hour day and a 40-hour week. Even in the war period of urgently needed production, nine Government agencies, including the War and Navy Departments, recommended that hours of work be kept as far as possible to 8 a day, 48 a week, and 6 days a week, as a means of insuring maximum efficiency. Limiting hours of work by requiring that increased hourly rates be paid after a basic number (daily and weekly) is the method employed not only in the Fair Labor Standards (Wage and Hour) Act and in the Public Contracts (Walsh-Healey) Act, but also in some State laws and in orders issued under authority of minimum wage acts.

None of the 13 Southern States has legislation for an 8-hour day, 48-hour, 6-day week with a broad coverage. Here, as in other sections of the country, limitations of hours for men are applied most commonly to occupations in which danger either to the worker or to the public is involved, as in the case of miners, railroad employees, or motorbus drivers. The employment of women is more generally covered.

Alabama does not regulate the hours of adults. An Arkansas law fixes a basic 8-hour day and 6-day week, with a requirement for overtime pay for women over 16 in practically all occupations. In Florida, any employee, in the absence of a written contract, is entitled to extra pay for all hours in excess of 10 a day. A Georgia law limits the hours of employees in cotton and woolen manufacturing establishments to 10 a day and 60 a week, with the exception of specific occupations. In Kentucky, a 10-hour day, 60-hour week applies to females in a fairly comprehensive list of employments, and the same standard covers all females under 21 in any gainful occupation except domestic service and nursing. A basic 8-hour day, 40-hour week on public works, with time and a half the prevailing wage rate for overtime, is the only regulation of hours applying to men. A Louisiana act of 1942 has an 8-hour day, 48-hour, 6-day week for females in a comprehensive list of industries; women in occupations not covered by this act are limited to a 9-hour day, 54-hour week.

In Mississippi, a 10-hour day, 60-hour week is the standard for females in any occupation, and the same provision exists for persons 16 years of age and over in mills and factories; in both cases overtime is permitted in case of emergency. A limit of 9 hours in 12, 48 hours a week, and 6 days a week in North Carolina protects only female workers of employers of more than 8 persons in any occupation; specifically exempted, however, are a large number of employments. Men are quite comprehensively covered by a 10-hour day, 56-hour week.

In Oklahoma, a 9-hour day, 54-hour week is limited to females in a comprehensive list of employments, with exemption of establishments employing less than 5 such workers in towns of less than 5,000.

South Carolina limits hours of females in mercantile establishments to 12 a day, 60 a week. Employees of cotton, silk, rayon, or woolen textile mills (with a number of exceptions) are covered by an 8-hour day, 40-hour, 5-day week. Enforcement of this law was at one time enjoined; but according to the commissioner of labor, the injunction has been dissolved. Tennessee limits women's hours in a number of occupations to 57 a week; Texas, to 9 a day, 54 a week. In Virginia, a 9-hour day, 48-hour week is limited to women in laundries, restaurants, and mercantile and manufacturing establishments.

DAY OF REST

Louisiana and North Carolina have laws requiring a weekly day of rest limited to women in enumerated industries. The South Carolina act establishes a 5-day week for employees in textile mills, and in Arkansas a permit must be obtained from the labor commissioner to work on the seventh day. Meal or rest periods of varying lengths are found in Arkansas, Kentucky, Louisiana, and North Carolina, applying generally to women or to women and minors.

Minimum Wage

Since the first minimum wage law was passed 34 years ago (1912), State minimum wage legislation has been enacted in 26 States, Alaska, the District of Columbia, Hawaii, and Puerto Rico. In only 4 States (Connecticut, Massachusetts, New York, and Rhode Island) and in Hawaii and Puerto Rico does the legislation cover men.

Minimum wage laws are of three types. One authorizes the department of labor, or a specified agency within it, to establish minimum wage rates recommended by wage boards. The second type establishes a minimum wage in the law itself. A third kind, an example of which is the law of Hawaii, follows the pattern of the Fair Labor Standards Act; the law establishes a specific minimum hourly rate and basic hours, with provision for increased hourly overtime rates, and provides for subsequent increases of the statutory minimum, based on wage-board action.

Traditionally, workers in service industries have been among the lower paid groups. As these are intrastate employments, no relief is offered by the Fair Labor Standards Act. On this situation, the Commissioner of Labor and Industry of Virginia commented in the biennial report issued in 1944:

> The adoption of minimum wage legislation on State level will prove of untold benefit in the postwar period to workers who do not have the protection of the Federal Fair Labor Standards Act. The responsibility for the protection of workers in intrastate occupations is with the State, and if this reponsibility is not assumed through State legislation their well-being will be seriously jeopardized. By neglecting to provide this protection for its citizens who are working without any protective wage contracts, the State will retard its social and economic progress, as employment under substandard remuneration reduces the standards of living and tends to involve the entire commonwealth in a downward spiral. Employees of industries engaged in interstate commerce have Federal legisla-

tive protection which prevents their wages being cut below a certain minimum standard. Why should not intrastate occupations be covered by wage orders? It can be expected that the transition from a war to a peace economy will be accompanied by a critical unemployment figure which will reduce the standard of living and decrease the demands for consumer goods. When this economic calamity attacks our wage structure, the States with minimum wage laws will be able to throw a life preserver to the marginal workers and will thus prevent wage cutting below health subsistence. Virginia should have a minimum wage law of general coverage.

Four, among the Southern States studied—Arkansas, Kentucky, Louisiana, and Oklahoma—have enacted minimum wage laws, and they apply to women or to women and minors. The Arkansas law, passed in 1915, applicable to women only, with specific industry coverage, establishes a statutory minimum wage of $1.25 a day for experienced workers. The minimum rate for workers with less than 6 months' experience is $1.00 a day. Time and a half pay is required after a basic 8-hour day and basic 6-day week.

In Kentucky, a minimum wage law of the wage-board type applies to women and minors. Under this authority a blanket order, covering all industries except laundry and dry cleaning and dyeing, provides for minimum wage rates ranging from 20 to 25 cents an hour, according to zone. A separate laundry, dry cleaning, and dyeing order establishes rates ranging, according to zone, from 20 to 28 cents an hour. A hotel and restaurant order passed subsequently to the blanket order provides for rates ranging from 20 to 30 cents an hour. Each order provides for payment of overtime rates.

The Louisiana law, which is also of the wage-board type, applies to women and girls. Although the legislation was enacted in 1938, no minimum wage orders have been issued to put the law into effect.

The Oklahoma law, also of the wage-board type, was written to cover men, women, and minors. The law has been declared unconstitutional as to its coverage of men and boys, owing to a defect in the title. Enforcement of the orders for women is prevented by injunction, so that the law is inoperative.

All four laws exclude agriculture; the Kentucky and Louisiana laws exclude domestic service. In Kentucky, persons subject to regulation by the public service commission, and in Louisiana, municipalities having a population of 10,000 or less, are not covered by the minimum wage acts.

Industrial Home Work

Only two States—Tennessee and Texas—in this group have homework laws.

Tennessee's law neither prohibits home work nor authorizes the department of labor to do so. Homes where specified kinds of work are performed must be reported to the board of health. Certain requirements are established with respect to cleanliness, light, and ventilation, and workplaces are subject to the supervision of the bureau of workshop and factory inspection. No licensing of employers is required, nor of home workers except in the case of minors under 16 years. Without licensing, enforcement is impossible.

Texas has a home-work law, though not under the jurisdiction of the department of labor. Authority is given to the State Board of Health to investigate any industry, and upon finding that industrial home work cannot be continued without injuring the health and welfare of the home workers, the board may prohibit home work in the industry. This law was passed in 1937, but by September 1946 no steps had been taken by the health department to put it into effect.

Under the home-work system, goods are given out by an employer to workers who perform one or more processes in their own homes and return the finished goods to the employer. The home worker usually furnishes the sewing machine or other equipment, collects and returns the materials, and is sometimes even charged for spoilage. The piece-rate method of payment prevails and low wages are universal. Long hours, night work, and the use of children of all ages are characteristic of industrial home work. Under these conditions, wage and hour and child labor laws become meaningless. Home work, therefore, represents an unfair type of competition to be met by the enlightened employer who has all his work performed in the factory, meets the obligations of law, and pays all overhead costs of production.

Conferences of home-work administrators have repeatedly recommended one of two courses of action: First, that States which do not have home work should, by law, make it impossible for the system to be introduced; in other States, legislation should empower the department of labor to prohibit home work, industry by industry. The few workers who, on account of age or disability, could never adjust themselves to factory work, may be permitted to continue working under certification by the proper administrative agency.

Wage Payment and Wage Collection Laws

Florida and Mississippi have no wage payment laws. A semimonthly pay day in Alabama applies only to employees of public service corporations engaged in transportation and employing 50 or more persons.

An Arkansas law requires a semimonthly pay day for employees of corporations; a second law forbids use of scrip or other token not payable on the next regular pay day; a third statute provides that employees of every company and corporation shall be paid on the day of discharge.

In Georgia, wages must be paid semimonthly in lawful money or check; excepted from the law are farming and sawmill and turpentine industries. The Kentucky semimonthly pay-day law applies to employees of corporations organized for profit; wages must be paid within 3 days to workers who are discharged or who quit. Another law requires employers of 20 or more persons to redeem scrip or other evidence of debt in legal tender at face value at least once a month on a regular pay day. A third measure, requiring payment in lawful money, applies only to wage earners employed by corporations or in factories, mines, or workshops.

In Louisiana, a semimonthly pay day is required for all employees (except the clerical and sales force) in manufacturing, mining, and oil boring, where 10 or more are employed, and in public service corporations. A second law, applying to all workers, requires that checks or other tokens be redeemed at face value, on demand, on the pay day following issuance; those employees discharged and quitting must be paid within 24 hours; if not, their wages continue until paid or payment is tendered.

In North Carolina, a law applying only to railroad-shop and roundhouse employees requires a semimonthly pay day and payment in lawful money or check. In Oklahoma, compulsory payment in lawful money is required for employees in mining, quarrying, manufacturing, and transmission and transportation of passengers or freight and, if demanded, a semimonthly pay day. In South Carolina, a weekly pay requirement applies to textile manufacturing and a semimonthly one to shop employees of certain railroads; nonnegotiable pay orders are prohibited except for agricultural employees under contract. Tennessee private employers of 20 or more must pay semimonthly in lawful money or check. A Texas law with broad but by no means complete coverage requires a semimonthly pay day, and payment within 6 days after demand for discharged or quitting workers and those absent on pay day. In Virginia, certain railroad employees and employees in mining and manufacturing are entitled to a semimonthly pay day and payment in lawful money or check or cash order. Employees of sawmills and excelsior mills must be paid monthly.

In the States covered, as in many others, the absence of a protective law on wage payment or the existence of a poor one makes workers the victims of financially irresponsible or careless or, in some cases, dishonest employers. The recognized standard for wage payment and wage collection laws includes the following guarantees: The worker must be able to count on the payment of his wages in full, in actual money (not scrip or other substitute), on regular pay days. The pay period should be short enough so that living expenses can be met on a cash, not a credit, basis. Prompt payment of wages due should be guaranteed to a worker who is separated from the pay roll. The State labor department should be authorized to help a worker collect wages due, if his employer fails or refuses to pay him.

Industrial Safety and Health

At conferences dealing with labor legislation it has been agreed that safety of workers is the responsibility of the employer and it has been recommended that he should be required by law to furnish a safe workplace. For many years, labor laws attempted to spell out the specific standards which would safeguard workers against industrial accidents and diseases. It is now generally agreed that because changing methods of production bring about changing hazards, a different approach is needed.

The Second National Conference on Labor Legislation, held in North Carolina more than 10 years ago, advocated that "the State department administering the labor laws should have authority to formulate industrial rules or codes, preferably with the assistance of advisory committees, including representatives of employers, employees, and experts, for the protection of the health and safety of employees. Such rules or codes should conform substantially to nationally approved standards."

Many States in preparing safety and health standards have adopted in whole or in part the safety codes promulgated by the American Standards Association.

STATUTES AND REGULATIONS

In all the States covered in this article, except Mississippi, the departments of labor have definite responsibility under law for insuring the safety of workers. The labor departments of Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, North Carolina, and Oklahoma have statutory authority to issue regulations for the safety and health of workers. In Tennessee, the department has such authority for industrial safety only. In South Carolina, as in Mississippi, rule-making authority is given to the department of health. In Texas and Virginia, although limited statutory standards exist, no general power to issue safety and health regulations exists in any agency.

As of 1946, action had been taken under such authority as follows:

The Alabama Department of Industrial Relations has issued a basic safety manual which includes, together with rules dealing with common accident hazards, basic information on accident prevention. In addition, other rules cover mine safety and open pits and quarries.

The Arkansas Commissioner of Labor has issued a basic safety manual, covering practically the same subjects as those in the Alabama manual, and five additional codes dealing with special subjects. The Alabama and Arkansas codes follow the American Standards codes very closely.

Under the authority of the Florida Industrial Commission, five codes dealing with various branches of the lumber and woodworking industries and also with boiler safety have been adopted.

In addition to the adoption of certain safety rules by the Kentucky Department of Industrial Relations, a comprehensive list of safety codes promulgated by the American Standards Association has been recommended to employers.

No rules have been issued in Georgia or in Louisiana under the authority of the commissioners of labor.

Under authority of the commissioner of labor, North Carolina has issued a basic safety code and 10 or more special codes. Oklahoma has adopted safety rules on 15 subjects.

The Tennessee Division of Factory Inspection, in carrying out its authority to prescribe safety devices and safeguards, has issued more than 40 rules covering various subjects. A 1945 act of the State Legislature transferred the functions of the department of labor, with respect to conditions injurious to the health of industrial workers, to the department of public health.

In Mississippi and South Carolina, rule-making authority is vested in the State Board of Health.

Workmen's Compensation

Workmen's compensation laws are designed to assure prompt payment of benefits to injured employees or to the dependents of those killed in industry, regardless of fault. In the early days, if an injured worker sued his employer for damages, he had to prove that the employer was negligent. Under the compensation law the question of fault or blame for the accident is not raised, as the cost of work injuries is considered part of production costs.

Workmen's compensation laws are of two types—compulsory and elective. A compulsory statute is one whereby every employer within the scope of the compensation law is required to accept the act and pay the compensation specified. An elective act is one in which the employer has the option of either accepting or rejecting the act, but in case he rejects it he loses the customary common law defenses—assumed risk of the employment, negligence of fellow servants, and contributory negligence. The compulsory type of law has been recommended by the several National Conferences on Labor Legislation.

All the States in the group considered, with the exception of Mississippi, have enacted workmen's compensation laws. Of these

States, only four—Arkansas, Kentucky, Oklahoma, and Virginia—have compulsory laws; however, the Kentucky and Oklahoma laws cover only hazardous employments. The laws of the other States are elective. In Georgia, North Carolina, and South Carolina the laws are compulsory for public employees, and in Texas for operators of motorbusses.

The employer is required in each of these States to obtain insurance with private insurance companies, or to give proof of his ability to carry his own risk (self-insurance). In Oklahoma, employers may insure their risks in the State insurance fund or with private carriers.

COVERAGE

None of the 47 States conform entirely to the suggested standards with respect to coverage as recommended by the National Conferences on Labor Legislation.

The suggested standards for workmen's compensation acts include total coverage of workers regardless of the type of industry or the number of employees and require the payment of benefits not only in the case of an accidental injury, but also for disabilities resulting from an occupational disease.

All of this group (except Louisiana) provide that employers of fewer than a stipulated number of employees are exempted from compensation-coverage requirements. Although the Louisiana act does not have a numerical exemption, coverage is limited in this State because the law applies mainly to listed "hazardous" or "extra-hazardous" employments. None of these States covers agricultural or domestic service. However, most of the acts permit voluntary acceptance by the employer in these fields, and also in instances in which there is a numerical exemption or in which the law applies only to hazardous employments.

OCCUPATIONAL DISEASE

The National Conference on Labor Legislation has frequently recommended "general" coverage of occupational disease instead of "schedule" coverage under which compensation is paid only for specifically listed diseases. A similar recommendation was made by the International Association of Accident Boards and Commissions in 1944. Occupational disease legislation has been enacted in six of the States in this group—Arkansas, Florida, Georgia, Kentucky, North Carolina, and Virginia—but only Florida provides general coverage. The Kentucky law is limited to silicosis and injuries or death by gas or smoke in mines and by poisonous gas in any occupation.

BENEFITS

The compensation benefits are based on proportion of wages received by the injured worker. In death cases, these percentages sometimes vary and depend on the number of children. The suggested standard as recommended by the National Conference on Labor Legislation proposes that in disability cases not less than 66⅔ percent of the employee's wages should be paid as compensation, and that the maximum weekly compensation should be based on a standard of living above the subsistence level. In the group of 13 States the maximum percentage of wages in disabilities ranges from 50 to 66⅔ percent, although in recent years there has been some improvement in the maximum weekly payments permitted by these laws. These payments still do not take into consideration the higher wages now paid. The maximum weekly payments vary from $18 in Alabama, Kentucky, and Tennessee to $25 in South Carolina. In Arkansas, Georgia, Louisiana, Texas, and Virginia the maximum is $20, in North Carolina and Oklahoma $21, and in Florida $22.

The National Conferences on Labor Legislation have recommended that death benefits be paid to the widow for life (or until remarriage), and to children until they reach the age of 18. However, none of the listed States has such provisions. In all these States the death benefits are limited to payments for a specified period ranging from 300 to 450 weeks. Oklahoma pays no death benefits. Some of these States also fix a total maximum for death benefits ranging from $5,000 to $7,200. With respect to permanent total disability, it has been recommended that benefits be paid during the period of disability, but in the States under consideration, such benefits are limited as to time and amount, or both. The time periods range from 350 to 550 weeks, and the money limits from $5,000 to $10,500.

Permanent partial disabilities are classified as specific or schedule injuries, such as the loss or loss of use of a member, and "nonschedule" injuries, which are those of a more general nature, as, for example, disability caused by injury to the head or back. The measure of such compensation is usually a stated number of weeks. In Arkansas, Florida, Georgia, and North Carolina, the compensation for permanent partial disability is in addition to the period of total disability or healing period. In Alabama, Kentucky, Louisiana, Oklahoma, South Carolina, Tennessee, Texas, and Virginia, on the other hand, the schedule payments are exclusive; in other words, the temporary total benefit payments are subtracted from the amount due from permanent partial disability. In either event, there may be money or period limitations.

MEDICAL CARE

In all workmen's compensation acts, medical care is required to be furnished to injured employees. In early legislation the provision for medical aid was narrowly restricted as to monetary cost, period of treatment, or both. In the later development of the acts such absolute restrictions have been changed in many cases either by providing for unlimited benefits or by authorizing benefits in addition to the initial maximum upon the approval of the administrative authority. In Arkansas, Florida, Georgia, North Carolina, Oklahoma, and South Carolina, medical benefits are virtually unlimited because the administrative agency can extend such services indefinitely. In Arkansas, however, there are arbitrary limitations upon the medical aid for occupational diseases. In Alabama, Kentucky, Louisiana, Tennessee, Texas, and Virginia, there are period or cost limitations. Extensions are permitted in Tennessee, Texas, and Virginia, but these are restricted to specified periods or amounts, or both.

WAITING PERIOD

All the States in this group provide for a specified waiting period immediately following the injury during which compensation shall not be paid. This "waiting time" is 3 days in South Carolina, 4 in Florida, 5 in Oklahoma, and 7 days in the other States. The justification for the waiting period is the cost and administrative burden of bookkeeping in setting up claim files and accounts where but a few dollars are involved. The waiting period relates only to compensation. Medical and hospital care are provided immediately, regardless of the fact that compensation is not paid for a specified period. Most of the laws provide that if the disability continues for a certain number of weeks the payment of compensation is retroactive to the date of injury. In Arkansas, Kentucky, North Carolina, Tennessee, and Texas, if the disability lasts for 4 weeks, compensation is paid from the date of disability. In South Carolina, the retroactive period is 2 weeks; in Louisiana and in Virginia it is 6 weeks. There is no retroactive period in Alabama, Florida, Georgia, and Oklahoma.

SECOND-INJURY FUNDS

In recent years, a new type of provision establishing "second-injury funds" has been included in workmen's compensation laws. When an employee has sustained an injury involving the loss of a member of the body and then loses another as a result of an industrial injury, he may become permanently and totally disabled. If the total cost of compensation is imposed on the latest employer, physically handicapped persons are apt to be refused employment. To meet such problems second-injury funds were created, so that when a second njury occurs the employer has to pay only for the last injury, yet the mployee is compensated for the disability resulting from the combined njuries, the remainder of the award being paid from the fund.

State workmen's compensation commissioners, employer and employee groups, and veterans' organizations have agreed that second-injury funds offer the best means of facilitating the employment of disabled veterans and other handicapped persons. The International Association of Industrial Accident Boards and Commissions, at its meeting in September 1944, recommended a draft bill relating to second injuries and the establishment of a second-injury fund. The draft bill provides that, if an employee who has sustained one of certain specified losses (i. e., the loss, or loss of use, of one hand, one arm, one foot, one leg, or one eye) becomes permanently and totally incapacitated through the loss, or loss of use, of another member or organ, the employer shall be liable only for the compensation payable for the second injury, and the balance of the compensation shall be paid out of the second-injury fund. The fund is financed by payments of $500 by the employer in each case of death if there are no dependents.

Second-injury funds have been established in Arkansas, Kentucky, North Carolina, Oklahoma, South Carolina, and Tennessee. The laws of Arkansas, North Carolina, South Carolina, and Tennessee conform to the standards proposed by the draft bill with respect to the injuries covered, although differences exist in the methods of financing the fund. The Kentucky law applies in the case of an employee who previously was permanently partially disabled, and who receives a second injury whereby the combined disabilities are greater than that which would have resulted from the second injury alone. In Oklahoma, the law applies to "physically impaired persons" who receive a second injury which results in additional permanent disability.

MINORS

All workmen's compensation laws cover minors legally employed. In Arkansas, Georgia, Kentucky, North Carolina, South Carolina, Texas, and Virginia, compensation is paid to minors illegally employed on the same basis as if they were legally employed. In Alabama and Florida, the laws provide extra compensation in such cases. On the other hand, the laws of Louisiana, Oklahoma, and Tennessee do not cover minors illegally employed.

ADMINISTRATION

In establishing the workmen's compensation system the principal objective was to provide a simple, convenient, and inexpensive method of settling the claims of injured workers. Both the National Conferences on Labor Legislation and the International Association of Industrial Accident Boards and Commissions have recommended administration by a commission or board rather than by the courts. In most of the Southern States having workmen's compensation laws, special agencies have been formed to administer the acts. However, in Alabama, Louisiana, and Tennessee, court procedure remains as a survival of early practice.

Industrial Relations

Industrial-relations legislation in the group of Southern States has been limited generally to the fields of conciliation, mediation, and arbitration of industrial disputes, and to the regulation of unions and labor-organization activity.

CONCILIATION, MEDIATION, AND ARBITRATION

Most of the Southern States are authorized by law to endeavor to settle disputes through the use of conciliation, mediation, or arbitration machinery.

Conciliation and mediation services are provided through special permanent agencies in two State labor departments—in North Carolina, the division of conciliation, and in Oklahoma, the board of arbitration and conciliation.

In six other States, authority to mediate or to promote voluntary conciliation or mediation is vested in a designated government official. This official is the labor commissioner in Arkansas, Georgia, Louisiana, and South Carolina, and the commissioner of industrial relations in Kentucky. In Alabama, the Governor is empowered to appoint mediation boards, and the department of industrial relations is also authorized to promote mediation.

Five States—Florida, Mississippi, Tennessee, Texas, and Virginia—have no machinery for conciliation and mediation of labor disputes.

Arbitration under special procedures for labor disputes is provided for in Alabama, Arkansas, Georgia, Louisiana, North Carolina, Oklahoma, South Carolina, and Texas. Permanent arbitration agencies are established in the labor departments of two of these States—the North Carolina Arbitration Service and the Oklahoma Board of Arbitration and Conciliation.

PROTECTION OF LABOR'S RIGHTS

There is a limited amount of legislation, in these 13 States, protecting labor's right to organize and bargain collectively.

The right of organization and collective bargaining is recognized by law in Alabama, Florida, and Kentucky. The Alabama law, however, also specifies the right of employees to refrain from such activities. One State, Louisiana, has an anti-injunction law modeled after the Federal Norris-LaGuardia Act, and an Oklahoma law places limited restrictions on the courts in labor disputes.

Blacklisting of employees is forbidden by law in seven States—Alabama, Arkansas, Florida, North Carolina, Oklahoma, Texas, and Virginia; and "yellow dog" contracts are outlawed in Louisiana.

UNION REGULATION

Over the past 5 or 6 years, there has been a decided increase in State legislation restricting or regulating union activity. At present, all these States except five—Kentucky, North Carolina, Oklahoma, South Carolina, and Tennessee—have union regulatory laws. Many of these laws have been held invalid, and others are in process of appeal in the courts, so that the constitutionality of much of this legislation is still in doubt. The main provisions of those laws still in effect are summarized as follows.

Internal Union Organization

Alabama, Florida, and Texas adopted legislation in 1943 which regulates internal union organization. The Alabama act requires every labor organization to file with the State department of labor copies of its constitution and bylaws, and the secretary and business agent of every local union with 25 members to make annual verified reports to its members and to the labor department, containing data on its officers, membership, elections, and property holdings, and a complete financial statement. It also prohibits membership of professional or supervisory employees in labor organizations which admit or are affiliated with unions admitting nonsupervisory employees, and forbids collection by a labor union of any fee for a work permit.

The Florida Union Regulatory Act prohibits interference with the right of franchise of any union member and solicitation of membership without authority of that organization. With regard to union finances, the law limits union initiation fees not in effect in 1940 to $15, requires unions to keep itemized financial accounts open to the membership, and prohibits unions from requiring payment of back dues of returning servicemen.

The Texas Union Regulatory Act requires every union to file with the secretary of state copies of its constitution and organization records and to make annual verified reports to the secretary of state containing data on the organization, its affiliates and locals, its local officials, its property holdings, and a complete financial statement.

The Texas law also establishes citizenship requirement for union officials, provides that union members may be expelled only for good cause and after public hearing, and directs the courts to intervene to reinstate any member expelled in violation of these provisions.

Unions are forbidden to collect fees for work permits, to make political contributions, or to require returning servicemen to pay back dues, and are required to keep itemized financial accounts open to the membership and to legal proceedings. The legal requirement that union organizers secure a registration card from the secretary of state was held unconstitutional in a case appealed to the United States Supreme Court.

Right to Work

So-called "right to work" constitutional amendments have been adopted in Arkansas and Florida. The Florida amendment makes unlawful the denial of the "right to work" on account of membership or nonmembership in any labor organization. The Arkansas amendment authorizes legislation of this type.

Strike, Picketing, and Organization Activity

Eight States—Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, Texas, and Virginia—have laws directly regulating unions during strikes, picketing, or other organizational activity.

Participation in "wildcat" strikes is outlawed in Alabama. Florida forbids strikes unless authorized by majority vote in a secret ballot and prohibits seizure or unlawful occupation of property during a labor dispute. It also forbids strikes caused by jurisdictional disputes. A Georgia law requires 30 days' written strike notice of all employees except seasonal and railroad workers. Louisiana in 1946 adopted legislation providing that "wildcat" strikes in violation of collective-bargaining agreements are against public policy.

So-called "anti-violence" legislation, recently adopted in Alabama, Arkansas, Mississippi, and Texas, outlaws assemblage near the place where a labor dispute exists and forbids the use or threat of force to prevent any person from engaging in a lawful vocation. The Alabama law also outlaws the use of threats, force, or coercion to prevent an employer's use of materials, equipment, or service. Violation of this legislation in Arkansas, Mississippi, and Texas is made a felony.

A Florida law outlaws picketing the home of an employee, picketing beyond the area of the industry in which a dispute arises, picketing by force or violence or in such manner as to prevent entrance to or exit from any premises, or picketing "other than in a reasonable and peaceable manner."

The following acts are prohibited by Virginia law: Interference with the right of another to work; use of force, threats or intimidation, or insulting language to induce any person to quit his employment or to refrain from seeking employment; picketing by force or violence; picketing so as to interfere with the entrance or exit of any premises or of the free use of public streets; and picketing by any person not employed by the business picketed, either at that time or immediately prior to the strike.

Unemployment Insurance

In the Southern States studied the unemployment-insurance laws differ considerably as to coverage and amount of benefits, the duration of unemployment, and other factors. Ten States—Alabama, Florida, Georgia, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, and Virginia—provide that employers of 8 or more employees in 20 weeks are covered by the legislation. Arkansas specifies 1 or more employees in 10 days, Kentucky 4 or more employees in 3 quarters of a preceding year, and Louisiana 4 or more employees in 20 weeks.

After an unemployed worker has filed a claim and before benefit payments begin, a waiting period of 1 or 2 weeks is usually required. All the States in this group have 1-week waiting periods except Georgia and Mississippi, which require a 2-week period before benefits begin.

In order to be entitled to benefits, a worker must have earned a specified amount in covered employments. The amount of the benefit to be paid is determined by the worker's wages or employment during a "base period." This period, generally 1 of the 4 quarters of the year (13 weeks), is used to determine a worker's earnings for eligibility, weekly benefits, and the duration of benefits. Under most laws the worker receives approximately 50 percent of his full-time weekly wage. All States limit the maximum and the minimum amount of weekly benefits.

In this group, the top limit on benefit payments ranges from $15 to $20 a week. Alabama, North Carolina, and South Carolina pay a maximum of $20; Georgia, Louisiana, Oklahoma, and Texas, $18; Kentucky, $16; and in Arkansas, Florida, Mississippi, Tennessee, and Virginia, the maximum is fixed at $15 a week. Minimum payments range from $3 to $6 a week. The maximum number of weeks in which unemployment-compensation benefits are paid ranges from 14 to 20. Benefits are limited to 14 weeks in Mississippi, to 16 in Arkansas, Florida, Georgia, North Carolina, South Carolina, Tennessee, and Virginia; and to 20 weeks in Alabama, Kentucky, Louisiana, and Oklahoma. Texas alone has specified that instead of a definite number of weeks the payment should be 9 times the benefit allowed for a 2-week period.

Child Labor

The following review of the major provisions of the child labor laws shows the existing standards.

MINIMUM AGE

North and South Carolina, in 1937, became the first of the Southern States to incorporate a 16-year minimum age standard in their child labor laws. Florida followed in 1941, Louisiana in 1942, and Georgia in 1946. Four of these five States—Georgia, Louisiana, North Carolina, and South Carolina—have a 16-year minimum age for employment in factories at any time and for any employment during school hours except in agriculture and domestic service. The fifth State—Florida—also has a 16-year minimum age for factory employment at any time, but requires a minimum age of 14 for all other employment during school hours.

A 15-year minimum age requirement obtains in factory and related employment in Texas. A 14-year minimum age standard applies to factory employment at any time in the remaining seven States (in Kentucky only during school hours), and to all other work during school hours, except in Mississippi, Oklahoma, and Virginia. In Virginia, work in agriculture and, in Mississippi and Oklahoma, work in agriculture and certain other occupations are not covered.

For work outside school hours most of these States set a minimum age of 14 but usually exempt agriculture and domestic service, and some permit employment at the age of 12 in certain other occupations. A few establish no minimum age for nonfactory employment outside school hours or cover no work outside school hours.

EMPLOYMENT CERTIFICATES

Because the employment certificate shows that the minor for whom it is issued has reached the minimum age for work and has met the other requirements fixed by law for his protection, an employment certificate system is a safeguard against illegal employment and an essential support of child labor standards. Ten States in this group require employment certificates as a condition for the employment of minors under 16 years of age, and seven States require either employment certificates or age certificates for minors above this age (Alabama to 17, and to 19 for work in certain hazardous employments; Florida, Georgia, Louisiana, and North Carolina to 18; Oklahoma to 18 where continuation schools are established; and Tennessee to 18 in certain hazardous occupations).

The child labor laws of three of the States, however, do not provide for an employment certificate system (Mississippi, South Carolina, and Texas). To supply the need for proof of legal employment under the child labor provisions of the Fair Labor Standards Act in these States, certificates of age are issued by the U. S. Department of Labor in cooperation with State and local officials. Moreover, in all 13 States, age certificates are issued for minors who have passed the age when certificates are required, on request of the minor or the employer.

HAZARDOUS OCCUPATIONS

In general, the protection from hazardous employment afforded minors under age 18 in the listed States is inadequate, particularly as to minors 16 and 17 years of age. Only three States (Louisiana, North Carolina, and Virginia) now prohibit employment of minors of 16 and 17 in any considerable number of dangerous occupations. Greater protection is afforded children under 16 from hazardous work, more than half the States prohibiting their employment in many hazardous occupations. Little or no such protection, however, is given in several States.

MAXIMUM HOURS AND NIGHT WORK

None of the 13 States protects minors up to 18 years of age from excessive hours of work to the extent recommended by the International Association of Governmental Labor Officials—a maximum 8-hour day, 40-hour week, and 6-day week. Louisiana, which has an 8-hour day, 44-hour week, and 6-day week for minors under 18, comes nearest. Few of the other States have limited maximum hours for both boys and girls of 16 and 17.

Five States, in addition to Louisiana, have adopted for children under age 16 a maximum workweek standard of less than 48 hours. These are Florida, Georgia, and North Carolina, with an 8-hour day, 40-hour week for children under 16, and Mississippi and Virginia with an 8-hour day, 44-hour week, for such children. Except for South Carolina, the remaining States have an 8-hour day, 48-hour week, applicable to children under 16 (in Texas to children under 15). South Carolina has no maximum hours of work provisions applicable to minors only, but has an 8-hour day, 40-hour week, 5-day week[3] for most employees of any age in silk, rayon, cotton, and woolen mills. For girls in stores the maximum is a 12-hour day, 60-hour week.

All 13 States have prohibited night work of minors under 16 years of age, but only 4 (Arkansas, Florida, Louisiana, and North Carolina) have such a prohibition for both boys and girls 16 and 17 years of age.

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[3] See comment under Hours of Work (p. 119).

STANDARDS AND ACCOMPLISHMENTS

Looking at the child labor laws in the States analyzed as a whole, the most serious weaknesses are the frequent exemptions of agriculture and domestic-service occupations, in which large numbers of children are employed; the lack of protection afforded minors 16 and 17 years of age, both in respect to hours of employment and to hazardous work; the limited coverage of some of the older laws; and the lack of certificate systems in three of the States.

In the South, as in the entire country, war labor needs brought about an unprecedented demand for the employment of young workers. This demand is reflected in the large increases in the number of employment and age certificates issued for children between 14 and 18 years of age during the war years, although these certificates do not tell the whole story. They do not cover children going to work in all industries, they are not required for all young workers of these ages, and they do not, of course, reflect illegal employment.

Even with these limitations, the figures are striking. In 11 of this group of States for which reports are available for both 1940 and 1945, the number of young persons between 14 and 18 years of age obtaining employment or age certificates for work (full time or part time) increased more than sevenfold. About 17 percent of these boys and girls going to work in 1945 were 14 or 15 years of age. Available figures for 1946 indicate a decided drop, as would be expected with the cessation of war demands, but in general the totals for the first 5 months of 1946 are considerably above those for the entire year 1940.

Although child labor legislation has developed slowly in this region, noteworthy advances have been made in the past decade in the laws of a number of the Southern States. These gains meet or approach standards urged as desirable for the employment of young persons by the International Association of Governmental Labor Officials and other groups interested in the protection of young workers from harmful child labor and reflect a sincere recognition of the needs of the young people of this region. The standards recommended by the International Association of Governmental Labor Officials are a 16-year minimum age for factory employment at any time, 16 for all employment during school hours, 14 outside school hours for all nonfactory employment, and for minors under 18 years of age a maximum 8-hour day, 40-hour week, and 6-day week; prohibition of night work; a requirement of employment certificates; and prohibition of work in hazardous occupations.

X.—Social Security in the South[1]

Social security, in the broad sense, has become a recognized responsibility of the Federal Government. The tremendous number of persons in need during the depression following 1929 demonstrated the inability of the average individual to provide against prolonged economic adversity, as well as the inability of most States to meet adequately the situation created by the depression. Under the Social Security Act, passed in 1935, two general systems of benefit payments were authorized, one based on insurance contributions and the other on the need of the beneficiaries.

Insurance against certain economic hazards can be based on past earnings in industry. Monthly benefits (as well as lump-sum payments) were provided under the act and the 1939 amendments thereto by the Old-Age and Survivors Insurance program for persons 65 years of age or over (and for certain of their dependents) who have worked in covered industry and have qualified for the payments. This is a wholly federally operated undertaking. An unemployment insurance system was set up as a joint Federal-State program providing unemployment benefits to those workers who have qualified while working in covered employment. There are other government operated or supervised social insurance systems, as well as staff retirement programs which are not operated under the Federal Social Security Act. These include the retirement systems of the Federal, State, and local governments, the workmen's compensation laws of the Federal and State governments, and the various insurance programs for railroad workers administered by the Railroad Retirement Board.

The programs of public aid in which the Federal Government participates are based on the need of the recipients and are administered by the States with grants-in-aid from the Federal Government for three types of needy persons: (1) Those over 65 who pass the State tests of need; (2) children, living with relatives, deprived of parental support as a result of death or incapacity of one or both parents; and (3) the needy blind. Other types of needy persons must be cared for wholly by State or local funds.

While present programs of social security are limited in terms of benefits provided and coverage, a genuine beginning has been made in giving some protection to substantial segments of the population against important economic dangers in modern industrial society. This is perhaps particularly noteworthy with respect to the Southern

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[1] Prepared by Solomon Shapiro of the Bureau's Labor Economics Staff. The social security data used in this article have been previously published or were made available by the Social Security Administration of the Federal Security Agency. The cooperation of this Agency is gratefully acknowledged.

States, where per capita incomes are relatively low and the social security increment has been a significant addition. It is the purpose of this section to describe the operation in the South of the two insurance programs established under the Social Security Act.

Operation of the Old-Age and Survivors Insurance Program

COVERAGE

Under the Old-Age and Survivors Insurance program persons aged 65 or over, who have qualified by working for certain periods in employment covered by the law, may retire and receive monthly benefits. The worker's wife if aged 65 or over and/or his dependent children under age 18 may also receive monthly benefits. Lump-sum payments or monthly benefits are also provided for certain dependent survivors of insured workers. Generally, persons working for wages or salaries are covered by the act, with a number of important exceptions. The major exceptions are agricultural labor; domestic service; casual labor not in the course of the employer's business; service performed for the worker's child, spouse, or parent; certain maritime service performed on vessels of foreign countries; employment for Federal, State, and local governments; employment for religious, charitable, and certain other nonprofit organizations; railroad employment; and self-employment.

From its inception until June 1945, over 82 million persons, representing 62 percent of the population on July 1, 1945, had established accounts with the Bureau of Old Age and Survivors Insurance of the Federal Security Agency. Of this number, about 21 million, or approximately 55 percent of the population, were in the Southern States. The following tabulation shows the number of accounts established by employees under old-age and survivors insurance, cumulative from November 1936 through June 1945, and the percentage these employees formed (July 1, 1945) of the total population of the United States and of the southern regions.

	Accounts established[1] *(in thousands)*	*Percent of population*[2]
Total, United States	82, 229	62. 3
Southern States	20, 701	55. 2
Southeastern States	13, 205	54. 1
Southwestern States	7, 496	57. 4
All other States	61, 528	65. 1

[1] Federal Security Agency, Social Security Bulletin, August 1945 (p. 33).

[2] Population data from Bureau of Census, Special Reports, Series P–46, No. 3. These percentages are somewhat overstated because the data do not eliminate duplicate account numbers, nor have adjustments been made for deaths of account holders. These percentages are not the proportions of the population covered by the act at any particular time because account numbers are issued to all workers who apply, regardless of whether their employment is covered under the act. As a result, the number of persons actually covered is considerably less than the number of accounts, since many workers with account numbers and at some time in covered employment are not presently so engaged, while others with account numbers have never worked in covered employment.

Of the 46.3 million persons who worked in covered employment at some time during 1944, 9.5 million were in the South (table 45). The South's proportion of covered workers was therefore considerably smaller than its share of the country's population. This relatively smaller coverage of workers is a reflection of the greater proportions of persons in noncovered employments—agriculture, domestic service, and self-employment, including farming.

During 1940, the first year that monthly benefits were awarded, 43,338 persons in the Southern States and 211,646 in the remainder of the country were awarded benefits. As of June 30, 1946, there were 1,700,696 monthly beneficiaries in the whole country, of whom 300,228 were in the South. The southern proportion of the total number of beneficiaries (17 percent in 1940 and 18 percent in 1946) was somewhat smaller than that of workers in covered employment. This reflects, partly, the younger median age of the population in these States,[2] but, to a greater extent, the fact that in these States covered employment constitutes a smaller proportion of total employment and consequently relatively fewer workers are insured.

TABLE 45.—*Old-Age and Survivors Insurance: Workers in Covered Employment, United States and Southern Regions* [1]

Region	Number of workers (thousands) [2]					
	1939	1940	1941	1942	1943	1944
United States	33,751	35,393	40,976	46,363	47,656	46,296
Southern States	6,651	7,018	8,423	9,624	9,659	9,480
Southeastern States	4,318	4,603	5,594	6,214	6,190	6,083
Virginia	559	612	776	865	778	738
North Carolina	720	751	876	954	880	905
South Carolina	352	375	467	490	478	451
Georgia	598	647	789	853	891	855
Florida	475	504	569	641	697	696
Kentucky	420	432	502	567	551	568
Tennessee	519	568	686	765	841	844
Alabama	439	484	619	734	739	705
Mississippi	237	232	309	345	336	321
Southwestern States	2,333	2,415	2,830	3,410	3,469	3,397
Arkansas	226	240	288	403	340	329
Louisiana	454	482	565	637	634	636
Oklahoma	351	353	402	485	528	522
Texas	1,303	1,340	1,576	1,885	1,967	1,910
All other States	27,100	28,375	32,553	36,739	37,997	36,816

[1] Source: Federal Security Agency, Social Security Administration. Workers are reported by State of last employment in year.

[2] Figures do not necessarily add to totals because of rounding.

BENEFITS

To be eligible for benefits a worker must have worked in covered employment for certain periods, with earnings of at least $50 in each period, prior to his death or his attaining the age of 65.[3] Under certain conditions of eligibility the wife and children of an insured worker and certain surviving dependents may draw benefits. The amount of each type of benefit [4] is obtained by applying appropriate fractions to the wage earner's primary benefit amount. This latter amount is based on the worker's wage history and is derived by using a single benefit formula.

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[2] In 1940, 7.4 percent of the population of the non-Southern States were 65 years or older, while only 5.4 percent of the people of the 13 Southern States were that old.

In measuring the regional differentials in average benefits each type of benefit should be studied separately, since the difference in average total benefits is distorted by the dissimilarity between the South and the rest of the country in the proportions of the various types of benefits. The greater prevalence of large families in the Southern States leads to a much higher proportion of child's benefits in this region than in the rest of the country. On the other hand, primary benefits are considerably less important in relation to total benefits than in the other States.

The average monthly amount of benefits in force in the South, June 30, 1946, ranged from $10.62 for a child to $21.63 for the primary beneficiary. At that date the average child's benefit in the rest of the country was $13.15 and the average primary benefit was $24.94. (See table 46.) There have been no marked changes in the differentials in types of benefit payments during the past few years.

Adequacy of Old-Age and Survivors Insurance in the South

The benefits paid out under the old-age and survivors insurance program have brought real economic relief to aged workers and their families and to surviving dependents. This is particularly true in areas where incomes are meager and the old-age benefit is often the only source of income. Nevertheless, the operation of the program

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[3] In general, a worker is fully insured if he has received $50 or more in wages for covered employment in half the quarters elapsing after 1936 (or his twenty-first birthday if it is later) and up to the quarter in which he reaches age 65 or dies. A minimum of 6 quarters is necessary. After a worker has 40 quarters of coverage he is permanently fully insured, regardless of whether he is in covered employment thereafter. Prior to 1947 a worker was currently insured if he had wage credits of not less than $50 for each of not less than 6 of the 12 quarters immediately preceding the quarter in which he died. For claims applications filed after 1946, a worker is currently insured if he received $50 or more in wages for covered employment in 6 quarters of the period consisting of the quarter of death and the 12 preceding quarters.

[4] The primary benefit is paid to a fully insured retired wage earner aged 65 or over. The wife's benefit, equal to one-half the primary benefit amount, is paid under certain conditions to the wife, aged 65 or over, of a primary beneficiary.

The child's benefit, equal to one-half the primary benefit amount, is paid under certain conditions to the child of a primary beneficiary or a fully or currently insured deceased worker.

The widow's benefit, equal to three-fourths the primary benefit amount, is paid under certain conditions to the widow, aged 65 or over, of a fully insured worker.

The widow's current benefit, equal to three-fourths the primary benefit amount, is paid under certain conditions to the widow of a fully or currently insured worker, provided she has in her care a child of her deceased husband entitled to child's benefits.

The parent's benefit, equal to one-half the primary benefit amount, is paid under certain conditions to he dependent parent of a fully insured deceased worker.

Table 46.—*Old-Age and Survivors Insurance: Average Monthly Amount of Benefits in Force,*[1] *by Type of Benefit, June 30, 1946* [2]

Region	Average monthly amount of benefits in force						
	Total	Primary	Wife's	Child's	Widow's	Widow's current	Parent's
United States	$18.97	$24.48	$12.92	$12.49	$20.20	$19.93	$13.05
Southern States	15.59	21.63	11.30	10.62	18.40	17.40	11.76
Southeastern States	15.42	21.56	11.33	10.47	18.30	17.13	11.51
Southwestern States	15.97	21.78	11.21	10.96	18.65	17.98	12.48
All other States [3]	19.70	24.94	13.15	13.15	20.43	20.63	13.45

[1] Represents total benefits awarded after adjustment for subsequent changes in number and amount of benefits and terminations, cumulative from January 1940.

[2] Source: Federal Security Agency, Social Security Administration.

[3] Includes Alaska, Hawaii, and Foreign.

falls far short of the good it could accomplish if its benefits were increased and its coverage extended Such extensions would have particular significance in the Southern States, where State and local finances are often insufficient to care adequately for aged workers and their dependents.

In 1940 the number of beneficiaries under OASI represented 0.12 percent of the total population in the South as compared with 0.22 percent in the rest of the country. As of June 30, 1945, 0.61 percent of the population in the South were monthly beneficiaries, compared with 1.12 percent in the rest of the country. Conceivably, with an increasingly older population, about 8 to 12 percent of the population of the non-Southern States may become recipients of benefits under OASI. Without an extension of coverage, however, not much more than about 4 to 6 percent will receive benefits in the South.

Only about 1.2 percent of the people aged 65 or over in the South were beneficiaries in 1940. This compared with 1.9 percent in the country as a whole. As of June 30, 1946, the aged beneficiaries in the Southern States were 6.3 percent of the population aged 65 and over as compared with 10.4 percent for the country as a whole. If no extension of coverage is enacted, eventually, when at least half the aged population in the country is receiving benefits, perhaps a fourth in the South may be doing so.

Even though the average wage benefit formula has been devised to give greater relative benefits to those whose wages during employment were in the lower brackets, primary benefit amounts are lower in the South then in the rest of the country. This is so not only because wage rates are lower but also because a greater proportion of all covered workers have worked part of the time in noncovered employment and thus cannot have all their earnings counted in the computations of their benefits.

An extension of coverage to farm workers, domestic servants, and the self-employed (the latter would cover the numerous farm owners or tenants in the South) would go far to remove the differential in coverage between the South and the other States.[5] The differential in benefits due to lower earnings will not change as long as earnings are lower in the South. There is sufficient justification, however, for increasing the level for the whole country. The increase in cost of living has made the problem one of pressing importance.

Operation of Unemployment Compensation Laws

COVERAGE

The Social Security Act imposed a national pay-roll tax of 3.0 percent on most commercial and industrial employers, but it permitted 90 percent of the tax to be offset by employers who paid an unemployment compensation tax to a State with an approved unemployment compensation law. The Federal tax encouraged the passage of State laws which are the basis for the administration of unemployment compensation. All States but one have set the tax on employers at 2.7 percent—90 percent of the Federal tax—while a few States have a tax on the wages of employees. Forty-five States have adopted experience ratings which reduce the tax for many employers, chiefly on the basis of their experience in payments of benefits to former employees. Since 1939 the Federal tax has been applied only to the first $3,000 paid by an employer to any one individual, and the States have also limited their tax to this amount.

The Federal unemployment tax applies to employers of 8 or more persons in at least 20 weeks during a calendar year, and does not cover certain categories of workers—those engaged in agriculture, domestic service, government, nonprofit organizations, and railroads.[6] Many of the State laws exclude the same employers as the Federal law; but more than half the States cover smaller business, and some cover a few kinds of work not subject to the Federal tax.

The cost of administering the various unemployment laws is borne by the Federal Government and is covered by the excess of the payroll tax above the credit allowed the States. Under the provisions of the Federal law the States have had wide latitude in the administration of the unemployment compensation laws. They determine the coverage of the laws, the amounts of benefits to be paid, the conditions for the payment of benefits, and the general policies of administration. The Federal law imposes certain responsibilities on the Federal Government and sets forth certain requirements which the State systems must meet.

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[5] In 1940, 36.5 percent of the labor force in the South were farmers, farm workers, or domestic servants. In the other States only 14.1 percent were in these occupations.

[6] Unemployment compensation for railroad employees is administered separately under the Railroad Retirement Act.

During 1945, 42.5 million persons worked at some time in employment covered by State unemployment laws; for the 13 Southern States combined the comparable total was 9.1 million (but this latter figure includes some duplication because of persons earning wages in more than one Southern State during the year). This coverage, for the country as a whole, increased from 31.9 million in 1940, with 6.7 million (including duplication) in the South (table 47). These figures, however, include many persons who worked for only short periods in covered employment and failed to earn sufficient wages to qualify for benefits.

The figures on average employment covered by State unemployment laws are somewhat closer to the number of persons who would qualify for unemployment compensation by reason of meeting the requirements with respect to the amount of earnings. (In the United States as a whole, average covered employment is estimated to be about 10 percent below the number of "insured" workers.) Average monthly employment in covered industry in the United States rose from 23.1 million in 1940 to a peak of 30.0 million in 1944. The proportion of this employment in the Southern States remained fairly constant, about 17 percent, over the period, rising from 3.9 million in 1940 to 5.3 million in 1944 (table 48).

Considerably fewer persons qualify as eligible for unemployment benefits because of failure to meet all the State eligibility and qualifying requirements. The number of beneficiaries depends not only on the number who earn sufficient wages in covered employment in the base period, but also on the workers being actually fully or partially

TABLE 47.—*Unemployment Compensation: Workers With Wage Credits, United States and Southern Regions, 1940–45* [1]

Region and State	Number of workers with wage credits (thousands)					
	1940	1941	1942	1943	1944	1945
United States [2]	31,900	37,600	43,000	44,000	43,000	42,500
Southern States	6,658	8,147	9,939	9,935	9,387	9,128
Southeastern States	4,346	5,516	6,566	6,444	6,036	5,940
Virginia	597	811	950	870	787	766
North Carolina	714	859	1,061	929	777	779
South Carolina	346	445	496	471	433	444
Georgia	570	745	866	892	864	830
Florida	508	589	684	718	679	710
Kentucky	428	506	571	560	529	501
Tennessee	489	646	761	872	880	867
Alabama	449	609	769	775	738	714
Mississippi	245	306	408	357	349	329
Southwestern States	2,312	2,631	3,373	3,491	3,351	3,188
Arkansas	272	334	430	377	370	359
Louisiana	547	577	680	700	672	619
Oklahoma	308	368	491	521	489	495
Texas	1,185	1,352	1,772	1,893	1,820	1,715
All other States	25,242	29,453	33,061	34,065	33,613	33,372

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[1] Source: Federal Security Agency, Social Security Yearbooks, and unpublished data. Estimated number of different workers in each State who have earned wages in covered employment during some period of year.

[2] Total adjusted to eliminate duplication due to shifting of workers between States during year.

TABLE 48.—*Unemployment Compensation: Average Monthly Employment*[1] *in Industries Covered by State Unemployment Compensation Laws, United States and Southern Regions, 1940–46*[2]

Region	Average monthly employment (thousands)						
	1940	1941	1942	1943	1944	1945[3]	1946 (first 6 months)[3]
Total, United States	23,096	26,814	29,350	30,818	30,026	27,994	28,046
Southern States	3,941	4,705	5,308	5,478	5,334	5,030	4,993
Southeastern States	2,649	3,188	3,523	3,559	3,468	3,281	3,275
Southwestern States	1,292	1,517	1,785	1,919	1,866	1,749	1,719
All other States	19,155	22,109	24,042	25,340	24,692	22,964	23,053

[1] Source: From data in Social Security Yearbooks for 1940–44; Employment Security Activities, March 1946, for preliminary estimates for 1945; and September 1946, for preliminary estimates for the first 6 months of 1946.

[2] Average number of workers in covered employment in last pay period of each type (weekly, semimonthly, etc.) ended in month for 1940–44. For 1945 and 1946 the pay period ending nearest the 15th of the month was used.

[3] Preliminary.

unemployed, being "able and available for work," registering for work, filing a claim for benefits, and serving the required waiting period. The number of beneficiaries will, of course, fluctuate with the volume of unemployment. Table 49 shows the number of beneficiaries in the United States and in the Southern States in the week ended December 14, 1946, and the number and month of highest and of lowest number from the beginning of the program until December 1946.

TABLE 49.—*Unemployment Compensation: Beneficiaries in Week Ended Dec. 14, 1946, and in High and Low Month Since Beginning of the Program to December 1946, United States and Southern States*[1]

Region and State	Number of beneficiaries in—				
	Week ended Dec. 14, 1946	High month[1]		Low month[1]	
		Number	Date	Number	Date
Total, United States	[2] 798,000	1,641,732	Jan. 1946	56,354	Nov. 1943
Southeastern States	56,310				
Virginia	3,982	31,359	July 1938	212	Nov. 1944
North Carolina	6,900	37,072	June 1938	466	Dec. 1944
South Carolina	2,400	10,465	Mar. 1939	268	Oct. 1944
Georgia	5,231	19,109	Aug. 1940	405	Oct. 1944
Florida	4,401	20,656	Aug. 1940	532	Apr. 1944
Kentucky	6,264	20,858	May 1939	946	Aug. 1944
Tennessee	13,055	33,194	Feb. 1946	1,218	May 1945
Alabama	11,513	32,814	May 1938	649	May 1944
Mississippi	2,564	11,023	Mar. 1940	212	Nov. 1944
Southwestern States	27,339				
Arkansas	4,378	12,628	May 1940	180	July 1944
Louisiana	8,237	24,178	Feb. 1946	526	Nov. 1943
Oklahoma	5,296	19,133	Feb. 1946	220	Apr. 1945
Texas	9,428	30,911	Mar. 1939	592	July 1944

[1] Source: Federal Security Agency, Social Security Administration. For years prior to 1940, data are average weekly number of payments during month. For the years 1940 through June 1946, data are average weekly number of beneficiaries. From July 1946 through December 1946, data are average number of beneficiaries during weeks ended in month.

[2] Includes estimates for California and South Dakota.

Benefit rights may be canceled or reduced by certain disqualifications for workers who might otherwise be eligible to receive them: For voluntarily quitting, for discharge for misconduct, for refusal to accept suitable work, and for stoppage of work due to labor disputes, benefits may be denied from 1 week to the duration of the unemployment, or they may be reduced for all or part of the duration.

The various eligibility and qualification requirements result in the disapproval of a considerable number of claims. Many other claimants return to work before receiving a single benefit payment. While only 63.8 percent of new claimants in 1946 ever became beneficiaries, the 13 States in the South show a still stricter record: with 11 of these States below the national average, 5 had less than 50 percent of the new claims approved (table 50).

TABLE 50.—*Unemployment Compensation: Proportion of New Claimants Who Became Beneficiaries, 1946, United States and Southern States* [1]

State	New claimants, total	Beneficiaries receiving first payment	
		Number	Percent of new claimants
United States	7,003,924	4,468,300	63.8
Virginia	68,366	48,711	71.3
North Carolina	59,605	33,392	56.0
South Carolina	31,243	12,184	39.0
Georgia	53,351	29,064	54.5
Florida	71,852	36,444	50.7
Kentucky	86,138	35,317	41.0
Tennessee	101,452	66,789	65.8
Alabama	95,173	54,961	57.7
Mississippi	32,809	12,919	39.4
Arkansas	70,525	35,770	50.7
Louisiana	98,754	45,480	46.1
Oklahoma	77,256	40,385	52.3
Texas	166,939	77,408	46.4

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[1] Source: Federal Security Agency, Social Security Administration.

BENEFITS

By December 31, 1946, over 10 billion dollars had been paid into the State accounts of the unemployment trust fund held by the Federal Treasury, representing contributions collected and interest accumulated. Of the total fund, 1,383 million dollars was in the accounts of the 13 Southern States. By that date 3,716 million dollars had been paid out in benefits of which 406 million was for the 13 Southern States. In these States the ratio of benefits to collections plus interest was 29.3, while in the other States it was 36.0. The somewhat smaller ratio of benefits to collections and interest in the Southern States reflects the fact that these States generally have greater restrictions in the payment of benefits and that the average benefit is smaller in amount and duration.

The conditions under which workers may receive benefits and the amounts they may receive are specified by the various State laws.[7] A worker's eligibility for benefits and the amount which he may receive in a 12-month period is determined by his record of employment and wages during a past period. Table 51 shows, for the Southern States, the maximum duration and maximum amount of benefits in effect at the end of 1945 as well as the average weekly benefit for total unemployment in 1940 and in September 1946. In no case does the average benefit equal that for the country as a whole. Increases in benefits during the period were roughly equivalent to increased earnings.

Adequacy of Unemployment Compensation in the South

Only 10.7 percent of the civilian population in the South was employed in covered industry in an average week in 1940, compared with 20.2 percent in the rest of the country. By 1944 these proportions had increased to 15.5 percent and 26.6 percent, respectively. The greater relative increase in the South results from the greater relative increase in manufacturing employment in that area, along with a greater decrease in farm population.

TABLE 51.—*Unemployment Compensation: Selected Data on Benefits, United States and Southern States* [1]

Region and State	Statutory minimum number of workers for employer coverage [2]	Maximum benefits [2]		Average weekly benefit for total unemployment	
		Duration in weeks	Weekly benefit amount	1940	September 1946
United States				$10.56	$18.27
Southeastern States:					
Virginia	8 or more in 20 weeks	16	$15	7.68	13.42
North Carolina	8 or more in 20 weeks	[3] 16	20	4.68	12.41
South Carolina	8 or more in 20 weeks	[3] 16	20	6.71	14.16
Georgia	8 or more in 20 weeks	[3] 16	18	6.56	13.63
Florida	8 or more in 20 weeks or $5,000 quarterly pay roll.	16	15	9.72	13.62
Kentucky	4 or more in 3 quarters of preceding year to each of whom $50 is payable in each such quarter; or 8 or more in 20 weeks.	[3] 20	16	7.88	11.46
Tennessee	8 or more in 20 weeks	[3] 16	15	7.48	12.81
Alabama	8 or more in 20 weeks	20	20	6.52	15.75
Mississippi	8 or more in 20 weeks	[3] 14	15	6.03	12.39
Southwestern States:					
Arkansas	1 or more in 10 days	16	15	6.36	13.12
Louisiana	4 or more in 20 weeks	20	18	8.02	15.29
Oklahoma	8 or more in 20 weeks	20	18	9.84	16.37
Texas	8 or more in 20 weeks	18	18	8.07	14.81

[1] Source: Federal Security Agency, Social Security Bulletin, August 1945 and November 1946.
[2] Coverage in effect on June 30, 1945. An employer becomes subject to the State unemployment insurance law when he has employed the specified minimum number of workers on at least 1 day in each of the specified number of weeks within the current or preceding calendar year.
[3] Uniform duration of benefits.

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[7] See Unemployment Insurance in section on State Labor Legislation in the South, p. 134 of this bulletin.

The exclusion of farmers and workers in agriculture as well as domestic service from the State unemployment compensation laws is the most important reason for the relatively smaller coverage in the South. Other exclusions (principally railroad workers, employees of the various governments, maritime workers, and employees of small employers) brought the percentage of the total labor force covered by unemployment compensation to 31.6 in the South in 1940 as compared with 49.0 for the country as a whole.[8]

An estimated 2 million workers were excluded from coverage in the country in 1944 owing to the exclusion of small employers.[9] This restriction was particularly important in the South, where 10 of the 13 States covered only firms with 8 or more workers. Only 13 of the remaining 35 States have such a high size-of-firm requirement. The presence of numerous firms of fewer than 8 employees complicates the administration of the law in the cases of workers who change from employers who are not covered to those who are.

Of the 27 States which provide maximum benefits of $20 or more per week, only 3 are in the South, while of the 22 States which provide a minimum of $6 or more per week, only 1 is in the South. Likewise, as to the duration of benefits, 32 States provide duration of benefits for 20 weeks or more, but only 4 are in the South. Only 3 of the Southern States had average benefits in September 1946 of $15 or more, while 29 of the remaining 38 States had average benefits of this amount.

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[8] Federal Security Agency, Social Security Bulletin, July 1945, p. 7.

[9] Issues in Social Security, A report to the Committee on Ways and Means of the House of Representatives, 1946 (p. 397).

XI.—Development of Trade-Unionism in the South[1]

There has been a measure of trade-union activity in the South since the 1880's, and there were isolated instances of the existence of labor organizations prior to that time. During the past 60 years, union organization and membership in the South has risen with every major upsurge of organized labor activity nationally. Since 1900 a continuous labor movement, confined during much of the time to certain of the skilled crafts, has functioned in the region. After more than a decade of effort beginning with the NRA period, union organization has established itself in the southern iron and steel, coal mining, shipbuilding, petroleum refining, pulp and paper, and tobacco industries, and has penetrated cotton textiles, hosiery, and furniture. Lumber workers remain largely unorganized. The more traditional areas of organization, in construction, printing, railroading, longshore work, and the like, have been materially strengthened.

No complete account of the development of the labor movement in the South has been written; indeed, much basic research remains to be done before a definitive history can be prepared. The purpose of this section is to present the main outline of the story as an aid to perspective in viewing current developments in labor organization in the region.

The Knights of Labor in the South

The Noble Order of the Knights of Labor was founded in Philadelphia in 1869 by an obscure group of garment workers. Its membership climbed slowly to 71,000 in 1884 and skyrocketed to 730,000 two years later. The organization became, for a brief period, the chief vehicle of labor protest against the conditions that attended the rapid spread of industrial capitalism in the United States during the latter part of the nineteenth century.

Assemblies[2] of the Knights were organized in Alabama and Kentucky as early as 1879, but membership was not appreciable in the region until 1884.[3] During the next 4 years, the movement spread rapidly. The first assembly in North Carolina was formed in June 1884;[4] by 1887 assemblies had been organized in most of the counties of the State.[5] Incomplete data for 1888 show 487 assemblies in 10 Southern States, including 101 in North Carolina, 65 in Louisiana, 64 in Alabama, 56 in Kentucky, and 54 in Virginia.[6] Meyers estimates that the membership of the Knights in 10 Southern States was about 30,000 in 1886.[7]

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[1] Prepared by H. M. Douty, Chief of the Bureau's Labor Economics Staff.

[2] The "assembly" was the unit of organization. Assemblies were composed of workers in one calling or else were "mixed"; i. e., composed of workers in various occupations and industries. Most of the assemblies in the South were of the latter type.

[3] Frederic Meyers: The Knights of Labor in the South (in Southern Economic Journal, April 1940, p. 483).

[4] H. M. Douty: Early Labor Organization in North Carolina, 1880–1900 (in South Atlantic Quarterly, July 1935).

Although the strength of the organization was most pronounced in the larger cities, local assemblies were scattered throughout the region. The poorer farmers contributed substantially to the membership of the Knights. Mitchell writes that of "112 assemblies in Alabama, Georgia, North and South Carolina which wrote in to the weekly journal [of the Knights] in 1888, 47 said their members were mainly farmers, 3 had mostly cotton mill hands, and 62 either had a mixture of farmers and artisans or did not state the composition."[8] Some effort was made to reach colored workers: there were a number of Negro assemblies in the South and some assemblies included both Negroes and whites. The Order was officially opposed to race discrimination.

According to its minute book,[9] Local Assembly No. 3606 in Raleigh, N. C., agitated for the 10-hour day, helped to conduct national boycotts, brought in speakers on labor subjects, encouraged study among its members, aided financially distressed brothers, and attempted to influence legislation. The movement touched many people with its message of the worth and dignity of labor and of the benefits of solidarity.

In a number of communities, cotton-mill operatives were organized. A long work stoppage took place at Augusta, Ga., where some 4,000 mill workers were out for about 2 months in an unsuccessful wage dispute. Other disputes involving cotton-mill workers occurred at Cottondale, Ala., Greenville, S. C., Maryville, Tenn., and Roswell, Ga. There were coal strikes in 1888 at Whiteside, Tenn., and at Pratt Mines, Ala. Sugar workers struck at Schriever, La., in 1887 and lumber workers at Ray, Ala., in 1890. The Knights also started many cooperative enterprises[10] in the South and participated actively in politics in some areas.

The Knights of Labor reached its greatest strength nationally in 1886, and thereafter declined rapidly. The peak in the South came a year or so later, but the decline was equally sharp. The town elements drifted away, and the remnants of the farm membership were attracted by the great Populist movement that developed in the region during the 1890's.

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[5] North Carolina Bureau of Labor Statistics, Annual Report, 1887 (p. 224).

[6] Meyers, op. cit. The 10 States are Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, and Virginia.

[7] See footnote 6.

[8] George S. Mitchell: Textile Unionism and the South (Chapel Hill, University of North Carolina Press, 1931) pp. 23–24.

[9] This minute book has been preserved in the North Carolina Historical Commission Library in Raleigh.

[10] Most of these enterprises were short-lived, but some lasted for a number of years.

Beginnings of Permanent Unionism Under American Federation of Labor

Almost a decade passed between the flurry of organization under the Knights of Labor and the second period of active union effort in the South. The American Federation of Labor, completely overshadowed by the Knights in the 1880's, managed to survive the deep depression of the nineties. Its membership was about 272,000 in 1897; under the stimulus of rising prices and generally prosperous business conditions, membership expanded to 1,556,000 in 1903. During this period, the Federation established a narrow base in the South.

Samuel Gompers became interested in the organization of southern workers as early as 1894.[11] At the American Federation of Labor convention in 1898, the executive council was instructed to place organizers in the southern area. Mr. Gompers was able to report to the 1899 convention that the "workers of the South are manifesting their appreciation of our efforts by forming unions, and uniting with our fellow workers in all parts of the country."[12] The convention instructed the executive council to take additional measures to stimulate organization in the South.[13]

For 3 or 4 years following 1898 labor activity was substantial in the South. Many groups of skilled workers formed local unions and affiliated with the national union of their craft.[14] The movement on the railroads, among the building trades, and in printing was highly significant. Some of these locals survived the decline in activity that occurred after 1902, combined into State federations of labor, and formed a permanent base for the labor movement in the region.

While skilled workers were rapidly forming unions, organization reached the factory employees and the Alabama coal miners. Little headway was made in the tobacco manufacturing industry. Locals of the International Tobacco Workers' Union were formed in North Carolina, Kentucky, and perhaps elsewhere in the South, but most of these locals quickly disintegrated. The union complained bitterly of the opposition of the "Tobacco Trust."[15]

The movement in cotton textiles was more vigorous and appeared first in Augusta, Ga., where the mills, late in 1898, announced a wage cut. The workers formed local unions and affiliated with the National Union of Textile Workers. This union had so few northern members that the southern workers found themselves in a majority. Prince Greene of Columbus, Ga., was president from 1898 to 1900, and secretary-treasurer from 1900 until the next year, when the United Textile Workers' Union was formed.

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[11] Samuel Gompers: Seventy Years of Life and Labor (New York, Dutton, 1925), I (p. 419).

[12] A. F. of L. Proceedings, 1899 (p. 9).

[13] Idem (p. 65).

[14] In North Carolina in 1901, for example, there were 26 locals of building trades workers, 13 of railroad workers, 8 in printing, and 11 locals of other types of skilled workers. See North Carolina Bureau of Labor and Printing, Annual Report, 1901 (pp. 386 ff.).

[15] E. Lewis Evans: Tobacco Workers (in American Federationist, September 1903).

When the wage cut was made effective in Augusta, the operatives in 8 mills struck. The workers eventually returned at the lower rate, but on the basis of no discrimination against the strike leadership and with several minor concessions from the employers. Moreover, the union was able to maintain itself in the Augusta area.[16]

In the meantime, textile locals appeared in North and South Carolina, with the employers resorting to lock-outs to destroy union organization.[17] The decisive test in North Carolina occurred in the fall of 1900, when a strike lasting more than a month affected all of the mills in Alamance County. The strike, which had its origin in a minor incident, developed into a major fight for the right to organize. Evictions, the lack of adequate relief, and a slow market for cotton goods caused the strike to collapse.[18] The defeat broke the back of cotton-mill unionism in the Carolinas.

On April 1, 1901, President Gompers of the American Federation of Labor arrived in Danville, Va. The textile local there had decided to attempt to gain the 10-hour day.[19] When shorter hours were refused, the operatives walked out. The strike lasted for a number of weeks, but ended in defeat for the men. After the Danville defeat, union membership in the South was again confined to the Augusta district. In the fall of 1901, the Augusta locals attempted to obtain a 10-percent wage increase. Ultimately, about 7,000 operatives were directly involved. The newly organized United Textile Workers contributed funds for the relief of the strikers and aided in other ways. The strike was unsuccessful, the Augusta locals were broken, and thus ended the first substantial movement for cotton-mill unionism in the South.

The United Mine Workers entered the Alabama coal fields not long after its formation in 1890. By 1902, some 65 percent of the Alabama miners were organized. Many of the operators entered into collective-bargaining agreements with the union. A strike occurred in 1904 when some of the companies refused to deal with the union.

The real test of union strength came 4 years later, when the remainder of the operators refused to renew the union agreement.

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[16] Mitchell, op. cit. (pp. 27 ff.).

[17] It is known that lock-outs occurred in Greenwood, Abbeville, and Bath, S. C., and at Greensboro and Fayetteville, N. C.

[18] Holland Thompson: From Cotton Field to Cotton Mill (New York, Macmillan Co., 1906) pp. 193–195.

[19] Apparently as a result of union agitation, the mill, which had been operating 12 hours daily, had announced late in 1900 that from January 1 to April 1 the schedule would be 10 hours, with 11 hours for the remainder of the year. The workers wanted a flat 10-hour schedule.

The union struck on July 6, 1908, and the stoppage lasted for about 2 months. Negro miners made up a substantial proportion of union membership in Alabama. White and colored miners exhibited marked solidarity during the struggle, but the race issue, raised by the companies, contributed greatly to the defeat of the strike.[20]

Quiescent Years, 1902–14

Union activity in the South between 1902 and the World War I period was confined largely, although not entirely, to the skilled trades. The period was not spectacular. There were many minor victories and numerous minor defeats for the skilled workers in unions. No major disputes occurred. Tangible improvement in economic position was secured in many situations as the result of persuasion or strike.

An indication of what happened may be furnished by random instances in North Carolina in 1906 and 1907. In the former year, the clerks of Salisbury organized and secured the earlier closing of stores; tinners in Charlotte won the 9-hour day; the printers in Wilmington gained an 8-hour day; a wage increase of 10 percent was secured by the machinists of Goldsboro. In 1907, the Asheville plumbers struck for the 8-hour day and compromised on 9 hours; the carpenters in Canton won the 9-hour day; in Wilmington, a cotton mill reduced hours from 11 to 10 when the employees, with the support of the local craft unions, asked for the reduction; the carpenters in Raleigh struck unsuccessfully for the 9-hour day.

These instances of union effort could be multiplied many times for the South as a whole. Taken together, their effect was not inconsiderable in the gradual improvement in labor standards that occurred in the region and in the remainder of the country during the decade preceding World War I.[21] There are no reliable estimates of union membership in the South during this period. It is certain that membership was relatively small.

A short but dramatic union episode during this period involved the lumber workers of the Southwest. The Brotherhood of Timber Workers, an independent union, was formed in 1910.[22] At the peak of its activity, this union had a membership of about 35,000 in the lumber industry of Texas, Louisana, and Arkansas. About half of the members were Negroes. In 1912 the union affiliated with the

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[20] Sterling D. Spero and Abram L. Harris: The Black Worker (New York, Columbia University Press, 1931), pp. 355–359.

[21] The improvement reflected gains made through collective bargaining and through State labor legislation. Between 1903 and 1909, for example, every State in the South passed child labor laws.

[22] The formation of the Brotherhood of Timber Workers had been preceded by a largely spontaneous strike over wages in 1907 among the timber workers of Louisiana and eastern Texas. Industrial Workers of the World, The Lumber Industry and Its Workers (p. 76).

Industrial Workers of the World. Employer opposition was bitter, and the efforts of the union to secure improvements in wages and working conditions were punctuated by lock-outs, strikes, and violence against union members. Jensen writes: "The union began to crack when some of the most obnoxious causes of dissatisfaction, such as payment in scrip and forced use of company stores and monthly payment of wages, were modified and small wage increases and shorter hours were granted. At the same time, the strain of blacklisting, discrimination, and fomenting of racial conflict had an effect. After 3 years of struggle, the union had been completely destroyed." [23]

There was also a measure of organization during this period; some desperate strikes occurred among the cigar workers of Tampa; and, toward the end of the period, signs of restiveness among the textile workers began to appear. In 1912, the American Federation of Labor held its convention at Atlanta, which had the effect of stimulating interest in unionism in the South. In cotton textiles, locals were formed during 1912 at Danville and Lynchburg, Va., and at Knoxville, Tenn. A long stoppage in Atlanta in 1914 gave the movement valuable publicity, and an excursion during the same year by the IWW into the industry at Greenville, S. C., served to point up the workers' grievances.[24]

War Boom and Postwar Collapse, 1914–22

During World War I, manpower shortages, rising prices, and a governmental policy favorable, on the whole, to the labor movement lent impetus to the growth of union organization. Conditions were generally conducive to the extension of unionism until the sharp depression beginning in mid-1920.

The economic impact of the war upon the United States was felt long before the country entered the conflict. Unionization, especially among skilled workers, increased at a rapid rate from 1915 onward. The movement among factory workers did not get under way significantly in the South until a year or two later.

The marked increase in organization among craft groups in the South was accompanied by numerous strikes. Most of these stoppages were on a small scale, but some, as in the case of the street-railway employees in Charlotte and Winston-Salem, N. C., and Greenville, S. C., developed into long and bitter struggles. Many of the strikes during the early part of the period were over the 8-hour day issue; later, as living costs began to rise, wage disputes were frequent. Union recognition was often one of the points at issue.

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[23] Vernon H. Jensen: Lumber and Labor (New York, Farrar & Rinehart, 1945), p. 91. See also Spero and Harris, op. cit. (pp. 332–333).

[24] Mitchell, op. cit. (pp. 32–35).

Aside from lumber and furniture, which remained relatively untouched, union activity penetrated deeply into the industrial life of the South during the First World War. Organization was extensive in tobacco, textiles, iron and steel, coal mining, and other industries.

TOBACCO INDUSTRY

In 1915, 3,245 members voted in a referendum to elect officers of the International Tobacco Workers' Union.[25] The only strength possessed by the union at this time was in a number of small factories (some of which were located in Kentucky) that catered to the union-label trade. The union had no influence among the workers in the major companies. Indeed, the union at this time was completely dependent upon the union label for tobacco products for its existence.

Beginning in 1916, locals of the union were formed in plants of the major companies, largely in the metropolitan New York area. Some of these locals were established during the course of unorganized strikes for wage increases and shorter hours.[26] Successful strikes and increased membership affected the character of the union. The use of the union label as an organizing device was largely discarded in favor of direct appeals to the workers to organize to improve their living standards.

In 1918, a number of short, spontaneous strikes occurred at the Durham, N. C., plants of the American Tobacco Co. and Liggett & Myers. A few of the workers sent for a union organizer. As a result, "a union was formed for the first time among the tobacco workers of Durham."[27] The companies resisted vigorously, however, and the union local was short-lived.

In Winston-Salem, N. C., the union met with greater success. In March 1919, the employees of the R. J. Reynolds Tobacco Co. began to organize. Membership increased rapidly. Despite some opposition from the Negro middle class of the community, colored workers joined in large numbers. By early summer, six large locals of tobacco workers had been established. On August 4, 1919, after much negotiation and the threat of a strike, R. J. Reynolds, Brown & Williamson, Bailey Bros., and Taylor Bros. signed an agreement providing for the 48-hour week, a 20-percent wage increase, and time and a half for overtime.[28] This union agreement represented the first ever signed by a major tobacco company in the South.

On the basis of its Winston-Salem success, the union reentered Durham and reached into Reidsville, where the American Tobacco Co. had a plant. In both cities, an appreciable membership was built up. Organizing activity was carried on for brief periods in other southern communities. The Winston-Salem victory was not repeated, however, and even in Winston-Salem the union's efforts to hold its membership were ineffective. By 1922, the membership of the union had been reduced to its prewar level.

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[25] Tobacco Worker, November 1915.

[26] Idem, October 1916.

[27] Idem, March 1918.

[28] Idem, August 1919.

COTTON-TEXTILE INDUSTRY

During the war and postwar boom, a very substantial union movement developed in the cotton-textile industry. Large numbers of workers were recruited and many strikes and some lock-outs occurred. The union was able to secure concessions at some mills and undoubtedly exerted material influence on conditions of work within the industry during this period. The vigorous unionism that developed, however, failed to survive the sharp collapse in business activity in 1920–21.

The United Textile Workers was active among the South Carolina cotton-mill operatives during 1915 and 1916. Mills in Greenville County were especially well organized and an appreciable membership was built up at other points in the State. The discharge of union members was the immediate point at issue in some of the disputes that took place at Greenville, Anderson, Columbia, and Westminster during this period. In 1917, major activity shifted to Georgia. The most noteworthy event was the organization of the industry in Columbus. A strike in this city resulted in a partial victory for the union in a settlement finally effected through the War Labor Board.

Mitchell writes of the period 1913–18:

> Early in 1919 the union's [United Textile Workers] activity in the South underwent so many changes that it is well to regard the years from 1913 to the end of 1918 as forming a distinct period in the development of the movement. Perhaps the chief characteristic of these 5 years was the confinement of unionism to the immediate vicinity of the places in which disputes concentrated the union's forces. The union did not have enough outside financial assistance to enable it to throw a network of organizers through the region. Possibly its strategy was to give its entire attention to each strike situation, in the hope that one substantial victory would make the union's position stronger than many quick failures. As for membership, it signed the workers by hundreds, and sometimes, as at Greenville and Anderson and Columbus, by thousands in the particular places in which it happened to be engaged; but at no time did the movement show a disposition to extend beyond the areas within easy reach of the organizers who were leading strikes.[29]

In the sense that textile union activity penetrated wider areas, 1919 appears to differ from 1918 and earlier years. Organization reached North Carolina and spread rapidly there, and South Carolina and Georgia continued to be centers of union activity. The 48-hour week had become a crucial demand. Early in 1919, strikes over the 48-hour issue took place at widely scattered points in the South; in several of these cases the workweek was reduced from 60 hours to 55 hours and other mills made this same reduction voluntarily.

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[29] Mitchell, op. cit. (pp. 40–41). During the 1913–18 period, according to Mitchell, the United Textile Workers chartered about 40 locals in the South.

Union membership increased rapidly in North Carolina during 1919. At the convention of the State Federation of Labor in August, the claim was made that 30,000 workers had joined the union during the preceding few months.[30] By September, 43 locals had been chartered by the United Textile Workers in North Carolina.[31] The impetus to organization in North Carolina apparently came from a relatively successful strike growing out of local issues in Charlotte. In February 1919, a number of North Charlotte mills removed a wartime bonus of 35 percent of wages. Operatives in the weave room of one of the mills walked out and called in union organizers.[32] The strike spread. Finally, a settlement was negotiated which provided for the reinstatement of all workers without discrimination as to union affiliation; the 55-hour week; incorporation of the bonus in the wage bill; and free house rent for the duration of the strike. Union recognition was not achieved. A similar settlement was made after a lock-out of 1,500 workers in East Charlotte.[33]

The settlement made in Charlotte was satisfactory enough to those involved to enable the union to hold its membership. Indeed, the union obtained members at other mills in the Charlotte area not affected by the dispute, and the gains made in Charlotte were broadcast in mill communities throughout the State. The growth of the movement in North Carolina was accompanied by a whole series of strikes, many of which resulted in improved conditions for the strikers. Organization flowed over into the hosiery industry in High Point. In addition to Charlotte, stoppages occurred in cotton mills in Concord, McAdensville, Albemarle, Mooresville, Salisbury, Raleigh, Gastonia, and elsewhere in the State during 1919.

It was during this period that the United Textile Workers, for the first time, was able to point to substantial achievements in the form of reductions in hours, increases in wages, and some improvements in working conditions. Had the prosperity of the textile industry continued for a period of years, the union might possibly have entrenched itself strongly in the South. However, it is not at all certain that this would have happened, even if prosperous conditions had continued, because employer opposition was vigorous and many of he workers, who rushed into the union under the spur of specific rievances, tended to lose interest when these grievances were adjusted. n North Carolina, for example, the declining vitality of the movement was apparent in 1920. Membership slowly dropped away, despite the persistent efforts of a corps of organizers. The sharp depression beginning in 1920 and continuing through 1921 provided the occasion for the virtual disappearance of union strength.

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[30] News and Observer (Raleigh, N. C.), August 12, 1919.
[31] Mitchell, op. cit. (p. 47).
[32] Observer (Charlotte, N. C.), February 26–28, 1919.
[33] Idem, May 31, 1919.

The union in the South did not break before a final struggle centering in and around Charlotte, N. C., where the union had retained a considerable membership. With the advent of the business depression in 1920, the mills began to reduce wages. By the spring of 1921, daily wages had been cut between 30 and 50 percent and the mills were running part time. The national officials of the United Textile Workers were extremely reluctant to sanction a strike, as requested by the North Carolina locals. Business conditions made a successful outcome doubtful; moreover, union funds were so low as to preclude the payment of strike benefits. However, a conference of representatives of 40 North Carolina locals was held at Concord on April 30, 1921. At this conference, the United Textile Workers agreed to lead the strike, and the representatives of the local unions agreed to waive their right to strike benefits. The national union promised such financial assistance as its funds would permit.[34]

About 9,000 workers answered the strike call on June 1, 1921. Mills in Charlotte, Rock Hill, Huntersville, Concord, and Kannapolis were affected. The mills were under no pressure to reopen. After the strike had continued for some weeks, an antiunion publicity campaign was inaugurated. For over 2 months, however, the strikers stood firm. Then the Governor dispatched troops to Concord and Kannapolis to restrain picketing, although no violence had occurred. The workers drifted back to the struck mills. By the end of August the strike was completely over. The workers went back under the wage rates prevailing when the strike was called. The union lost most of its membership. Thus ended the war and postwar boom period of textile unionism in the South.

COAL MINING, STEEL, AND OTHER INDUSTRIES

The World War I period provided a fresh opportunity for the United Mine Workers in the Alabama coal fields. In 1917, the union reentered the district. After building an appreciable membership, the union secured wage increases through strike action. Union recognition was not obtained.

Alabama miners participated in the national coal strike that began on November 1, 1919. A commission, appointed by President Wilson to study the situation and make an award, granted an increase in wages and urged the Alabama operators to "arrange to meet with representatives of the miners and put into effect the award." Apparently, most of the operators were willing to grant the wage increase, but they were not willing to establish contractual relations with the union. The United Mine Workers, however, insisted upon the creation of joint machinery for the settlement of disputes. The national officers of the union ordered a State-wide strike for September 7, 1920.

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[34] Mitchell, op. cit. (pp. 51–52).

About 12,000 of the 27,000 coal miners in Alabama at that time walked out. About three-fourths of the strikers were Negroes. There was a good deal of disorder, and the National Guard was sent into the fields shortly after the dispute began. "The Alabama scene," according to Spero and Harris, "was as primitive and brutal as any of the earlier coal tragedies in which white men had been the sole participants." [35]

After 5 months, the strike began to weaken, although most of the men still held out. At this point, the union and the operators agreed to arbitrate the issues in dispute: (1) union recognition; (2) abolition of subcontract system; (3) reemployment of strikers; (4) readjustment of the day wage rate; (5) machinery for the settlement of disputes. The Governor of Alabama, who served as sole arbitrator, ruled against the union on every point. He held that the operators were under no obligation to reemploy striking miners. This award spelled temporarily the end of organization among the Alabama coal miners. After having spent 3 million dollars in Alabama, the United Mine Workers found itself with only a handful of determined unionists retaining membership cards.

Unionism also appeared during this period in the Alabama iron and steel industry. Unions of skilled craftsmen—machinists, sheet-metal workers, electricians, and others—entered the steel mills and metal working shops of the Birmingham district, and obtained a substantial membership. The International Union of Mine, Mill, and Smelter Workers organized the ore mines and also enrolled those workers in the mills who were not included in the various metal-trades unions.

When the companies refused the 8-hour day and other demands put forward by the workers, a general metal-trades strike was called. The strike was not successful. As a result of this defeat, Birmingham took little part in the great steel strike of 1919.[36]

In 1919, two American Federation of Labor unions—the International Timber Workers Union and the United Brotherhood of Carpenters and Joiners—recruited members among southern logging and sawmill workers. Union activity centered in Bogalusa, La., which was then among the largest lumber centers in the world. The Timber Workers were active at other points as well. Company opposition was bitter, and union members, both white and Negro, were subject to discrimination. A vigilante group was formed by the anti-union forces. On November 22, 1919, this group entered the union office in Bogalusa, killing Lum Williams of Mississippi, leader of the lumber workers in the Bogalusa area, and two other union men.[37] The episode effectively ended organizing efforts in the lumber industry in the South at that time.

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[35] Spero and Harris, op. cit. (p. 361).
[36] Idem (pp. 247-249).

Clearly, a fairly extensive labor movement existed in the South during the World War I period. By 1922 or earlier, however, unionism had been liquidated in many of the industries in which substantial strength had been built up during the preceding 6 or 7 years. Cotton textiles, tobacco, iron and steel, and coal mining could muster, at best, a mere handful of union members, and unionism as a positive force had ceased to be of any importance in these industries. A measure of organization which had been built up in the petroleum industry in Texas had evaporated. Furniture and lumber had scarcely been touched by the wartime development. The southern labor movement by 1922 was again composed overwhelmingly of locals of skilled workers, although a residue of influence of factory unionism remained.

Upsurge in Textiles, 1922–29

Union activity in the southern textile industry did not entirely cease after the collapse of the movement in 1921. In a number of places in the South, local labor people managed to keep the spark of unionism alive in the cotton industry. Some help was obtained from the American Federation of Hosiery Workers.[38] This union became concerned about 1925 with the development of the full-fashioned hosiery industry in the South.[39] After that year, "the union has kept organizers in the South continuously, meeting the industry as it expanded in that section. It has not been content with sending organizers from the North, but has developed a southern leadership which now [1938] makes up the great majority of the southern organizing staff of the Federation." [40]

The textile industry in the South, in contrast with the New England industry, was relatively prosperous during the years following 1922. Union activity reappeared on a small scale in North Carolina. Textile locals were reorganized in Charlotte, Salisbury, and a number of other towns during 1922 and 1923. Several small strikes occurred in the Charlotte area and in the spring of 1923 many mills raised wages 10 percent or more.[41] In the fall of 1924 the workers in a Lexington, N. C., mill conducted a successful 1-week strike against a wage reduction.[42] Some gains were made through a strike of unorganized workers in the spring of 1925 at a cotton mill in Wilmington, N. C.[43] There were several other small strikes in North Carolina in 1925 and 1926.

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[37] Jensen, op. cit. (pp. 91–94).

[38] Prior to 1933, when it assumed jurisdiction over seamless hosiery workers, this union was known as the American Federation of Full-Fashioned Hosiery Workers.

[39] George W. Taylor: The Full-Fashioned Hosiery Worker (Philadelphia, University of Pennsylvania Press, 1931), p. 83.

[40] Laurence Rogin: Making History in Hosiery (Philadelphia, American Federation of Hosiery Workers, 1938), p. 15.

An important dispute began on August 4, 1927, when the unorganized employees of a cotton mill in Henderson, N. C., walked out. These workers were attempting to obtain restoration of a wage cut made in 1924; they complained also about the condition of the mill houses and other matters. The strikers were aided by an organizer for the hosiery workers, and aroused the interest of officials of the State Federation of Labor. The walk-out lasted for about a month. Under threat of eviction from company houses, the workers returned to their jobs.[44] The dispute revived the whole question of textile unionism in the Upper Piedmont, and led to the formation late in 1927 of the Piedmont Organizing Council under the leadership of Alfred Hoffman of the hosiery workers. This group, in cooperation with local unions and city central bodies, conducted general union propaganda. Southern delegates to the 1928 convention of the American Federation of Labor laid plans for a union drive. Thus, toward the end of the decade, signs pointed to an expansion of union activity.

In the meantime, a new grievance had developed. In New England, industrial rationalization was being utilized in an effort to arrest the decline in cotton manufacturing in that area.[45] Southern mill management could not be indifferent to this new development. Consequently, the installation of efficiency systems in the South became widespread. The new production methods frequently were introduced quite abruptly, often without adequate technical preparation. Little effort was made to enlist the cooperation of the mill workers. The operatives themselves called the new techniques the "stretch-out" and added another grievance to the list that included low wages and long hours. The "stretch-out" was a contributing factor of considerable importance in the series of explosive strikes in 1929.

In 1929 cotton-mill strikes occurred in Gastonia and Marion, N. C., and at a number of places in South Carolina—Ware Shoals, Greenville, Woodruff, Central, Anderson, and Union. In addition, a bitter dispute in the rayon industry took place at Elizabethton, Tenn.

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[41] American Federationist, July 1923 (p. 593); Mitchell, op. cit. (pp. 57–58).

[42] Idem, December 1924 (p. 1001).

[43] Idem, April 1925 (pp. 268–269).

[44] News and Observer (Raleigh, N. C.), August 11–September 10, 1927; Mitchell, op. cit. (pp. 61–62).

[45] During the 1920's, the cotton manufacturing industry in New England was cut down by bankruptcy and voluntary liquidation. On the other hand, well over a million spindles, with a proportionate amount of complementary machinery, were added to southern equipment between 1923 and 1929. During the latter year, southern mills accounted for 76.3 percent of total cotton consumption in the United States.

These stoppages cannot be described in detail, owing to space limitations, but their chief characteristics should be briefly noted.

The Loray mill in Gastonia, N. C., was selected by the National Textile Workers' Union, a Communist-controlled organization affiliated with the Trade Union Unity League,[46] as the first objective in a drive for southern membership. Organization work began in January 1929. In this mill, an intensive drive to lower production costs had begun in 1927, with the result that "although expenses decreased and production mounted, to the great satisfaction of the board of directors, the operatives reacted violently against the new system and the man who inaugurated it."[47] Worker discontent became so great that the company in late 1928 replaced its resident manager and promised to lessen the intensity of the efficiency program.

The National Textile Workers' Union apparently was able to recruit membership rapidly in this situation. On March 25, 1929, five active unionists were discharged. The strike began on April 1, when approximately 1,800 of the 2,000 workers left the mill. The strike did not last effectively for much more than 2 weeks. After the first few days, the workers began to drift back to the mill, although the mill remained somewhat handicapped in its operations until the latter part of May.

The economic demands of the strikers received no consideration.[48] The political beliefs of the strike leadership were made the central issue and the State militia was sent into the community. Strikers were roughly handled, union headquarters were wrecked, workers were evicted from company-owned houses, and the dispute ended in a paroxysm of violence.

In Marion, N. C., another bitter dispute occurred, under the leadership of the United Textile Workers of the American Federation of Labor.[49] The strike began on July 11, when 650 operatives of the East Marion Manufacturing Co. walked out. For a time, the workers of the nearby Clinchfield Manufacturing Co. were also involved. This strike was related directly to the "stretch-out." When the superintendent of the East Marion mill added 20 minutes to the 10-hour work-shift to recoup installation losses for which the management was responsible, a committee of operatives sought union assistance. As in Gastonia, the strike was called when the mill began discharging active unionists. A month later, workers at the two Clinchfield mills were locked out. The lock-out was converted into a strike.

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[46] The Trade Union Unity League and the unions affiliated with it were later disbanded after a change in Communist Party lines on trade-union tactics.

[47] Robin Hood: The Loray Mill Strike (unpublished M. A. thesis, University of North Carolina, 1932, p. 25). This thesis contains perhaps the best account of the Gastonia strike. See also B. U. Ratchford: Economic Aspects of the Gastonia Situation (in Social Forces, March 1930); Tom Tippett: When Southern Labor Stirs (New York, Jonathan Cape and Harrison Smith, 1931), chapter 6; and Mitchell, op. cit. (pp. 70–75).

[48] The union demands included (1) a minimum wage of $20 per week, (2) the 40-hour week, (3) better working conditions, (4) the addition of screens and bathrooms to the company houses, and (5) union recognition.

[49] See Tippett, op. cit., chapters 7–8.

The strike lasted for 3 months. It was called off after troops had stopped all forms of union activity and after a conference had been arranged to work out a settlement. A "gentlemen's agreement" was reached at the conference for (1) a trial reduction in the length of the workweek (to 55 hours); (2) the reemployment of all but a few of the strikers; and (3) the election of worker committees to deal with management. The reemployment provisions of this agreement were not kept. The situation was particularly bad at the East Marion plant. On October 1, the night shift walked out. When the day shift appeared, armed deputies inside the mill released tear gas and fired at the workers. Six strikers were killed and 30 wounded. Seven deputies were tried for murder; all were acquitted; four union men, on the basis of an earlier minor incident, were subsequently convicted of rioting. This ended the union effort at Marion.[50]

The 1929 stoppages in South Carolina were largely spontaneous and in some instances the workers indicated that they did not desire union participation. About 1,200 workers quit successfully at Ware Shoals in March in protest against a recently installed efficiency system. A short strike at Pelzer was settled at a conference of the strike committee and the mill management. A long dispute in four plants of the same company in Greenville and Woodruff ended without substantial gain for the workers. A 1-day strike against the "stretch-out" was settled favorably at Central. Other strikes occurred at Anderson and Union.

There were no union organizers on the scene on March 12, 1929, when 5,000 employees of the Bemberg-Glanzstoff rayon companies in the mountain town of Elizabethton, Tenn., began their walk-out. Not until the dispute got under way were requests for organizers sent to the American Federation of Labor. Low wages, long hours,[51] and the stretch-out were among the causes of discontent. The strikers demanded a 25-percent wage increase and union recognition. Injunctions were issued against the strikers and troops were sent in.

The strike ended after 11 days. The companies agreed to equalize the wages of men in the two plants, to raise the wages of women by about 20 percent, and to meet with employee committees over grievances. The union was not recognized.

Shortly after the end of the strike, many active unionists were discharged. On April 3, two union men, including the personal representative of President Green of the American Federation of Labor, were kidnapped in Elizabethton and carried from the State. They returned several days later accompanied by President Green. A mass discharge of unionists occurred on April 15 and 4,000 workers walked out in a second strike. Again troops were brought in and a considerable amount of violence developed. The union's funds were not adequate for the relief problem created by the strike. The strikers began drifting back to work and on May 25 a settlement was negotiated. This settlement again did not include union recognition.

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[50] As a result of the strike, hours were reduced. A sewer system and plumbing were installed in the East Marion village. The Clinchfield mills granted a small wage increase.

[51] Average weekly wages were about $15 for males and $10 to $11 for females for a 56-hour week.

After the strike, a company union was installed and an elaborate company welfare program inaugurated. The United Textile Workers tried unsuccessfully to hold its membership. An abortive strike took place in March 1930, marking the final collapse of the union in Elizabethton.

The 1930 Organizing Campaign

Tremendous enthusiasm for a southern organizing campaign was displayed at the 1929 convention of the American Federation of Labor.[52] The executive council of the Federation reported: "These workers in the South are poor and they have suffered much by the recent strikes. It will take time to develop self-supporting unions. Responsibility for establishing higher wages and better conditions of employment must rest with the national and international unions." [53] A resolution for an organizing campaign introduced by the United Textile Workers was adopted.

The drive got under way on January 6, 1930, at a large conference in Charlotte, N. C. Among those at the conference were 229 delegates from southern unions, organizers from 26 national unions and the Federation, delegates from seven State federations and from a number of city central bodies, and local workers from 95 different crafts. It was decided to establish headquarters at Birmingham, and a coordinating committee of three was selected. At the height of the drive, more than 50 organizers were in the field.[54]

Part of the initial strategy of the campaign was to convince employers of the advantages of trade-unionism. During the years of relative economic stability following 1922, the labor movement had become increasingly interested in union-management cooperation and in production problems. The United Textile Workers itself had participated in a union-management cooperation effort since 1924 in the Naumkeag Steam Cotton Mills at Salem, Mass.[55]

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[52] A F. of L. Proceedings, 1929 (pp. 225–283).

[53] Idem (p. 60).

[54] Idem, 1930 (pp. 85–86).

[55] See Richmond C. Nyman and Elliott Dunlap Smith: Union-Management Cooperation in the "Stretch-Out" (New Haven, Yale University Press, 1934) for a detailed account of the Naumkeag experiment.

At least at this time the union-management cooperation idea failed to appeal to either employers or workers in the South.[56] Therefore, a more militant approach was adopted. Two factors served as barriers to success. The first was the general business depression beginning in the fall of 1929. In the second place, the union resources available for the campaign were not large. Despite these obstacles, 112 new local unions had been organized in the South by September 1930; 81 of these locals were in industries other than textiles.[57] The 31 new locals of the United Textile Workers were found in Virginia, North and South Carolina, Georgia, Alabama, and Tennessee.

The strength of cotton unionism was in the upper Piedmont. In North Carolina, the union signed up large numbers of workers at the Marshall Field mills in Leaksville-Spray and Draper, and at the great Cone mills in Greensboro. In Danville, Va., the union built up a substantial membership at the Riverside and Dan River Cotton Mills.

The test came at Danville, where the unqualified refusal of the company to deal with the union made a stoppage almost inevitable. For months, the mill refused to meet with union representatives; during the same period active union workers were being discharged. The national convention of the United Textile Workers authorized a strike and 95 percent of the union members in Danville voted for a walk-out. The strike of 4,000 workers began on September 29, 1930.

The strike had substantial support from the community at large. All offers of mediation were refused by the company. Injunctions restrained effective picketing. Strikebreakers were imported. Minor acts of violence occurred and State troops were sent in. Eviction notices were issued. The relief problem faced by the union increased in seriousness as the months passed.

The strike was broken after 5 months. The Danville defeat marked the end of the southern organizing campaign.[58] Textile-union membership elsewhere in the South melted away, although the United Textile Workers retained a small following in the region.[59] The deepening economic depression provided poor soil for new union growth.

Labor Unrest in Depression

The depression did provide the occasion for two instances of largely unorganized labor revolt in the South. During the summer and fall of 1932, a series of strikes swept over North Carolina.[60] The ranks of the strikers were composed of seamless-hosiery workers, full-fashioned hosiery workers, silk workers, cotton-mill operatives, and furniture workers.

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[56] Jean Carol Trepp: Union-Management Cooperation and the Southern Organizing Campaign (in Journal of Political Economy, October 1933).

[57] A. F. of L. Proceedings, 1930 (p. 86).

[58] See Tippett, op. cit., chapter 10; Herbert J. Lahne: The Cotton Mill Worker (New York, Farrar & Rinehart, 1944, pp. 221-224.)

[59] See reports in the Textile Worker, 1932.

On July 18, 1932, a few hundred stocking boarders walked out of six hosiery mills at High Point, N. C. The walk-out was in protest against a drastic wage reduction, the second of the year. The movement spread until 24 hosiery mills employing 5,000 seamless-hosiery workers were closed.[61] After 10 days, the dispute was settled by the restoration of the wage cut and certain other concessions.

On August 23, workers in three cotton mills in Rockingham walked out. The demands included restoration of two wage cuts made during the year, the 10-hour day, and a reduction in the rent of company-owned houses. Railroad union locals in Spencer and Hamlet, textile workers in Salisbury, and farmers from the surrounding countryside provided food for the strikers. The stoppage lasted for almost 2 months. None of the strikers' objectives were gained except the reinstatement of all employees. Other North Carolina strikes during this period involved 600 full-fashioned hosiery workers in High Point, about the same number of cotton-mill workers in a mill village near High Point, 500 employees of a silk works in High Point, and a thousand furniture workers in Thomasville.

Walk-outs during 1932 were largely spontaneous. The seamless-hosiery workers in High Point formed an independent union during their strike; this unaffiliated union had a checkered career for several years and then expired. In Rockingham, an independent union was formed just prior to the strike and collapsed when the walk-out failed. Some workers in High Point joined the American Federation of Full-Fashioned Hosiery Workers and the American Federation of Silk Workers.

In the Kentucky coal country, where unionism had never developed, revolt also flared over the conditions produced by wage cuts and part-time work during the depression. Discharges for union activity accompanied the beginnings of unionization. In April 1931, 18,000 miners walked out under the leadership of the United Mine Workers. After a gun battle between miners and deputies at Evarts, the militia was sent into Harlan County. The leadership of the strike shifted to the Industrial Workers of the World. The strike was broken. An attempt by the Communist National Miners' Union to call a strike in neighboring Bell County on January 1, 1932, failed.

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[60] For a detailed account of these stoppages see H. M. Douty: Labor Unrest in North Carolina, 1932 (in Social Forces, May 1933).

[61] Owing mainly to the action of roving bands of unemployed workers, over 150 industrial plants in and around High Point were closed for a few days.

The NRA Period

These labor disputes, and others of lesser significance, revealed the existence of deep unrest. With the passage in 1933 of the National Industrial Recovery Act, which guaranteed to labor in section 7 (a), the right to bargain collectively through representatives of its own choosing, large numbers of workers in the South and elsewhere crowded into unions. As it turned out, the labor provisions of the Recovery Act were not highly effective because of the lack of adequate enforcement machinery. However, the collective-bargaining clause of the act, together with a measure of industrial recovery, unquestionably gave rise to a great upsurge of union activity.

Some unions were more active during the NRA period than others. The United Mine Workers, for example, sent a corps of organizers into the coal country. The third major attempt to organize the Alabama field began in the summer of 1933. By 1935 the union had more than 23,000 members in Alabama, more than half of whom were colored. On May 26, 1937, the United Mine Workers signed contracts with every mine in the State.[62] The miners' union also obtained a large membership in Tennessee. In August 1938, the Harlan County Coal Operators' Association signed the standard Appalachian agreement, thus ending an era in the history of "bloody Harlan." [63]

The tobacco workers' union extended its influence during this period. As early as November 1933, the union reported that 90 percent of the white workers in the cigarette department of the American Tobacco Co. in Durham, N. C., had joined the organization.[64] By the summer of 1934, the white employees of Liggett and Myers in Durham had also organized, and there was union membership in Reidsville and Winston-Salem. The union also established locals in Virginia. Negro tobacco workers were drawn into the movement, but were not at this time effectively integrated into the union. By the end of the NRA period, the union had a contract with the Brown and Williamson Tobacco Co. and with a number of smaller firms,[65] and apparently exerted some influence on the major companies.

Although some unionism developed in the southern iron and steel industry during the NRA period, the movement was not strong enough to exert much influence on labor relations. Some union locals were formed among Alabama ore miners. The petroleum industry in the Southwest was penetrated for the first time since the World

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[62] United Mine Workers Journal, June and July 1937.

[63] Idem, October 1938.

[64] Union Herald (Raleigh, N. C.), November 2, 1933.

[65] Herbert R. Northrup: The Tobacco Workers International Union (Quarterly Journal of Economics, August 1942). This article contains an excellent account of the development of the union, including an analysis of the internal struggle that resulted in a change in national leadership in 1939.

War I period. Union activity in the southern lumber and furniture industries was meager. On the other hand, many of the workers in the semiskilled and skilled trades were organized in most of the southern cities, some for the first time. Many city central bodies were revived, some new ones organized, and functioning city centrals greatly strengthened.

The most spectacular development in southern unionism during the NRA period occurred in cotton textiles. The United Textile Workers quickly gained a substantial membership in cotton mills throughout the region; the hosiery workers' union also was active. Discharges for union activity and other violations of the labor provisions of the NRA were numerous. The "stretch-out" problem was intensified by the efforts of mill managements to cut costs in face of the minimum-wage and maximum-hour provisions of the cotton-textile code. Scattered local strikes did not prove effective in improving conditions in the industry. At the union convention in August 1934, delegates from the South joined with delegates from New England in calling for a general strike. The convention fixed September 1 as the date for the stoppage.

Unsuccessful efforts were made to forestall the strike. On September 1, about 100,000 cotton operatives in the South walked out. At its peak, the workers on strike in the South numbered about 170,000.[66] Shortly after the beginning of the strike, President Roosevelt appointed a board of inquiry. This board recommended: (1) that a new textile labor relations board be appointed; (2) that the Federal Trade Commission investigate the ability of the industry to support a higher wage structure; (3) that the cotton, wool, and silk codes be amended to permit the functioning of a special committee to regulate the "stretch-out"; (4) that a study be made by the U. S. Department of Labor of occupational wage rates in the industry.

On the basis of these recommendations, the United Textile Workers called off the strike on September 22. Subsequently, President Roosevelt appointed a textile labor relations board to investigate alleged violations of section 7 (a) of the NRA, to arbitrate questions voluntarily submitted, and to exercise such functions as might be granted by code provision. This board appointed a special committee to investigate the subject of the "stretch-out." The Bureau of Labor Statistics initiated a survey of hours and earnings in the principal textile industries and the Federal Trade Commission began a survey of the financial condition of textile enterprises.

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[66] The vast majority of those on strike in the South were cotton-textile workers. The strike was extended to the wool and worsted, silk, hosiery, and miscellaneous textile industries, but these industries (except hosiery) were very thinly represented in the South.

This greatest of all textile strikes brought few tangible or immediate gains to the workers. The companies did not recognize the union, wages remained unchanged, and, as it turned out, the new textile board was no more effective than the old in protecting the right of workers to organize and bargain collectively. The use of the "stretch out" was apparently tempered. The workers themselves interpreted the result as a defeat. Many were refused employment at the end of the strike, and union membership declined sharply during the months that followed.

The textile strike marked the high tide of unionism in the South during the NRA period. Loss of the strike had unfavorable repercussions upon union organization in other industries. In textiles, however, the union retained part of its membership, and gains in other industries by no means disappeared. When the NRA (in May 1935) was declared unconstitutional, the labor movement in the South was considerably stronger than it had been 2 years earlier.[67]

National Labor Relations Act, Union Rivalry, and War Years 1935–45 [68]

Two developments in 1935 were to have great significance for the labor movement in the South and elsewhere.

Less than 2 months after the invalidation of NRA, the National Labor Relations Act became law. One of the purposes of this act was to continue and strengthen the collective-bargaining provisions of section 7 (a) of the National Recovery Act. The act asserted that employees in industries under its jurisdiction had the right to self-organization, and employers were forbidden to engage in certain "unfair labor practices" that tended to discourage union membership. The act also placed upon employers the duty to bargain collectively with representatives freely chosen by their employees. The effective administration of the act was initially hampered by the question of constitutionality; this question was resolved in April 1937.[69]

Shortly after the 1935 convention of the American Federation of Labor, a group of union leaders formed the Committee for Industrial Organization (CIO). This action represented almost the last stage in a long conflict within the Federation over the appropriate form of union organization for the mass-production industries. Involved were the jurisdictional claims of the craft unions in the steel, automotive, rubber, and similar industries. A substantial minority opinion within the Federation held that such industries could only be effectively organized on an industrial basis.

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[67] Labor organization in southern agriculture is not covered in this article. It should be noted, however, that the Southern Tenant Farmers Union (now the National Farm Labor Union affiliated with the American Federation of Labor) was formed in 1934. For an exhaustive account of farm labor unionism in the South see Bureau of Labor Statistics Bulletin No. 836, Labor Unionism in American Agriculture (pp. 256–355).

[68] The writer is indebted to the Union and Management Research Division of the Bureau's Industrial Relations Branch for assistance with this section.

[69] *Associated Press* v. *National Labor Relations Board*, 301 U. S. 103; *National Labor Relations Board* v. *Jones & Laughlin Steel Corp.*, 301 U. S. 1; *National Labor Relations Board* v. *Fruehauf Trailer Co.*, 301 U. S. 49; *National Labor Relations Board* v. *Friedman-Harry Marks Clothing Co.*, 301 U. S. 58; *Washington, Virginia & Maryland Coach Co.* v. *National Labor Relations Board*, 301 U. S. 142.

Almost immediately after the organization of the Committee, requests for organizing assistance began to pour in from workers in many industries, and the Committee was soon carrying on a tremendous organizing campaign. In 1938, the Committee became the Congress of Industrial Organizations, thus creating a rival to the existing labor federation.[70]

In terms of the southern labor movement, the most outstanding action of the CIO was the creation, in March 1937, of the Textile Workers Organizing Committee in agreement with the United Textile Workers.[71] In the organizing campaign that followed, the TWOC proceeded cautiously, utilizing fully the procedures of the National Labor Relations Act. Strikes were avoided wherever possible. A recession in business activity, beginning in the fall of 1937 and lasting into 1938, tended to slow the drive.

As of May 31, 1941, the Textile Workers Union (CIO), which had grown out of the Organizing Committee,[72] had won National Labor Relations Board representation elections in 46 southern cotton mills employing over 32,000 workers; in addition, the union had been certified without elections as collective-bargaining agent in five southern mills. In these 51 mills, however, the union had been able to secure actual collective-bargaining agreements in only 29. As of May 31, 1941, the union had 23 collective agreements covering over 17,000 workers with southern cotton mills.[73]

After 1941, the union advance continued slowly. Contracts were signed with a number of the larger mills, including the Erwin Cotton Mills and the Kendall Mills. An important election, and subsequently an agreement, was won at the Riverside and Dan River Cotton Mills.[74] The tempo of the union's activity in the South during 1943–46 can be gaged from the report of its executive council to the fourth biennial convention: "The union's organizational progress in the South continued slowly but certainly. . From Virginia to Alabama we picked up mill after mill during the 3 years, all but a few of them cotton mills. TWUA also invaded Texas for the first time, winning elections in 11 mills in the eastern part of the State. . . . In point of numbers, workers organized during the 3 years in the South were principally concentrated in North Carolina and Georgia." [75] It was stated that 20 percent of the southern cotton and rayon workers were represented by the Textile Workers Union.[76]

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[70] An excellent brief account of the formation of the CIO may be found in Harry A. Millis and Royal E. Montgomery: The Economics of Labor: Organized Labor (New York, McGraw-Hill Book Co., 1945), III (pp. 201–242).

[71] In 1939, a group of locals of the United Textile Workers was reinvested with the charter of that organization by the American Federation of Labor. In the same year the Textile Workers Organization Committee and the majority group in the United Textile Workers united to form the Textile Workers Union of America (CIO). Thus, at the present time both the AFL and the CIO have unions competing for membership in the textile industry. See Herbert J. Lahne: The Cotton Mill Worker (New York, Farrar & Rinehart, 1944), pp. 262–269, 273–277.

[72] See preceding footnote.

[73] Lahne, op. cit. (pp. 270–271).

[74] Textile Workers Union of America, Third Biennial Convention, 1943, Proceedings (pp. 121–122).

Meantime, the United Textile Workers (AFL), which was reconstituted in 1939, also made some progress in the South. By September 30, 1942, the UTW had won bargaining rights in nine southern cotton mills employing almost 6,000 workers [77] and additional gains were made later.[78] Membership in the United Textile Workers nationally has increased rapidly from a very small number in 1939.[79] The bulk of the membership in both AFL and CIO unions at present is in branches of the industry other than cotton.

With respect to the South, the existing situation is different from any existing in the past. Cotton unionism is functioning in the South; a number of mills, including some very large units, are under contract.[80] Nationally, textile unionism has never been stronger. However, the bulk of the industry in the South remains unorganized.

As previously stated, the Tobacco Workers International Union (AFL) concluded collective-bargaining agreements with a number of companies in the industry during the NRA period. In 1937, after the validation of the National Labor Relations Act by the Supreme Court, the union negotiated agreements with Liggett and Myers, American Tobacco Co., and Philip Morris covering workers in their North Carolina and Virginia plants. In 1940, after a hard fight, agreements were signed with P. Lorillard Co. for employees in Louisville, Ky., and in New Jersey.[81] The Food, Tobacco, Agricultural and Allied Workers Union (CIO) has some membership in the industry, notably at the large Winston-Salem, N. C., plant of the R. J. Reynolds Tobacco Co.

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[75] Idem, Fourth Biennial Convention, 1946, Executive Council Report (pp. 46–47).

[76] Idem (p. 49).

[77] Lahne, op. cit. (p. 275).

[78] See the Textile Challenger, official organ of the union.

[79] When rechartered in 1939 by the American Federation of Labor, membership in the United Textile Workers was only 1,500. See Anthony Valente: Let's Talk About Textiles (in American Federationist, April 1946, pp. 16–17).

[80] For an analysis of union agreements in cotton manufacturing in 1945, see Rose Theodore: Union Agreements in the Cotton Textile Industry (in Monthly Labor Review, March 1946, pp. 413–423).

[81] John O'Hare: The Tobacco Worker (in American Federationist, June 1946, p. 22). See also Herbert R. Northup: Tobacco Workers International Union (in Quarterly Journal of Economics, August 1942, pp. 615–616).

By the close of 1944, approximately 90 percent of the workers in the industry (cigarettes, chewing and smoking tobacco, and snuff) were employed in plants which had trade-union agreements. Agreements negotiated by the Tobacco Workers International Union covered almost three-fourths of the organized workers. In the cigar industry, about half the workers were organized in 1944. The Cigar Makers' International Union (AFL) had its major strength in the Florida area; most of the cigar workers under agreement with the Food, Tobacco, Agricultural and Allied Workers (CIO) were employed outside the region.[82]

Possibly the most dramatic of all the CIO organizing campaigns—in the steel industry[83]— started in 1936. In March 1937, a formal agreement was signed between the Steel Workers Organizing Committee and various subsidiaries of the United States Steel Corp., including the Tennessee Coal, Iron and Railroad Co. in Birmingham. By this agreement the union was recognized as the collective-bargaining agent only for those employees who were its members. In Birmingham, about 5 years elapsed before the union, in a series of representation elections under the National Labor Relations Act, obtained sole bargaining rights. By 1943, however, steel unionism was well established in Birmingham. In addition to Tennessee Coal and Iron, the union (now the United Steel Workers) has won bargaining rights in other iron and steel plants in Alabama and in metal fabricating plants, as well. Iron-ore miners in the Birmingham area are represented by the International Union of Mine, Mill and Smelter Workers (CIO).

The union situation in other industries is briefly noted. A very substantial organization has been built up in the southern pulp and paper industry by the Pulp, Sulphite and Paper Mill Workers (AFL). Most employees of the Tennessee Valley Authority work under agreements negotiated with the Authority by various unions affiliated with the AFL.[84] In 1944, the United Rubber Workers (CIO) had 11 agreements and 9 locals in the South.[85] The locals were situated in Alabama, Georgia, Tennessee, Virginia, North Carolina, and Kentucky. By 1942, the Oil Workers International Union (CIO) had 28 working agreements in the petroleum industry in Louisiana and Texas.[86] In 1943, the organizing work of the union was revitalized, and material progress was reported at subsequent conventions. It is now (1946) estimated that over 60 percent of the workers in the refining branch of the industry are working under the terms of collective bargaining agreements, largely with the Oil Workers International Union.

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[82] Eleanor T. Royer: Union Agreements in the Tobacco Industry (U. S. Bureau of Labor Statistics, Bulletin No. 847, 1945), pp. 1–2, 13–14.

[83] A good account of the organizing campaign in steel may be found in Frederick H. Harbison's "Steel," in Harry A. Millis (ed.): How Collective Bargaining Works (New York, Twentieth Century Fund, 1942), pp. 510–534.

[84] American Federationist, January 1943 (p. 21).

[85] United Rubber Workers, Officers' Report, Ninth Annual Convention, 1944 (pp. 29–31, 40–43).

[86] Oil Workers' International Union, Reports of the Executive Council, Thirteenth Convention, 1942 (pp. 16–17).

The National Federation of Telephone Workers (independent) had more than 13,000 members in 1944 in its Southern Federation of Telephone Workers (covering the territory of Southern Bell in 9 Southeastern States, including Louisiana).[87] The union also had members in Texas. For a decade, the Amalgamated Clothing Workers (CIO) has conducted active organizational work in the men's clothing industry, primarily cotton garments, in the South, and has built up an appreciable membership. The United Garment Workers (AFL) also has membership in the region. The International Ladies Garment Workers Union (AFL) reported more than 11,000 members in some 60 locals in its Southwestern District in 1944.[88] Apparently, this district covers part of Illinois and Missouri, in addition to Texas, Arkansas, and Tennessee. Locals of the union are also found at Atlanta, Knoxville, and elsewhere in the Southeast. As of 1944, the United Automobile Workers (CIO) had 31 plants under contract in the South.[89] Most of these plants were engaged in turning out war materials, including aircraft. The enormous expansion of the southern shipbuilding industry during the war was accompanied by extensive organization, by both AFL and CIO affiliates. Longshore organization also increased.

It is clear that union organization in the South is substantial in character and is no longer restricted to its traditional spheres in railroading, printing, and a few other industries. Much of the present organization, of course, has developed during very recent years, and its stability, in many cases, has yet to be tested. The existing position has been reached, as this article in very summary terms has attempted to show, after a comparatively long period marked by many sacrifices on the part of labor and in spite of bitter defeats. The persistence of the efforts of workers in the South to organize reflects the importance attached by workers to the role that trade-unionism can play in modern industrial society.

Even during World War II years, the great lumber industry in the South remained virtually untouched by union organization. The bulk of the southern textile industry is unorganized. In the furniture and chemical industries unionism is weak. Food-processing has been largely untouched, together with a great variety of service trades and many miscellaneous manufacturing industries.

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[87] National Federation of Telephone Workers, Executive Board Report, Tenth National Assembly, 1944, Appendix A.

[88] International Ladies Garment Workers Union, Report of General Executive Board, Twenty-fifth Convention, 1944 (p. 115).

[89] United Automobile Workers, Report entitled "Automobile Unionism" submitted to 1944 convention by R. J. Thomas (pp. 26c, 30c).

Organizing Campaign of 1946

A new chapter in the history of southern trade-unionism began in the spring of 1946, when both the CIO and the AFL announced plans for major organizing campaigns in the South.[90] Both organizations reported progress by late summer, but no appraisal is yet possible of the results of these efforts to extend labor organization in the region.

Some Factors in Southern Unionism

Historically, unionism in the South has reflected the strength and weakness of organized labor in the country as a whole. The relative size of the southern movement, its scope, and its structure have been determined, in part, by the size, scope, and structure of the labor movement nationally. In 1929, for example, southern organization was comparatively meager. In that year, however, only 10.9 percent of the employed wage earners in manufacturing in the country as a whole were organized, and this figure includes the railroad shop crafts.[91] Moreover, 71.5 percent of all trade-union members in 1929 were in five industry groups—mining, building, transportation, clothing, and paper and printing.[92]

Unquestionably unionism in the South has had—and to some extent still has—greater obstacles to overcome than unionism in most other parts of the country. The retarding factors listed below, however, are not to be regarded as characteristic exclusively of the South. They exist in some measure elsewhere in the Nation.

(1) Industrialism on a substantial scale in the South is comparatively recent. Many of those who now compose the industrial working force have come direct from farms; many others are only one generation removed from the land. Strong unionism requires sustained collective action, and the habits and attitudes that promote such action grow in part out of the discipline that industry itself imposes. As urban-industrial behavior patterns more and more supplant agrarian behavior patterns among southern workers, cohesive unionization may more easily be achieved.

(2) Many groups of southern workers occupy an exposed position and are difficult to organize because of the pressure on industrial-job

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[90] A convenient statement of CIO objectives may be found in the May 1946 issue of its Economic Outlook. The AFL drive was opened at a large conference in Asheville, N. C., in May 1946. See Report, Third Biennial Southern Labor Conference.

[91] Leo Wolman: Ebb and Flow in Trade Unionism (New York, National Bureau of Economic Research. 1936), p. 123.

[92] Idem (p. 87).

opportunities of large numbers of desperately poor people from the agricultural areas. The labor market has rarely been firm in the South except in time of war. During the next decade or two, the competition for industrial jobs may increase depending upon (*a*) the rate at which agricultural labor is displaced because of technological and market factors; (*b*) the rate at which job opportunities in southern industry are created; (*c*) the rate at which migration out of the South takes place.[93]

(3) Historically, the company-owned town has been another obstacle to union advance. This factor has been highly important in the textile industries; it has been important also in coal mining and some other industries. The significance of the company-owned town as a barrier to unionism was reduced substantially with the passage of the National Labor Relations Act.

Another locational factor is the extent to which industry in the South is dispersed over a wide geographic area. Southern industry characteristically is located in small and medium-sized communities. As southern industry continues to develop, this locational pattern undoubtedly will tend to persist. There is much to be said in human terms for the avoidance of huge urban concentrations; the only point being made here is that the scattered nature of southern industry makes the process of union organization more difficult.

(4) The biracial character of the southern labor supply also presents problems in the growth of unionism. Race prejudice has been used to break strikes in the South (and elsewhere) and to keep workers divided along racial lines. There is membership discrimination against Negroes by some unions.

The Negro constitutes a relatively large and permanent part of the southern industrial labor force in such industries as tobacco, lumber, and iron and steel. Successful unionization of such industries will require the organization of colored workers. There is evidence to the effect that workers among both races are beginning to realize that economic cooperation is not only possible, but desirable. As this feeling grows, general racial understanding also tends to increase. Some unions—the United Mine Workers is an example—have done a magnificant job in cementing union bonds among members of the two races.

A number of factors tend to favor union growth: (1) That elusive but important factor, public opinion, is changing. Beginning about 1900, sentiment grew slowly in the South for various forms of labor legislation.[94] During the 1920's, some southern ministers, editors, and teachers began to voice publicly the belief that workers should have the right to join unions if they wished to. After 1929, the reexamination of attitudes on many social problems among large sections of the population accelerated the growth of general tolerance toward union organization. This change in public opinion is more pronounced in some parts of the South than in others. In general, opposition to unions tends to vary inversely with the degree of industrialization.

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[93] See the section Labor Supply in the South, p. 16 of this bulletin.

[94] See the section State Labor Legislation in the South, p. 118 of this bulletin.

(2) The southern working class is becoming more mature, in the sense of having more confidence in itself as a group. The nature of unionism is better understood, owing partly to the accumulation of past experience with labor organization and to the growth of union organization during the past decade; partly to the persistence of a general union propaganda in the region coupled with the development of a more favorable public attitude; and partly to the fact that mere participation in industry affords lessons in collective action.

(3) Undoubtedly, a factor of great importance in the South (and elsewhere) is the existence of the National Labor Relations Act. For a long time workers in this country have had the unquestioned legal right to seek collective bargaining by legal means. But until the passage of the National Labor Relations Act in 1935, employers did not have placed upon them the reciprocal duty to enter into collective-bargaining relations. Moreover, through its definition of "unfair labor practices," the act deprived employers of powerful weapons they formerly were able to use to discourage unionization.

(4) A final favorable factor at present is the existence nationally of a stronger trade-union movement than at any time in our history and of greater organization within the South itself than at any previous time. The AFL alone has at least doubled its membership during the past decade, and the CIO has emerged as a powerful trade-union center. The structure of the labor movement has altered profoundly with the rise of industrial unions in the great mass-production industries. As a result, any general organizing campaign in the South is likely now to be better staffed and better financed, and to take advantage of more flexible organizational forms, than any of the earlier campaigns. The assistance that can be expected from those unions already firmly established in the region is also a consideration of material importance.

XII.—Cooperatives in the South[1]

With certain exceptions, the South[2] has shown comparatively little development in the field of consumers' cooperation. The exceptions are cooperative credit associations (credit unions), students' cooperatives, electricity associations formed under the Rural Electrification Administration program, farmers' associations dealing in petroleum products and home and farm supplies, and medical care. There are, of course, a great many farmers' cooperatives in the South which market their members' farm products or purchase farm supplies (producer goods) for them; such associations are not, however, dealt with in this review unless they also handle consumer goods.

At the end of 1945, the latest date for which information is available, the 13 Southern States under consideration had a total of 1,494 credit unions, or 17 percent of all such associations in the United States; they accounted for nearly 13 percent of the membership and 11 percent of the total credit union assets. Texas alone had 334 credit cooperatives, and Florida, Georgia, Kentucky, Louisiana, North Carolina, and Tennessee had over 100 each.

The great majority of these credit unions were urban associations with membership largely drawn from industrial and other employees. Considerable numbers of the student cooperatives were also in the cities and large towns. With the exception of these two groups and the relatively small number of urban or nonfarm stores and buying clubs, practically all of the development in these States is in rural areas, among the farmers. As far as the records of the Bureau of Labor Statistics show, in these States 4 cooperatives have been organized by labor unionists. These include two cooperative store associations started by members of a textile union in Alabama in 1936 and 1937, respectively, and two formed by union oil-field workers in Texas in 1946.

In the cooperative provision of medical and hospital care, the South has shown the way to the other sections of the country. This has been due to several circumstances: the need of a group of Cuban cigar makers in Florida for protection against the health hazards of their trade in a community in which they were alien in tongue and customs, which led to the formation of their own medical facilities many years ago; the efforts of a single physician to improve the health of his farmer patients, which resulted in the building of a cooperative hospital in Oklahoma; and the recent passage of a law in Texas authorizing cooperative hospitals in rural communities, which has led to the formation of a score of hospitals during the past year.

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[1] Prepared by Florence E. Parker of the Bureau's Labor Economics Staff.

[2] The term "South" relates to Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, and Virginia.

During the subsistence-homesteads program, many homesteads projects were established in the South. A common accompaniment was the formation of a cooperative association which marketed the members' produce or ran a store for supplying groceries and other household goods, or both. Altogether some 50 distributive cooperatives handling consumer goods were formed. As of January 1, 1947 the homesteaders had bought the store property from the Government in 21 cases and were continuing its operation cooperatively. In the remaining cases the cooperative association had been liquidated; in most instances the Government loan had been paid in full.

Development in Individual States

In addition to nearly 80 credit unions and about 20 electricity associations formed under the Rural Electrification Administration program, *Alabama* has a number of farmers' purchasing associations—one of these among sharecroppers—and several students' cooperatives (including 2 at Tuskegee Institute). Under the Farm Security Administration's subsistence-homesteads program, also, several purchasing associations and health cooperatives were formed among the homesteaders in this State. In 6 of these the homesteaders had bought the store, and were operating it cooperatively at the end of 1946 (one of these is a Negro association).

As *Arkansas* had an even larger part than Alabama in the FSA program, a considerable number of its cooperatives were those of subsistence homesteaders. Most of these cooperatives carried on the marketing of their members' produce in addition to their consumer activities. At the end of 1946, 6 of these (4 Negro) were still in operation. Of the 4 Negro associations, 2 were land-leasing associations which also purchased consumer goods. Both had been conspicuously successful in farming the land, so much so that in one case the owner refused to renew the lease except at a prohibitive price, so that the association has no future unless it can obtain other land; the lease of the other association still has several years to run. The other 6 FSA cooperatives in this State had either been liquidated or were in process of liquidation at the end of 1946. The State's other consumers' associations included several students' cooperatives and farmers' purchasing associations, 18 REA cooperatives providing electric power, and 25 credit unions.

Florida associations include 160 credit unions, 12 electricity cooperatives, and a small number of retail distributive associations.

This last group contained (in addition to several farmers' purchasing associations) 2 students' cooperatives (one of veterans), a store at a migratory workers' camp, and one of the oldest Negro cooperatives in the United States. Florida also has a number of associations, formed by cigar makers of Cuban descent, which provide medical and hospital care in their own clinics and hospitals; several of these date from the 1890's and early 1900's. One of the Florida credit unions is reported to have taken a step unusual for such organizations, by buying land on which it is planning to build some 400 houses. All of the subsistence-homesteads cooperatives had gone out of existence by the end of 1946.

Georgia has 132 credit unions and 44 electricity cooperatives, a unique association dealing only in religious films, and cooperatives in at least five institutions of higher education. Among its retail cooperatives are several formed by residents in low-cost housing projects, and one is in an entirely cooperative community. A good deal of organizing work is going on—especially among labor and veteran groups—which is expected to result in some new cooperatives during 1947.

The consumers' cooperatives in *Kentucky* consist mainly of credit unions (104 in number) and REA cooperatives (26). The few distributive associations are those on college-campuses (including two in settlement schools) and a few farmers' cooperatives handling petroleum products and/or farm and household supplies.

The consumers' cooperative movement in *Louisiana* includes several cold-storage associations, a few buying clubs and stores, 13 electricity associations, and 131 credit unions. None of the cooperatives at subsistence-homesteads projects was in operation at the end of 1946.

Cooperatives are few in *Mississippi*. Even the credit unions numbered only 26 in 1945—the lowest of the 13 States here considered. Electricity cooperatives totaled 23 in 1942. Other types include 2 cold-storage associations, one surviving homesteads cooperative (of 5) and a few stores; one of the latter is a students' cooperative at a Negro college.

Credit unions are numerous in *North Carolina* (195 in 1945); REA associations (30), students' associations (6), and farmers' purchasing cooperatives (12) have also had a moderate development. One of the farmers' associations is in a community where, with the assistance of a local "folk school," many activities have been organized on a cooperative basis. Perhaps the greatest relative achievement has been among the Negroes; their 3 associations, although not large, have been well supported and have rendered valuable service to their members. At least one of the farmers' purchasing groups and one of the Negro associations have a credit union in connection. Of 4 stores started in connection with FSA homesteads, 2 (1 Indian and 1 Negro) remain.

In *Oklahoma* nearly all the farmers' purchasing cooperatives handle petroleum products and many deal in groceries; these are, with credit unions, the outstanding types of cooperation, numbering 60 and 71 each. The State also has the one cooperative funeral association in the South, 2 cooperative hospitals, several campus cooperatives and cold-storage associations, and 23 electricity cooperatives.

South Carolina has had comparatively little cooperative development, the representation there consisting of 35 credit unions, 24 REA cooperatives, a few store associations (including one whose members are colored), and several students' associations (2 Negro). The same situation exists in *Tennessee* where, with the exception of 117 credit unions and 19 electricity associations, the consumers' cooperative development consists of several urban or nonfarm buying clubs and stores, one or two campus cooperatives, a few cold-storage associations, and a medical association in a cooperative community.

Among the 13 States here considered, *Texas* is easily preeminent as regards cooperatives. At the end of 1945 it had 334 credit unions, or over twice as many as any of the other 12 States, and 72 REA cooperatives. It also showed an extensive distributive development among the farmers. There were in the State some 50 petroleum associations, in addition to many farmers' marketing or purchasing associations which also dealt in petroleum products. It is the only Southern State with a cooperative wholesale of the federated type (i. e., in which the members are retail cooperatives). The wholesale, at Amarillo, has been operating since 1931, and until a few years ago dealt almost wholly in petroleum products. Within the past few years it had been adding new lines, has opened up two branch warehouses in order to serve its large territory better, and has expanded into production. It now owns an oil-compounding plant, a feed mill and grain elevator, and a petroleum refinery. It is affiliated with National Cooperatives, the central purchasing agency of the consumers' cooperative movement in this country. Under the guidance of the wholesale, the affiliated retail associations in Texas have been diversifying their activities; many now handle groceries and various other merchandise. Consumers' cooperation has only recently begun to take hold among nonfarm groups. The very few nonfarm cooperatives started thus far include two formed in 1946 by members of an oil-field workers' union.

As already noted, Texas now leads the United States in number of cooperative hospital associations. By June 1946 there were at least 20 of these. Although one of these associations was organized in 1940 and opened its hospital in 1942, the rest have been formed during the past year. This is the result of an act passed by the Texas Legislature in 1945, which authorized the formation of cooperative hospitals in places of 2,500 or less. Most of the associations thus far formed plan to extend their service over the entire county in which the headquarters is located.

In addition to the above types, Texas also has some 10 students' cooperatives, the greatest development of which is at Texas A & M College where one association operates 25 rooming and boarding houses for students. Another students' association operates a flying (aviation) service. In the State there are also perhaps a score of cold-storage associations, in addition to a number of locker plants operated by associations whose main line of activity is marketing or purchasing. Texas also has a unique recreation cooperative—an association which purchased land and built an arena where the members practice the roping of steers.

Virginia has 86 credit unions and 15 REA cooperatives, some half dozen urban stores or buying clubs, and a number of farmers' cooperatives handling petroleum products and farm and home supplies. These include several Negro store cooperatives, one of which has been operating since 1937 and has three branch stores. The most active recent development has been the erection of cold-storage locker plants—a development which has been fostered by the Southern States Cooperative, at Richmond. Until the war put a stop to civilian flying, the State also had 5 flying clubs which owned one or more airplanes which the members flew for pleasure.

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UNITED STATES DEPARTMENT OF LABOR
L. B. Schwellenbach, *Secretary*
BUREAU OF LABOR STATISTICS
Ewan Clague, *Commissioner*

Retail Prices of Food
1944 and 1945

Bulletin No. 899

For sale by the Superintendent of Documents, U. S. Government Printing Office
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29

Letter of Transmittal

United States Department of Labor,
Bureau of Labor Statistics,
Washington, D. C., May 20, 1947.

The Secretary of Labor:

I have the honor to transmit herewith the third issue of the bulletin on retail prices and indexes of retail prices of foods. This report covers the years 1944 and 1945.

A mimeographed report on retail prices of food, giving index numbers by groups and subgroups of commodities and average prices for individual commodities in each of 56 cities will continue to be issued monthly and will be available on request as heretofore.

This report was prepared by the Food Section, Division of Consumers Prices, Prices and Cost of Living Branch.

Ewan Clague, *Commissioner.*

Hon. L. B. Schwellenbach,
Secretary of Labor.

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Bulletin No. 899 of the
United States Bureau of Labor Statistics

Retail Prices of Food 1944 and 1945

Summary of Trends in Food Prices During World War II

During the 6 years of World War II (September 1939–August 945), average retail prices of all foods advanced more than 50 per- ent. At the end of 1945 the Bureau of Labor Statistics all-foods rice index was more than 41 percent above the 1935–39 average and 4 percent below the 1920 peak. Retail food prices in 1944 were elatively stable, averaging 1.4 percent below the average for the ear 1943 and 4.8 percent below the high for World War II established May 1943, the peak of the rise that led to the President's hold-the- ne order, issued in April 1943. This stability was largely accom- lished through subsidies and OPA regulations, including commodity ollars-and-cents ceilings and the establishment of ceilings for a umber of items not previously controlled. As an integral part of e price stabilization program, subsidies were paid producers and ocessors of many foods including meats, dairy products, flour, and gar. The subsidies, which served to hold or reduce retailers' costs, abled retailers to sell at prices within the established OPA ceilings. the end of 1943, price controls were in effect for all foods priced the Bureau. With few exceptions, these controls continued in eration during 1944 and 1945. Prices for 1945, on the average, re higher than in 1943 or 1944, although the May 1943 peak was ver equaled in any month in the two following years.

Production of foods in 1945 remained at high levels but fell far rt of demand as Government purchases for military and lend-lease ount took a considerable part of the available supplies. Many ds continued to be rationed during 1944 and most of 1945. Short- s of certain foods were intensified in 1944, and some foods became remely scarce in 1945. Despite the reduction of rations, supplies, many instances, were inadequate to fulfill the ration allowances. -day brought no immediate relief from the acute shortages of meats, and oils, sugar, cheese, condensed and evaporated milk, eggs, ltry, processed fruits and vegetables, and canned fish.

ood supplies, except for sugar, and fats and oils, improved consid- ly after VJ-day as a result of the curtailment of military require- ts and the cancellation of most contracts for lend-lease purchases. ioning of canned fruits and vegetables was removed on VJ-day and rationing of meats, canned fish, butter, and fats and oils was eliminated in November 1945. Sugar was the only food still being rationed at the end of 1945. OPA price controls continued in effect and the elimination of rationing had no specific reaction on prices.

Table 1 presents indexes of retail prices of all foods from 1913 through 1945. During World War I (1914–18) annual average food costs rose about 64 percent. During World War II (1939–45) annual average food costs advanced less than 47 percent. However, the average of 139.1 percent of the 1935–39 base, reached by the index in 1945, was 3.5 percent higher than that for 1918, the final year of World War I. Retail food prices mounted rapidly and unceasingly during most of World War I. By contrast, in 1944, food prices averaged 1 percent lower than in 1943, and in 1945, the final year of World War II, food prices were maintained at levels only slightly higher than the average for 1943.

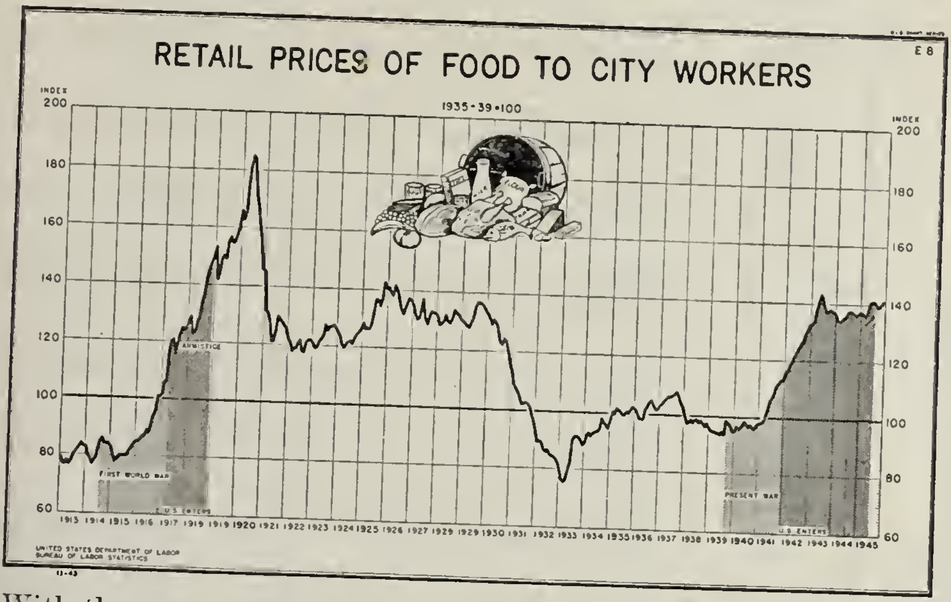
Table 1.—*Indexes of retail prices of food in large cities combined, by years, 1913 to 1945 and by months, January 1943 to December 1945*

[1935–39 = 100]

Year and month	All-foods index	Year and month	All-foods index	Year and month	All-foods index
		By Year			
1913	79.9	1924	122.8	1935	100.4
1914	81.8	1925	132.9	1936	101.3
1915	80.9	1926	137.4	1937	105.3
1916	90.8	1927	132.3	1938	97.8
1917	116.9	1928	130.8	1939	95.2
1918	134.4	1929	132.5	1940	96.6
1919	149.8	1930	126.0	1941	105.5
1920	168.8	1931	103.9	1942	123.9
1921	128.3	1932	86.5	1943	138.0
1922	119.9	1933	84.1	1944	136.1
1923	124.0	1934	93.7	1945	139.1
		By Month			
1943		*1944*		*1945*	
January	133.0	January	136.1	January	137.3
February	133.6	February	134.5	February	136.5
March	137.4	March	134.1	March	135.9
April	140.6	April	134.6	April	136.6
May	143.0	May	135.5	May	138.8
June	141.9	June	135.7	June	141.1
July	139.0	July	137.4	July	141.7
August	137.2	August	137.7	August	140.9
September	137.4	September	137.0	September	139.4
October	138.2	October	136.4	October	139.3
November	137.3	November	136.5	November	140.1
December	137.1	December	137.4	December	141.4

Food Prices During the Years 1944 and 1945

Fluctuations in the all-foods index during 1944 and 1945 were caused partly by the regular seasonal variations in prices of certai foods such as eggs and fresh fruits and vegetables and partly by othe factors such as adjustments in price controls and subsidies. In Apri 1944, the OPA instituted a system of seasonal pricing for fresh fruit and vegetables whereby ceiling prices could be revised each week an adjusted to restore the usual seasonal price patterns. Seasonal pricing of eggs had been in effect since March 1943.



With the exception of only 2 months, food prices declined steadily for the first 10 months after May 1943, and by March 1944 were 6 percent below the World War II peak. The decline during the first quarter of 1944 was chiefly the result of lower prices for eggs, of which there was an abundant supply, and fresh fruits and vegetables, for which OPA, in January 1944, issued new maximum prices at wholesale levels. Prices of cereals and bakery products declined slightly during this period after a 3-year uninterrupted advance. A subsidy granted to millers of wheat flour in December 1943 stopped the steady climb of prices in this group and permitted processors to pay farmers more for their grains.

After March 1944, prices rose steadily until in August they were 2.7 percent higher than the low in March, a result of seasonal increases n egg prices and higher prices for fresh fruits and vegetables, particuarly oranges, potatoes, and spinach. Prices of foods then receded—xcept in November and December—until March of 1945, when they vere about 5 percent below May 1943. During the next 4 months, hey again advanced sharply, this time to within 1 percent of the ay 1943 peak. These advances, through July 1945, were due chiefly o rapidly rising prices of fresh fruits and vegetables such as apples, ranges, potatoes, and green beans.

Table 2 shows the indexes of retail prices of foods by commodity roups for the years 1923 through 1945 and for each month in 1944 nd 1945. In 1945, the average cost of all foods combined was higher an at any time in the preceding 21 years (1923–44). The high averge cost of all foods in 1945 resulted largely from the high levels ached by prices of meats, dairy products, and eggs.

TABLE 2.—*Indexes of retail prices of food in large cities combined,*[1] *by commodity groups*

[1935–39=100]

By Years, 1923 to 1945[2]

Year	All foods	Cereals and bakery products	Meats						Dairy products	Eggs	Fruits and vegetables				Beverages	Fats and oils	Sugar and sweets
			Total	Beef and veal	Pork	Lamb	Chickens	Fish, fresh and canned			Total	Fresh	Canned	Dried			
1923	124.0	105.5	101.2						129.4	136.1	169.5	173.6	124.8	175.4	131.5	126.2	175.4
1924	122.8	107.2	102.4						124.1	139.0	159.5	162.7	128.2	159.6	147.6	134.1	159.1
1925	132.9	116.0	111.3						128.2	151.2	185.1	193.5	132.3	159.0	170.3	149.1	124.6
1926	137.4	115.7	117.8						127.4	141.7	210.8	226.2	122.9	152.4	170.4	145.0	120.0
1927	132.3	113.3	116.0						130.7	133.2	183.8	194.4	120.8	145.9	163.3	132.8	127.2
1928	130.8	110.1	123.1						131.4	137.3	161.4	166.5	120.6	153.9	165.2	128.3	123.1
1929	132.5	107.6	127.1						131.0	143.8	169.0	173.5	124.3	171.0	164.8	127.2	114.3
1930	126.0	104.3	119.1						121.0	121.4	177.5	185.7	118.6	158.7	143.4	119.2	107.4
1931	103.9	91.4	101.1						102.8	95.6	125.7	128.7	103.3	118.7	124.6	96.0	99.1
1932	86.5	82.6	79.3						84.9	82.3	103.5	105.9	91.1	91.2	112.6	71.1	89.6
1933	84.1	84.7	68.9						82.8	77.9	113.8	118.9	87.9	88.4	102.4	66.4	94.3
1934	93.7	98.3	78.9						90.9	88.6	119.1	122.3	103.9	101.1	107.6	76.4	97.9
1935	100.4	101.8	99.9	98.9	104.7	96.3	95.5	98.2	97.5	104.2	99.7	98.8	106.2	100.8	104.0	110.3	100.7
1936	101.3	100.7	98.9	94.7	103.4	101.1	101.1	98.5	101.6	103.3	104.8	106.2	100.9	96.6	99.4	102.8	99.6
1937	105.3	103.3	105.8	106.5	106.6	105.2	104.9	101.0	105.4	101.2	107.9	108.6	103.2	116.0	103.6	105.8	101.2
1938	97.8	99.8	98.9	98.7	96.3	97.9	104.6	101.3	99.6	100.3	93.2	92.1	97.4	93.3	97.7	93.5	97.9
1939	95.2	94.5	96.6	101.1	88.9	99.5	93.8	101.0	95.9	91.0	94.5	95.1	92.3	93.3	95.5	87.7	100.6
1940	96.6	96.8	95.8	102.8	81.1	99.7	94.8	110.6	101.4	93.8	96.5	97.3	92.4	100.6	92.5	82.2	96.8
1941	105.5	97.9	107.5	110.8	100.1	106.6	102.1	124.5	112.0	112.2	103.2	104.2	97.9	106.7	101.5	94.0	106.4
1942	123.9	105.1	126.0	123.6	120.4	124.1	122.6	163.0	125.4	136.5	130.8	132.8	121.6	136.3	122.1	119.6	126.5
1943	138.0	107.6	133.8	124.7	119.9	136.9	146.1	206.5	134.6	161.9	168.8	178.0	130.6	158.9	124.8	126.1	127.1
1944	136.1	108.4	129.9	118.7	112.2	134.5	151.0	207.6	133.6	153.9	168.2	177.2	129.5	164.5	124.3	123.3	126.5
1945	139.1	109.0	131.2	118.4	112.6	136.0	154.4	217.1	133.9	164.4	177.1	188.2	130.2	168.2	124.7	124.0	126.5
1944																	
Jan. 18	136.1	108.5	131.0	119.3	112.8	133.8	149.9	223.5	133.5	154.0	166.7	175.3	129.7	162.8	124.4	124.0	126.6
Feb. 15	134.5	108.1	130.5	119.3	112.5	133.9	149.9	217.1	133.5	142.5	163.0	170.7	129.8	163.1	124.3	123.8	126.6
Mar. 14	134.1	108.0	130.6	119.1	112.3	134.1	150.2	220.2	133.6	135.5	162.9	170.6	129.6	163.2	124.4	123.5	126.5
Apr. 18	134.6	108.0	130.0	119.1	112.1	134.3	150.4	210.4	133.6	127.6	168.8	178.0	129.5	163.2	124.4	123.5	126.6
May 16	135.5	108.1	130.3	118.9	111.9	134.4	155.9	200.5	133.5	127.1	172.8	183.1	129.2	163.5	124.4	123.3	126.5
June 13	135.7	108.4	129.8	118.8	112.0	134.8	154.1	196.7	133.5	129.1	174.0	184.6	129.2	164.1	124.3	123.1	126.5
July 18	137.4	108.6	129.3	118.7	112.1	135.0	151.4	197.5	133.6	148.9	176.9	188.4	129.0	164.6	124.3	122.9	126.6
Aug. 15	137.7	108.5	129.0	118.6	112.0	134.7	149.8	198.0	133.6	159.4	175.7	186.7	129.3	165.0	124.3	122.7	126.5
Sept. 12	137.0	108.6	129.0	118.3	112.2	134.6	149.3	200.4	133.6	168.0	169.9	179.4	129.4	165.3	124.3	123.0	126.3
Oct. 17	136.4	108.6	129.4	118.2	112.2	134.7	149.9	205.8	133.6	179.0	162.9	170.4	129.7	165.7	124.3	123.1	126.4
Nov. 14	136.5	108.6	129.7	118.2	112.2	134.5	150.4	210.3	133.6	186.7	160.7	167.6	129.6	166.5	124.3	123.2	126.5
	137.4	108.6	129.9	118.3	112.3	135.6	150.6	211.0	133.5	188.5	164.2	171.9	129.9	166.4	124.3	123.3	126.4

1945																			
Jan. 16	137.3	108.7	130.2	118.4	112.5	135.5	152.2	210.1	133.5	169.6	168.9	177.9	129.7	166.9	124.4	123.4	126.3
Feb. 13	136.5	108.7	130.7	118.4	112.5	135.5	152.9	215.2	133.5	153.2	168.9	177.8	129.8	167.0	124.5	123.5	126.3
Mar. 13	135.9	108.7	130.8	118.4	112.4	135.9	153.6	214.4	133.5	140.7	169.5	178.6	129.9	167.4	124.5	123.7	126.5
Apr. 17	136.6	108.9	130.8	118.6	112.4	135.9	154.3	211.9	133.5	139.9	173.3	183.3	130.0	167.9	124.6	123.8	126.4
May 15	138.8	109.0	131.6	118.6	112.5	135.9	156.3	218.7	133.5	140.7	182.5	195.0	130.2	168.5	124.6	123.9	126.5
June 12	141.1	109.1	131.6	118.5	112.6	136.0	156.8	215.6	133.4	145.1	192.6	207.7	130.1	168.8	124.7	123.9	126.4
July 17	141.7	109.1	131.6	118.5	112.7	136.0	156.2	217.3	133.4	157.2	191.8	206.7	130.2	168.9	124.7	124.0	126.5
Aug. 14	140.9	109.1	131.8	118.5	112.6	136.4	157.3	217.8	133.4	171.4	183.5	196.2	130.3	168.6	124.7	124.0	126.6
Sept. 18	139.4	109.1	131.6	118.4	112.6	136.4	155.9	219.8	133.4	183.9	172.5	182.3	130.4	168.8	124.7	124.1	126.5
Oct. 16	139.3	109.1	131.0	118.2	112.6	136.2	152.3	221.3	133.3	185.5	172.5	182.3	130.4	168.9	124.7	124.0	126.5
Nov. 13	140.1	109.1	131.0	118.2	112.6	136.2	152.5	220.8	135.9	192.1	172.3	181.9	130.6	168.5	124.9	124.4	126.5
Dec. 11	141.4	109.2	131.2	118.3	112.6	136.4	153.1	221.7	136.2	193.2	177.3	188.4	130.3	168.7	124.9	125.1	126.6

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[1] Aggregate costs in each city, weighted to represent total purchases of families of wage earners and lower-salaried workers, have been combined with the use of population weights.

[2] Comparable indexes for the years 1923–34 have been computed by converting indexes from the 1923–25 base to the 1935–39 base.

Changes in Food Prices by Cities

Retail food prices on the average for large cities in the United States advanced a moderate 3.1 percent between December 1943 and December 1945, but price increases among cities varied considerably. During this 2-year period, the greatest rise in food prices occurred on the Pacific Coast—7.2 percent in San Francisco, 6.2 percent in Portland (Oreg.), and 5.3 percent in Seattle. There were marked increases in 1944 and 1945 in Memphis, Jacksonville, Washington, Baltimore, Milwaukee, and Providence. The smallest changes in food prices were in New England. In Bridgeport and Portland (Maine) prices increased less than 1 percent, and in New Haven prices declined nearly 1 percent. Buffalo food prices were no higher in December 1945 than in December 1943 and prices in St. Paul, Norfolk, and Louisville advanced negligibly.

Among the 51 cities for which food-price indexes are based on the period 1935–39, prices in December 1945 ranged from 34 percent to more than 54 percent above the levels prevailing in the base period, with an average increase of 41.4 percent over the base period. Greatest increases over this longer period prevailed in Pacific Coast, East South Central, and South Atlantic cities and the smallest increases were in New England and certain scattered cities such as Columbus (Ohio), Omaha, and St. Paul.

The indexes of average retail prices of foods, by cities and by months for 1944 and 1945 are presented in table 3.

Table 3.—*Indexes of retail prices of food,*[1] *by cities and months, 1944 and 1945*

[1935–39=100]

Region and city	1944												
	Average for the year	Jan. 18	Feb. 15	Mar. 14	Apr. 18	May 16	June 13	July 18	Aug. 15	Sept. 12	Oct. 17	Nov. 14	Dec. 12
United States	136.1	136.1	134.5	134.1	134.6	135.5	135.7	137.4	137.7	137.0	136.4	136.5	137.4
New England													
Boston	130.9	130.9	128.7	128.6	129.5	129.6	130.4	131.9	132.2	132.9	131.1	131.8	132.7
Bridgeport	133.8	135.1	133.4	132.6	131.4	131.4	131.4	135.5	135.1	135.1	135.4	134.5	134.6
Fall River	130.9	131.2	129.6	128.7	130.0	129.8	129.2	132.9	132.3	132.4	131.2	131.6	132.2
Manchester	132.9	132.5	131.4	132.0	130.8	131.7	130.9	135.3	135.0	134.2	133.4	133.6	133.6
New Haven	134.7	136.3	134.7	133.0	132.4	133.1	132.6	135.3	136.0	136.3	135.7	135.2	135.3
Portland, Maine	132.9	132.3	132.0	131.6	131.2	131.4	131.1	135.1	136.5	133.6	133.8	133.2	133.1
Providence	133.9	132.0	131.2	131.8	132.1	131.9	133.4	135.5	136.8	135.9	134.6	135.6	135.7
Middle Atlantic													
Buffalo	134.1	135.0	134.0	133.3	132.5	134.2	134.6	135.0	134.0	134.8	134.7	133.4	134.1
Newark	138.6	140.7	138.0	137.6	137.6	137.8	137.7	139.2	138.4	138.5	138.8	139.1	140.2
New York	137.2	138.0	135.4	135.7	135.7	137.0	136.8	138.1	138.9	137.3	137.2	137.4	138.7
Philadelphia	133.9	135.0	133.3	131.9	132.5	132.8	134.5	134.8	136.1	134.7	133.5	133.3	135.
Pittsburgh	135.6	134.6	133.1	132.9	134.8	134.6	135.8	136.7	138.7	138.0	136.6	134.7	136.
Rochester	131.5	131.5	129.8	128.2	128.5	129.5	131.3	133.8	133.0	133.8	132.5	132.4	134.
Scranton	136.2	134.7	133.1	132.4	135.4	135.5	135.9	138.6	138.8	138.1	138.1	136.3	137.

See footnotes at end of table.

TABLE 3.—*Indexes of retail prices of food,[1] by cities and months, 1944 and 1945*—Con.

[1935–39=100]

Region and city	1944												
	Average for the year	Jan. 18	Feb. 15	Mar. 14	Apr. 18	May 16	June 13	July 18	Aug. 15	Sept. 12	Oct. 17	Nov. 14	Dec. 12
East North Central													
Chicago	135.0	132.5	131.3	131.6	133.9	134.2	135.4	138.6	137.1	137.3	135 8	135.8	136.5
Cincinnati	135.3	135.1	133.7	132.9	135.4	133.7	138.4	139.2	136.8	135.8	133.4	134.4	134.7
Cleveland	142.0	140.8	140.6	140.3	141.7	141.9	141.3	144.6	144.3	142.8	141.9	142.6	140.6
Columbus, Ohio	128.3	128.1	127.3	126.9	127.6	127.1	127.1	129.2	130.2	129.4	128.7	129.0	129.4
Detroit	132.8	132.8	130.9	130.8	131.2	132.4	133.0	136.5	134.4	134.0	132.8	132.3	132.7
Indianapolis	133.0	133.3	131.9	131.0	132.1	132.2	132.6	134.6	134.4	134.3	132.7	133.1	133.8
Milwaukee	134.2	130.5	131.0	131.9	132.1	134.4	135.5	137.4	136.4	135.5	135.7	135.2	135.2
Peoria	139.2	138.4	137.6	138.0	137.5	138.2	138.2	140.4	141.1	140.6	139.9	140.2	140.5
Springfield, Ill	141.1	138.7	139.2	138.9	140.2	140.5	140.9	144.2	142.5	142.5	141.1	141.9	142.0
West North Central													
Cedar Rapids [2]	138.2	137.6	137.2	136.6	136.2	136.3	137.3	140.5	139.1	139.0	138.8	139.6	139.9
Kansas City	130.6	130.3	129.8	129.8	130.1	131.4	130.5	132.5	131.2	130.9	129.7	130.3	131.0
Minneapolis	129.6	128.3	128.9	128.7	128.9	129.5	129.0	131.3	130.5	129.7	130.4	130.0	130.4
Omaha	130.7	131.1	131.9	131.3	131.0	131.2	131.1	130.4	129.7	129.9	130.0	130.3	130.0
St. Louis	138.5	137.9	136.0	135.9	137.4	137.8	138.7	141.9	140.1	139.8	138.0	138.5	139.5
St. Paul	128.1	127.1	127.6	127.1	127.3	127.9	128.1	129.6	128.5	127.9	128.3	128.3	129.1
Wichita [2]	146.5	146.1	146.3	145.4	144.2	145.5	146.2	148.4	147.8	147.0	146.8	147.2	147.3
South Atlantic													
Atlanta	136.7	138.0	135.9	133.0	134.6	135.4	135.2	138.1	139.2	137.8	136.9	137.9	138.8
Baltimore	141.8	142.5	140.2	139.3	140.3	140.5	141.2	143.1	143.5	140.7	142.0	144.3	143.9
Charleston, S. C	133.3	134.2	133.2	131.5	132.1	130.7	130.6	133.0	135.4	134.7	134.5	134.7	135.0
Jacksonville	144.7	145.8	143.3	139.6	141.4	143.0	142.9	144.8	148.9	148.1	146.1	145.9	146.8
Norfolk [3]	143.1	145.1	145.0	143.7	143.8	142.7	142.0	143.2	144.8	141.1	140.8	142.0	143.2
Richmond	134.1	134.7	133.0	131.8	131.6	131.9	134.0	134.4	136.5	134.1	134.7	135.7	137.1
Savannah	150.9	151.1	149.5	147.2	150.8	149.4	150.2	152.9	154.7	152.8	150.9	150.6	150.5
Washington, D. C	134.9	136.4	133.6	131.7	132.8	134.1	135.3	134.9	136.7	135.2	134.7	136.7	137.1
Winston-Salem [2]	136.1	136.9	134.7	133.4	132.9	134.2	135.1	136.0	138.8	137.4	137.6	138.0	138.7
East South Central													
Birmingham	139.9	140.6	137.8	136.2	136.1	138.5	139.8	141.4	145.4	140.3	139.5	141.3	142.3
Jackson [2]	144.4	142.9	144.0	142.1	141.2	140.4	139.3	138.5	142.9	150.7	149.3	150.2	151.3
Knoxville [2]	155.2	154.3	152.7	151.7	151.8	152.7	154.1	157.3	158.6	157.9	156.3	156.8	158.3
Louisville	131.8	132.6	131.2	129.7	131.8	130.8	132.9	133.4	133.4	131.7	131.0	131.0	132.0
Memphis	144.6	146.0	142.6	141.0	141.3	143.0	144.7	146.1	148.3	146.5	144.9	144.9	145.6
Mobile	144.5	145.5	144.2	142.7	143.4	143.4	142.1	144.4	147.1	146.6	145.4	145.0	144.6
West South Central													
Dallas	132.7	134.5	133.8	131.6	131.6	133.3	130.8	132.3	133.5	132.9	131.9	132.7	133.4
Houston	136.2	137.5	135.9	134.9	135.3	135.9	135.0	137.0	137.8	137.5	136.6	134.6	135.9
Little Rock	135.3	134.7	135.3	133.2	132.9	133.9	133.8	135.8	137.7	137.4	135.4	136.3	137.0
New Orleans	149.6	149.9	148.4	147.2	148.5	148.4	146.9	149.6	152.7	153.1	150.7	149.7	150.3
Mountain													
Butte	133.6	135.3	133.4	133.0	133.2	133.0	132.8	134.8	133.7	133.1	133.1	133.5	134.3
Denver	137.1	136.0	135.7	135.7	136.6	139.3	137.5	140.6	137.1	136.4	136.2	136.4	137.9
Salt Lake City	139.9	138.6	138.2	138.9	138.6	139.2	139.5	141.1	139.9	140.3	141.3	141.1	141.9
Pacific													
Los Angeles	141.2	142.0	140.5	140.9	138.6	142.0	139.2	138.5	141.1	141.4	143.0	143.3	143.9
Portland, Oreg	144.8	142.5	142.8	143.3	142.2	144.7	144.4	146.2	145.3	144.8	146.5	146.8	148.1
San Francisco	143.8	143.6	141.6	142.2	142.2	144.7	142.5	142.4	142.4	143.3	145.2	146.3	149.1
Seattle	141.6	142.5	140.6	140.5	139.2	141.3	140.4	141.9	141.6	141.7	143.3	142.7	143.9

See footnotes at end of table.

TABLE 3.—*Indexes of retail prices of food,*[1] *by cities and months, 1944 and 1945*—Con.

[1935–1939=100]

Region and city	1945												
	Average for the year	Jan. 16	Feb. 13	Mar. 13	Apr. 17	May 15	June 12	July 17	Aug. 14	Sept. 18	Oct. 16	Nov. 13	Dec. 11
United States	139.1	137.3	136.5	135.9	136.6	138.8	141.1	141.7	140.9	139.4	139.3	140.1	141.4
New England													
Boston	133.6	132.8	132.1	130.6	130.8	133.0	136.8	136.6	135.7	133.4	133.3	133.8	134.5
Bridgeport	135.9	134.2	133.5	132.8	133.9	135.9	138.5	138.7	137.4	136.0	136.4	136.3	136.8
Fall River	132.9	132.5	131.9	130.6	130.1	131.9	134.6	134.8	134.1	132.4	132.8	134.3	134.8
Manchester	135.2	134.0	133.5	132.7	132.7	133.9	137.4	139.4	136.4	134.9	134.6	136.1	137.3
New Haven	136.0	135.1	134.7	133.5	134.1	136.3	139.9	139.0	137.2	135.7	135.5	135.3	135.8
Portland, Maine	133.6	132.4	132.5	131.4	131.3	133.4	135.2	136.4	135.7	133.1	133.0	133.9	135.2
Providence	138.1	135.6	134.5	134.8	134.1	136.0	140.7	141.9	141.6	140.0	139.1	139.0	140.3
Middle Atlantic													
Buffalo	136.8	135.5	136.3	135.2	134.7	137.1	140.2	138.9	138.4	135.3	135.6	136.7	137.6
Newark	141.4	140.0	138.3	137.5	138.0	139.9	145.3	145.1	143.4	140.7	141.0	143.6	144.0
New York	140.1	138.7	137.3	136.4	136.8	139.6	142.1	143.8	141.7	139.7	139.5	141.7	143.3
Philadelphia	137.1	135.1	135.9	134.3	134.2	137.7	138.8	139.2	138.9	137.6	137.2	137.9	138.7
Pittsburgh	138.6	136.4	135.6	133.8	135.4	137.1	141.2	142.4	141.3	139.6	140.0	139.7	140.3
Rochester	135.6	134.3	134.0	132.6	133.7	135.4	138.9	138.2	137.8	134.9	134.7	135.1	137.7
Scranton	139.4	137.2	136.9	135.9	136.4	139.8	144.5	142.6	141.3	139.3	138.7	139.5	141.3
East North Central													
Chicago	137.8	135.3	134.5	135.0	136.2	139.5	140.2	140.7	139.2	137.5	137.8	137.8	139.3
Cincinnati	137.6	135.5	134.6	134.1	135.0	137.5	140.6	140.8	140.0	138.2	139.0	137.7	138.7
Cleveland	143.2	140.8	140.1	139.6	140.7	144.6	146.4	145.8	145.6	142.7	143.3	143.8	144.8
Columbus, Ohio	131.5	129.5	128.8	128.1	128.4	130.7	133.6	133.4	134.0	132.5	132.6	133.0	133.5
Detroit	135.6	132.4	131.7	131.4	132.1	135.0	139.2	138.3	138.4	136.8	136.4	137.5	138.3
Indianapolis	135.4	134.0	132.7	132.1	133.3	135.1	137.4	136.8	137.7	136.0	136.0	136.3	137.7
Milwaukee	137.4	135.2	133.8	133.8	134.3	138.1	141.0	140.6	139.4	137.8	137.4	137.8	139.1
Peoria	143.3	140.0	140.1	139.7	140.9	142.1	144.6	144.8	145.9	145.6	145.5	145.4	145.7
Springfield, Ill	144.2	142.7	141.8	140.8	142.0	144.3	146.3	144.7	146.1	144.7	145.0	145.5	146.5
West North Central													
Cedar Rapids[2]	142.5	140.7	139.4	139.0	140.5	142.7	144.6	145.4	145.3	142.9	142.2	142.8	144.3
Kansas City	133.0	131.6	130.6	130.3	131.5	132.4	134.4	135.0	135.4	132.8	132.9	133.8	135.3
Minneapolis	132.0	130.7	129.7	129.3	129.5	131.2	133.0	133.7	133.2	132.6	132.6	133.7	135.1
Omaha	131.9	130.6	129.7	129.6	130.3	133.9	133.5	133.5	131.8	131.1	131.1	132.8	134.5
St. Louis	141.4	140.0	139.1	138.1	139.0	141.7	144.0	142.9	144.0	141.4	141.4	141.4	144.1
St. Paul	130.9	129.6	128.8	128.2	128.5	130.1	131.9	132.2	132.1	131.5	131.4	132.8	133.7
Wichita[2]	149.6	148.0	147.2	147.5	149.9	151.7	150.0	150.9	149.8	148.7	148.3	150.6	152.1
South Atlantic													
Atlanta	140.0	139.7	137.8	136.9	137.3	138.3	140.6	142.1	142.1	141.5	140.5	141.0	141.6
Baltimore	147.4	145.2	145.2	144.1	144.9	146.9	151.4	150.4	149.1	148.1	147.5	147.5	148.1
Charleston, S. C	136.9	134.3	133.9	134.0	133.5	134.8	136.5	139.4	139.7	139.5	139.4	138.4	138.9
Jacksonville	148.2	146.3	144.9	142.8	145.5	146.4	147.5	152.4	152.0	151.9	149.0	149.5	150.7
Norfolk[3]	143.8	145.0	144.0	141.4	140.1	142.4	143.4	145.3	146.1	144.1	144.3	144.3	145.2
Richmond	136.4	136.5	135.0	133.5	133.2	134.5	136.1	137.5	138.3	138.5	137.7	137.8	138.6
Savannah	153.7	150.7	150.9	150.7	150.8	151.7	153.1	156.6	157.5	157.2	155.4	155.6	154.4
Washington, D. C	139.9	138.0	137.4	136.8	137.8	139.7	141.6	142.2	141.7	141.5	140.2	140.8	140.9
Winston-Salem[2]	140.8	139.7	138.1	137.1	138.0	139.9	141.4	143.1	143.4	142.0	142.6	142.1	142.3
East South Central													
Birmingham	143.4	142.8	140.6	139.8	141.1	141.4	143.7	146.9	147.5	144.1	144.2	143.8	145.2
Jackson[2]	149.7	152.9	150.2	147.1	148.3	147.4	149.0	149.4	151.2	151.2	150.0	150.1	150.0
Knoxville[2]	159.3	160.2	158.3	156.3	156.5	157.8	159.0	161.1	160.6	160.8	161.1	160.0	159.8
Louisville	132.8	131.9	130.1	130.2	130.6	131.2	134.1	134.3	135.0	133.5	133.5	134.2	135.2
Memphis	148.1	147.1	145.4	144.4	145.2	146.9	149.8	150.7	150.9	148.1	148.6	148.8	151.8
Mobile	147.1	143.8	143.8	143.9	144.9	144.9	145.9	151.1	152.3	148.9	148.1	148.4	148.9
West South Central													
Dallas	135.9	133.7	132.9	133.8	134.4	134.2	135.6	137.7	138.9	137.6	137.1	137.0	137.5
Houston	138.7	136.5	135.4	134.8	136.7	138.4	139.5	141.6	141.2	140.5	139.7	139.5	140.9
Little Rock	138.6	137.3	136.5	136.1	137.6	138.0	140.3	141.0	140.4	139.3	138.3	138.8	139.8
New Orleans	153.3	150.6	150.0	151.0	152.5	153.0	152.4	157.6	156.5	155.7	154.4	153.2	152.7

TABLE 3.—*Indexes of retail prices of food,*[1] *by cities and months, 1944 and 1945*—Con.

[1935–1939=100]

Region and city	1945 Average for the year	Jan. 16	Feb. 13	Mar. 13	Apr. 17	May 15	June 12	July 17	Aug. 14	Sept. 18	Oct. 16	Nov. 13	Dec. 11
Mountain													
Butte	136.6	134.8	133.2	133.2	134.2	136.5	138.0	138.7	138.7	137.7	136.7	137.9	139.2
Denver	138.8	137.8	136.9	136.9	137.9	141.8	142.0	139.8	139.3	136.1	138.0	137.9	141.7
Salt Lake City	142.9	140.4	139.7	139.0	140.1	142.5	144.3	144.8	143.9	143.4	144.5	145.6	146.5
Pacific													
Los Angeles	145.6	143.4	141.8	142.7	144.4	144.5	144.8	145.2	145.9	147.2	147.2	149.2	150.9
Portland, Oreg	149.5	147.0	146.4	145.8	147.4	149.9	150.3	152.5	150.9	149.3	149.7	151.4	153.9
San Francisco	148.2	146.9	145.3	146.2	148.4	145.7	147.5	150.1	147.1	147.3	147.9	151.5	154.1
Seattle	144.4	143.4	142.2	143.0	143.0	144.4	144.0	145.7	145.8	144.2	142.7	145.3	149.6

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[1] Aggregate costs of 61 foods in each city, weighted to represent total purchases of families of wage earners nd lower-salaried workers, have been combined for the United States with the use of population weights.

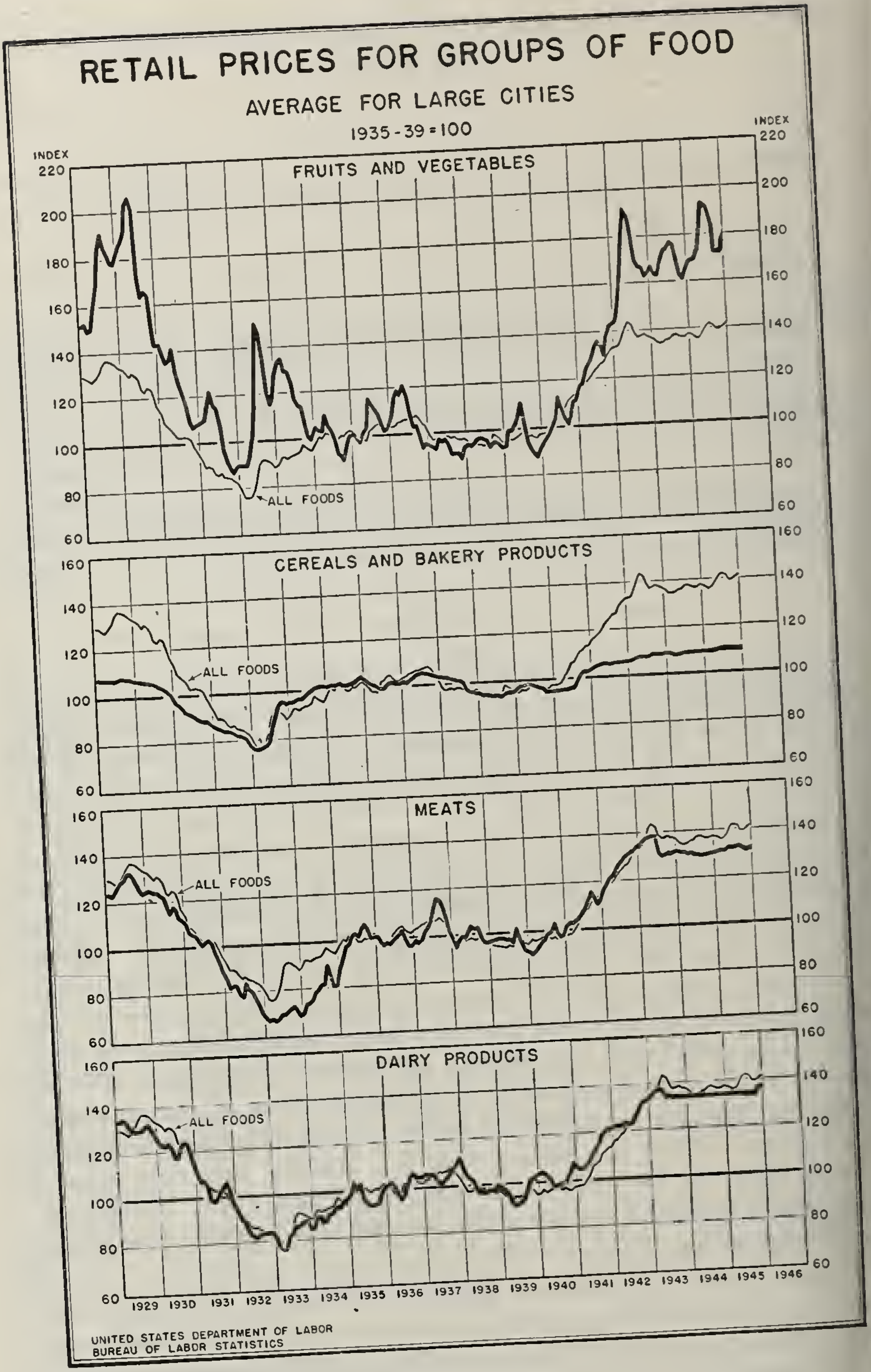
[2] June 1940=100.

[3] Includes Portsmouth and Newport News, January to August 1945 inclusive.

Trend of Prices for Major Food Groups

Cereals and bakery products.—The retail prices of cereals and bakery roducts, which had been rising steadily from 1939 through 1943, eveled off in 1944 and rose less than 1 percent in 1945 to a level 7 percent above that of August 1939. Flour prices, which were abilized in February 1944 by a subsidy payment to millers uthorized in November 1943), remained unchanged until June, hen prices declined following further ceiling reductions made after lowing additional subsidies to millers in the Eastern and Central ates. Flour prices in 1945 remained practically unchanged. Maca- ni prices were relatively stable during the period, fluctuating within 2-percent range during 1944 and even less in 1945. In the cereals oup, prices of wheat cereal and corn flakes remained relatively con- ant while rolled oats rose sharply (17 percent) from April 1944 to e end of the year, but leveled off in 1945 at about 2 percent above ecember 1944. Rice fluctuated within a range of 2.4 percent during 2 years. Prices of pancake flour rose slightly, and were some 5 rcent higher in December 1945 than in January 1944. Corn-meal ces rose 8 percent from March to October 1944 but were practically changed during 1945.

Prices of bakery products in general and bread in particular were d strictly in line during 1944 and 1945 as a result of the subsidies on ir, reflecting the Administration's effort to keep prices of basic foods low levels.



RETAIL PRICES FOR GROUPS OF FOOD

AVERAGE FOR LARGE CITIES

1935-39=100

FRUITS AND VEGETABLES

CEREALS AND BAKERY PRODUCTS

MEATS

DAIRY PRODUCTS

UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS

Meats.—As a group, meat prices during 1944 and 1945 failed to equal the World War II high of mid-1943. By the end of World War II, however, the average price of meats was some 37 percent higher than in August 1939, the month preceding the war's start.

Meat packers continued to receive subsidy payments during 1944 and 1945. With heavy meat production late in 1943 and in the spring of 1944 and with crowded storage facilities, ration points were removed from all meats except beef roasts and steaks during May and June 1944. However, on July 30, 1944, beef set-asides for military and lend-lease were increased to 45 percent of production and again increased in August to about 50 percent of production. By the end of 1944, rationing had been restored for approximately 85 percent of all meats sold at retail. Supplies for civilian consumption were not adequate to meet the record demand and meat shortages of several months duration developed in retail stores at various times during 1944 and 1945. Partial relief from the meat scarcity occurred after VJ-day for a short period.

Beef, veal, and pork prices declined generally during 1944. Beef and veal were lower from January to October as prices for practically all cuts declined or remained unchanged. In the last quarter of 1944 record supplies of beef failed to meet demand and prices advanced moderately until April 1945. With the end of the war in the Pacific, supplies for civilians increased materially as military and lend-lease set-asides were decreased and prices of beef and veal declined slightly from May 1945 through the end of the year. Pork prices were stable throughout the year 1945 at about the same level as 1944 but 6 percent below that of 1943.

Lamb prices rose steadily during the first 7 months of 1944 and leveled off until December. Between December 1944 and August 1945, lamb prices advanced somewhat and remained at the August level (which was 4 percent below May 1943) through December. Sheep and lamb slaughter set a record in the first 4 months of 1945, but the supply was not great enough to offset the heavy civilian demand: In August 1945, direct subsidy payments to producers replaced payments to slaughterers, in order to meet increases in costs of production without reflecting higher prices to consumers.

Chicken prices followed their regular seasonal pattern for the first 9 months of 1944 but failed to decline seasonally in the final months of the year when there was heavy demand for poultry as a substitute or scarce meats. Moreover, production in 1944 was 20 percent below he record year 1943. The seasonal price pattern was at a higher evel in 1944, however, as average prices for 1944 were 3.3 percent bove those of 1943. Prices in 1945 followed about the same pattern s 1944 prices but again at a higher level (about 2 percent). Retail prices of roasting chickens in August 1945 averaged 47.6 cents a pound, the highest price recorded by the Bureau since April 1920.

Dairy products.—Dairy product prices remained stable during 1944 and 1945 except for the last 2 months of 1945 when the butter subsidy was removed, raising the average price to consumers from 50.0 to 54.7 cents a pound, a 9-percent increase. In December 1945, prices of dairy products were 46 percent higher than during August 1939. During the latter part of 1945, butter production dropped as producers diverted butterfat into other lines such as cream and ice cream. Dairy products as a whole for civilian consumption were in short supply during most of the 2-year period. High ration points were necessary to distribute available butter and cheese supplies among civilians as various war requirements took a large part of total production. After VJ-day, cheese and evaporated milk were removed from rationing and the point value of butter was reduced.

Eggs.—A fairly large supply of eggs in the spring and early summer of 1944 postponed the usual seasonal price increases until July. The seasonal peak of prices in December 1944, fell a little short of the high established in November 1943. Prices then declined until April 1945, but maintained a level some 10 percent higher than the low of May 1944. Average prices of eggs more than doubled during World War II and by December 1945 consumers paid 113 percent more for eggs than in August 1939. At the close of the year 1945, average prices of eggs were 68.2 cents a dozen, higher than at any time during World War II. Supplies of better grade eggs were not adequate but the lower grades became more plentiful when the army canceled its dried egg program shortly after VJ-day.

Fruits and vegetables.—By January 1, 1944, all fruits and vegetables commonly purchased by consumers had been brought under price control. Controls, coupled with larger supplies during 1944, held prices for the group at approximately the same average as in 1943. By the end of 1945, however, fruit and vegetable prices had increased to a level nearly double that preceding the war in August 1939.

Apple prices, which held fairly close to the usual seasonal trend during 1944 as the result of a good crop, began to show substantial increases after March 1945, when it became apparent that a warm March followed by frost in April and early May in the apple-producing States of the East and Middle West would cut the crop considerably. This short crop was half as large as the 1944 crop, with the result that the average price of apples rose to 14.3 cents a pound in December 1945, or about 28 percent over the 1944 level. Orange prices were increased during the winter months under a “disaster’ adjustment, in effect from November 6, 1944, to March 1, 1945 which was instituted because of the extensive crop damage resulting from the Florida hurricane in September of 1944. With the indication of bumper crops in the fall and declining prices, ceilings were finally suspended for a 2-month period beginning in mid-November.

Average prices of fresh green beans and carrots in 1944 were unchanged from 1943, while cabbage prices averaged 25 percent lower, lettuce 18 percent, spinach and onions 8 percent. Production of most vegetable crops was not quite as high in 1945 as in 1944, resulting in higher prices during the first half of the year. Ceilings on cabbage and green bean prices were removed on June 6 and July 1, 1945, respectively. There was an immediate increase of 55 percent in cabbage prices and 37 percent in green bean prices. By October 1945, prices for both of these vegetables had fallen below those in effect immediately before the removal of ceilings. Prices of white potatoes were high during 1944, as a result of increased ceilings permitted on early potatoes to encourage production, and upward adjustments in ceilings for potatoes from Eastern and Midwestern States because of the drought. Throughout the first 7 months of 1945, potato prices held at levels higher than those of 1944, but declined sharply in August and September as larger supplies became available with the curtailment of Government purchases. "Disaster" ceilings were eliminated in early August, and remaining ceilings suspended September 14.

Prices for canned fruits and vegetables were relatively stable in 1944 and in 1945 were at approximately the 1943 level. Prices declined slightly from January to July 1944, and then rose slowly to November 1945, to a level about 1 percent higher than in July 1944. Production of canned fruits never equaled demand, but supplies of most canned vegetables were available during the 2-year period.

Beverages.—Coffee prices were stable during 1944 and 1945, with average prices in December 1945 less than a cent higher per pound than in January 1944. Brazil continued to export coffee when shipping facilities were available, paying a subsidy to producers to make up for increased costs which would have prohibited profitable sale to the United States at our rigid ceiling prices. Trading with Colombia continued slow and in the summer of 1945, Great Britain and other European countries bid prices upward by 1¼ cents per pound, thus reducing offerings to the United States. After VJ-day, offerings were practically nonexistent as the South American countries awaited developments on ceiling prices in the United States. Tea prices remained stable at ceilings and although tea continued to be allocated under international agreement, the supply situation had improved sufficiently by January 1945 to allow suspension of the order restricting packaging and distribution. Supplies of cocoa continued to be limited, and average prices remained stable.

Fats and oils.—Declines in the price of peanut butter from January to August 1944 were responsible for slight price decreases of fats and oils as a group. Between August 1944 and December 1945, the group index increased less than 2 percent. Again peanut butter prices were primarily responsible, as prices for this commodity rose sharply at the end of 1945 when the subsidy was removed and OPA permitted price increases. Prices of lard, shortening, oleomargarine, salad dressing, and cooking and salad oils were lower by the end of the year 1945 and were removed from rationing in November 1945.

Sugar and sweets.—Prices for sugar, corn sirup, and molasses remained stable throughout the 2-year period 1944 and 1945. Sugar remained extremely scarce during most of the period and was the one food rationed throughout 1944 and 1945. The United States mainland and Cuba produced the bulk of the supplies available to the world as the Philippines and Pacific sources were virtually cut off. Cuban production was off sharply with no 2-year cane available for grinding. By the summer of 1945, the best producing areas of Europe had been ruined by war, and part of the already tight supplies were shipped to European countries. For the 1944–45 sugar crop, the United States paid a subsidy of $9 a ton for Cuban sugar, a subsidy of $3 a ton to processors of raw beets, and 85 cents a ton to processors of cane sugar in Louisiana.

Monthly average retail prices of individual foods for large cities combined are presented in table 4 for 1944 and 1945. Annual average retail prices of individual foods in each of 56 cities, for 1944 and 1945, are shown in table 5.

TABLE 4.—*Average retail prices of principal foods in large cities combined, by months, 1944 and 1945*

Article	1944												
	Average for the year	Jan. 18	Feb. 15	Mar. 14	Apr. 18	May 16	June 13	July 18	Aug. 15	Sept. 12	Oct. 17	Nov. 14	Dec. 12
Cereals and bakery products:													
Cereals:	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
Flour, wheat .... 10 pounds	64.7	64.6	65.1	65.2	65.1	65.2	64.9	64.8	64.6	64.4	64.1	64.2	64.1
Macaroni .... pound	15.7	15.5	15.5	15.7	15.7	15.7	15.7	15.7	15.8	15.7	15.7	15.8	15.7
Wheat cereal[1] .... 28 ounces	23.2	23.3	23.3	23.3	23.3	23.3	23.2	23.0	23.2	23.2	23.2	23.2	23.1
Corn flakes .... 8 ounces	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.6	6.5	6.5	6.5	6.5	6.5
Corn meal .... pound	6.2	5.9	5.9	5.9	6.0	6.1	6.2	6.3	6.3	6.3	6.4	6.4	6.4
Rice[1] .... do	12.8	12.8	12.8	12.8	12.8	12.8	12.9	12.8	12.9	12.8	12.8	12.7	12.8
Rolled oats .... do	9.4	8.7	8.7	8.7	8.7	8.9	9.4	9.8	9.9	10.0	10.1	10.2	10.2
Flour, pancake[1] .... 20 ounces	12.1	11.9	11.9	12.0	12.0	12.1	12.1	12.1	12.2	12.2	12.2	12.3	12.3
Bakery products:													
Bread, white .... pound	8.8	8.9	8.8	8.8	8.7	8.7	8.8	8.8	8.8	8.8	8.8	8.8	8.8
Bread, whole-wheat .... do	9.7	9.8	9.7	9.7	9.7	9.7	9.7	9.7	9.6	9.6	9.6	9.6	9.6
Bread, rye .... do	9.9	10.0	10.0	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9
Vanilla cookies .... do	28.5	28.8	28.9	28.6	28.3	28.5	28.7	28.4	28.1	27.8	28.2	28.2	28.9
Soda crackers .... do	18.9	18.7	18.8	18.8	18.9	19.0	18.9	18.9	19.0	18.9	18.9	18.9	18.9
Meats:													
Beef:													
Round steak .... do	41.4	42.0	42.0	41.9	41.9	41.8	41.6	41.6	41.2	40.9	40.7	40.6	40.6
Rib roast .... do	33.4	34.0	33.9	33.9	33.8	33.7	33.7	33.4	33.1	32.9	33.0	33.0	32.9
Chuck roast .... do	28.8	29.2	29.3	29.2	29.2	29.0	28.9	28.8	28.7	28.5	28.4	28.3	28.2
Stew meat[1] .... do	31.2	31.7	31.8	31.7	31.6	31.5	31.5	31.3	31.0	30.6	30.6	30.6	30.4
Liver .... do	37.3	37.2	37.5	37.5	37.4	37.1	37.3	37.3	37.2	37.2	37.3	37.3	37.3
Hamburger .... do	28.0	28.7	28.6	28.6	28.4	28.0	28.0	27.9	27.7	27.5	27.5	27.5	27.5
Veal:													
Cutlets .... do	45.2	46.0	46.0	45.7	45.6	45.5	45.1	45.1	45.2	44.7	44.6	44.6	44.8
Roast, boned and rolled[1] .... do	35.5	35.4	35.6	35.4	35.7	35.2	35.0	35.0	35.0	35.4	35.9	36.0	35.9
Pork:													
Chops .... do	37.3	37.6	37.4	37.4	37.3	37.3	37.3	37.3	37.3	37.3	37.2	37.3	37.3
Bacon, sliced .... do	41.1	41.4	41.2	41.2	41.2	41.1	41.2	41.1	40.9	40.9	40.9	40.8	40.9
Ham, sliced .... do	50.8	51.6	51.5	51.4	51.3	51.0	51.1	50.9	50.4	50.3	50.0	50.1	50.0
Ham, whole .... do	35.4	35.6	35.5	35.4	35.6	35.4	35.6	35.5	35.3	35.3	35.2	35.2	35.2
Salt pork .... do	22.3	22.6	22.5	22.5	22.5	22.5	22.4	22.2	22.1	22.1	22.3	22.1	21.9
Liver[1] .... do	22.1	22.2	22.2	22.2	22.1	22.1	22.0	22.0	21.9	21.9	22.0	22.0	22.0
Sausage[1] .... do	38.3	38.4	38.5	38.5	38.4	38.2	38.2	38.0	38.1	38.2	38.5	38.4	38.5
Bologna, big[1] .... do	34.3	34.4	34.5	34.5	34.3	35.2	34.2	34.1	34.1	34.1	34.2	34.0	33.9
Lamb:													
Leg .... do	40.0	40.1	40.1	40.1	40.2	40.0	40.1	40.1	40.0	39.9	39.9	39.9	40.1
Rib chops .... do	45.3	45.3	45.3	45.4	45.3	45.2	45.3	45.4	45.3	45.1	45.2	45.3	45.7
Poultry:													
Roasting chickens .... do	45.1	44.9	44.7	44.9	45.0	46.5	46.0	45.1	44.6	44.6	44.9	45.0	45.0

See footnotes at end of table.

TABLE 4.—*Average retail prices of principal foods in large cities combined, by months, 1944 and 1945*—Continued

Article	1944												
	Average for the year	Jan. 18	Feb. 15	Mar. 14	Apr. 18	May 16	June 13	July 18	Aug. 15	Sept. 12	Oct. 17	Nov. 14	Dec. 12
	Cents	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
Fish: [2]													
Salmon, pink......16-ounce can..	23.5	23.2	24.0	24.2	24.1	24.1	23.7	23.7	23.6	22.9	23.0	22.9	22.5
Salmon, red [1]......do....	41.8	41.8	42.6	43.1	43.1	42.9	42.3	41.9	40.4	40.4	40.9	41.5	40.4
Dairy products:													
Butter......pound..	50.0	50.2	50.2	50.2	50.1	50.0	49.9	50.0	50.0	50.0	49.9	49.8	50.0
Cheese......do....	36.0	36.1	35.9	35.9	36.2	36.0	36.0	36.1	36.1	36.1	36.1	36.2	36.0
Milk, fresh (delivered)......quart..	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6
Milk, fresh (grocery)......do....	14.5	14.4	14.4	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5
Milk, evaporated......14½-ounce can..	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Eggs:													
Eggs, fresh......dozen..	54.5	54.3	50.3	47.8	45.0	44.9	45.7	52.7	56.5	59.6	63.5	66.3	66.9
Fruits and vegetables:													
Fresh fruits:													
Apples......pound..	11.2	10.8	11.2	11.6	11.8	11.8	12.1	13.6	11.0	9.7	9.8	10.3	10.7
Bananas......do....	11.3	11.7	11.5	11.3	11.2	11.4	11.3	11.2	11.2	11.1	11.1	11.2	11.1
Oranges......dozen..	46.0	40.5	37.6	41.9	45.1	46.8	48.2	50.8	50.9	50.6	49.6	46.0	43.7
Grapefruit [1]......each..	8.8	7.4	6.9	7.5	7.9	8.7	9.2	10.1	10.4	11.0	9.2	8.6	8.8
Fresh vegetables:													
Beans, green......pound..	18.7	25.9	23.4	18.9	20.5	19.5	16.6	13.4	14.1	17.2	14.7	20.2	20.5
Cabbage......do....	5.3	6.0	5.8	5.1	5.6	5.6	5.4	4.8	4.9	5.0	4.7	4.7	5.8
Carrots......bunch..	8.8	10.4	9.0	8.6	7.2	8.4	8.5	8.6	8.7	8.9	8.9	9.0	9.2
Lettuce......head..	11.5	12.2	11.3	10.5	11.1	12.3	11.5	10.2	10.8	12.2	12.2	10.9	12.5
Onions......pound..	6.9	7.7	8.1	8.2	9.9	9.0	6.5	7.2	6.5	5.5	4.8	4.7	5.0
Potatoes......15 pounds..	69.8	64.1	64.9	63.6	63.2	69.4	78.7	79.5	80.1	72.4	67.1	66.5	67.6
Spinach......pound..	10.9	11.6	10.5	10.3	10.9	9.2	9.7	10.3	11.6	12.9	11.4	10.8	11.9
Sweetpotatoes......do....	10.4	10.6	10.8	11.0	11.3	12.2	12.7	13.5	12.3	8.7	7.1	6.8	8.0
Beets [1]......bunch..	8.8	9.6	9.0	8.8	8.8	10.5	10.7	7.5	7.3	7.7	7.6	7.9	9.7
Canned fruits:													
Peaches......No. 2½ can..	27.5	27.0	27.2	27.1	27.3	27.3	27.5	27.7	27.7	28.0	27.8	27.7	27.8
Pineapple......do..	27.4	27.7	27.6	27.5	27.5	27.5	27.5	27.3	27.3	27.3	27.5	27.2	26.7
Grapefruit juice......No. 2 can..	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.3	14.4	14.4	14.4
Canned vegetables:													
Beans, green......do....	13.3	14.0	13.8	13.4	13.2	13.1	13.0	13.1	13.2	13.1	13.1	13.1	13.1
Corn......do....	14.5	14.5	14.5	14.5	14.4	14.4	14.4	14.4	14.5	14.5	14.6	14.7	14.7
Peas......do....	13.4	14.2	13.9	13.5	13.3	13.2	13.1	13.1	13.1	13.2	13.3	13.3	13.2
Tomatoes......do..	12.0	12.2	12.1	12.0	12.0	11.9	11.9	11.9	12.0	12.0	12.0	11.9	12.1
Soup, vegetable [1]......11-ounce can..	13.4	13.2	13.3	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.3
Dried fruits:													
Prunes......pound..	17.0	17.0	16.6	16.8	16.8	17.1	17.1	17.1	17.3	17.3	17.0	16.8	17.0

Navy beans	do	10.7	10.5	10.6	10.6	10.6	10.6	10.7	10.7	10.8	10.9	10.9	11.1	11.1
Soup, dehydrated, chicken noodle [1]	ounce	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.6	3.6	3.7	3.7	3.7
Beverages:														
Coffee	pound	30.1	29.8	29.8	29.9	29.9	30.0	30.0	30.0	30.1	30.2	30.3	30.3	30.3
Tea	¼ pound	23.8	23.5	23.6	23.8	23.8	23.8	23.9	23.9	23.9	23.9	23.9	24.0	24.0
Cocoa [1]	½ pound	10.1	9.7	9.9	9.9	10.0	10.1	10.2	10.2	10.3	10.4	10.4	10.4	10.4
Fats and oils:														
Lard	pound	18.7	18.8	18.8	18.8	18.8	18.7	18.7	18.6	18.6	18.7	18.7	18.8	18.8
Shortening other than lard:														
In cartons	do	20.1	20.0	20.1	20.0	20.1	20.1	20.2	20.2	20.2	20.2	20.2	20.2	20.2
In other containers	do	24.8	24.8	24.8	24.8	24.7	24.7	24.7	24.7	24.8	24.8	24.8	24.9	24.8
Salad dressing	pint	25.6	25.5	25.5	25.6	25.6	25.5	25.6	25.6	25.6	25.8	25.7	25.8	25.8
Oleomargarine	pound	24.1	24.0	24.1	24.1	24.1	24.2	24.1	24.2	24.0	24.0	24.1	24.1	24.2
Peanut butter	do	28.5	28.9	28.8	28.6	28.4	28.5	28.4	28.4	28.4	28.4	28.4	28.5	28.3
Oil, cooking or salad [1]	pint	30.6	30.7	30.6	30.6	30.6	30.1	30.1	30.6	30.7	30.6	30.7	30.7	30.7
Sugar and sweets:														
Sugar	pound	6.7	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.7	6.7	6.7	6.7	6.7
Corn sirup	24 ounces	15.8	15.9	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8
Molasses [1]	18 ounces	15.9	15.9	16.0	15.9	15.9	15.8	15.7	15.8	15.8	15.8	15.7	15.9	15.9
Apple butter [1]	16 ounces	13.3	13.2	12.9	13.2	13.2	13.2	13.2	13.2	13.3	13.4	13.7	13.6	13.5

Article		Average for the year	1945											
			Jan. 16	Feb. 13	Mar. 13	April 17	May 15	June 12	July 17	Aug. 14	Sept. 18	Oct. 16	Nov. 13	Dec. 11
Cereals and bakery products:														
Cereals:		*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
Flour, wheat	10 pounds	64.2	64.2	64.2	64.2	64.3	64.2	64.3	64.3	64.3	64.2	64.1	64.1	64.0
Macaroni	pound	15.7	15.7	15.7	15.7	15.8	15.8	15.7	15.7	15.8	15.7	15.7	15.7	15.6
Wheat cereal [1]	28 ounces	23.3	23.2	23.1	23.1	23.2	23.3	23.3	23.3	23.4	23.5	23.4	23.3	23.3
Corn flakes	8 ounces	6.6	6.5	6.5	6.5	6.5	6.6	6.7	6.7	6.7	6.7	6.7	6.7	6.7
Corn meal	pound	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.5	6.5	6.5	6.5
Rice [1]	do	12.8	12.8	12.8	12.8	12.8	12.8	12.9	13.0	13.0	12.8	12.7	12.9	12.9
Rolled oats	do	10.4	10.2	10.2	10.3	10.3	10.3	10.4	10.4	10.4	10.4	10.4	10.4	10.4
Flour, pancake [1]	20 ounces	12.4	12.3	12.3	12.3	12.3	12.3	12.3	12.4	12.4	12.4	12.4	12.8	12.4
Bakery products:														
Bread, white	pound	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8
Bread, whole-wheat	do	9.7	9.6	9.6	9.6	9.6	9.6	9.7	9.7	9.7	9.6	9.6	9.6	9.7
Bread, rye	do	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	10.0
Vanilla cookies	do	28.9	28.8	28.8	28.9	28.9	28.7	28.6	28.8	28.6	28.7	29.1	29.5	29.0
Soda crackers	do	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.8	18.8
Meats:														
Beef:														
Round steak	do	40.6	40.5	40.5	40.4	40.4	40.2	40.0	40.1	40.9	41.0	40.9	40.9	40.9
Rib roast	do	32.8	32.8	32.8	32.7	32.7	32.6	32.1	32.3	33.0	33.1	33.1	33.1	33.0
Chuck roast	do	28.1	28.1	28.0	27.9	28.0	27.8	27.6	27.9	28.4	28.3	28.4	28.3	28.3
Stew meat [1]	do	29.6	30.1	29.9	29.3	29.3	29.3	29.0	29.4	30.0	29.8	29.9	29.6	29.9
Liver	do	37.0	37.3	37.3	37.2	36.9	36.6	36.5	36.6	36.9	37.1	37.2	37.3	37.3
Hamburger	do	27.4	27.4	27.5	27.5	27.4	27.3	27.2	27.2	27.4	27.4	27.3	27.4	27.5

See footnotes at end of table.

TABLE 4.—*Average retail prices of principal foods in large cities combined, by months, 1944 and 1945*—Continued

Article	Average for the year	1945											
		Jan. 16	Feb. 13	Mar. 13	April 17	May 15	June 12	July 17	Aug. 14	Sept. 18	Oct. 16	Nov. 13	Dec. 11
Meats—Continued	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
Veal:													
Cutlets pound	44.1	44.5	44.2	43.7	43.6	43.4	43.1	43.5	44.4	44.4	44.5	44.7	44.7
Roast, boned and rolled [1] do	34.9	35.5	35.3	34.9	34.6	34.5	34.3	34.4	34.3	34.7	35.1	35.3	35.9
Pork:													
Chops do	37.1	37.3	37.2	37.0	36.9	36.9	36.8	36.9	37.2	37.2	37.2	37.2	37.3
Bacon, sliced do	41.1	40.9	41.0	40.9	41.0	40.9	41.0	41.1	41.2	41.2	41.2	41.2	41.2
Ham, sliced do	49.5	50.0	49.9	50.0	49.3	49.2	49.0	49.2	49.4	49.4	49.4	49.6	49.8
Ham, whole do	34.7	35.3	35.2	34.9	34.5	34.5	34.4	34.6	34.5	34.4	34.7	34.9	35.0
Salt pork do	22.1	22.2	22.3	22.0	22.1	22.2	22.1	22.1	22.0	22.0	22.0	22.0	21.9
Liver [1] do	22.1	22.1	22.0	22.1	22.1	22.0	22.1	22.1	22.1	22.2	22.1	22.1	22.1
Sausage [1] do	38.5	38.2	38.3	38.5	38.1	38.0	38.4	38.6	38.7	38.7	38.7	38.8	38.8
Bologna, big [1] do	33.9	33.6	33.9	33.6	33.9	33.9	33.8	33.7	33.9	34.0	34.0	34.1	34.1
Lamb:													
Leg do	40.0	39.9	39.8	39.7	39.9	39.7	39.6	39.8	40.5	40.5	40.4	40.4	40.3
Rib chops do	45.5	45.4	45.2	45.3	45.4	45.1	45.0	45.2	46.0	45.8	45.9	45.9	45.6
Poultry:													
Roasting chickens do	46.6	45.5	45.6	46.2	46.5	47.0	47.3	47.1	47.6	47.0	46.1	47.0	46.9
Fish [2]:													
Salmon, pink 16-ounce can	23.3	23.0	23.5	23.6	23.4	23.5	23.6	23.6	23.4	23.3	23.0	23.0	23.2
Salmon, red [1] do	40.3	40.3	40.5	40.3	40.8	40.2	40.3	40.2	39.7	39.9	40.2	40.4	40.9
Dairy products:													
Butter pound	50.7	49.8	49.9	49.9	49.9	49.9	50.0	49.9	49.9	50.0	49.9	54.4	54.7
Cheese do	35.6	35.7	35.5	35.8	35.6	35.5	35.2	35.4	35.7	35.6	35.7	35.7	35.5
Milk, fresh (delivered) quart	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6
Milk, fresh (grocery) do	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5
Milk, evaporated 14½-ounce can	10.0	10.0	10.0	10.0	10.1	10.1	10.1	10.1	10.1	10.0	10.0	10.0	9.9
Eggs:													
Eggs, fresh dozen	58.1	60.2	54.4	49.9	49.5	49.7	51.0	55.3	60.6	65.2	65.7	67.9	68.2
Fruits and vegetables:													
Fresh fruits:													
Apples pound	12.6	11.1	11.2	11.4	11.8	12.3	12.9	12.5	13.1	13.3	13.6	14.1	14.3
Bananas do	10.4	10.4	10.3	10.3	10.4	10.4	10.5	10.5	10.5	10.5	10.4	10.5	10.5
Oranges dozen	48.5	44.5	43.9	44.4	45.7	48.1	52.2	52.7	51.3	51.6	51.2	47.0	49.1
Grapefruit [1] each	9.8	8.8	8.8	9.0	9.4	10.1	11.0	11.3	11.0	11.3	10.0	8.5	9.0
Fresh vegetables:													
Beans, green pound	19.6	23.2	20.5	20.2	20.0	18.9	17.5	24.0	18.7	15.8	17.0	20.1	19.6
Cabbage do	6.1	7.4	6.4	5.5	6.6	5.8	9.0	6.6	6.0	5.1	4.8	4.4	5.0
Carrots bunch	8.8	8.7	8.7	7.8	8.0	9.0	9.2	9.2	9.1	8.9	9.0	9.0	8.9
Lettuce head	12.1	11.8	10.6	12.1	12.4	12.0	12.6	12.3	12.5	12.1	12.2	12.3	12.7
Onions pound	6.9	5.3	5.9	5.4	5.2	7.1	8.8	9.3	7.9	6.8	6.6	7.0	7.2
Potatoes 15 pounds	74.0	72.0	75.3	77.4	79.7	88.2	88.7	81.9	73.8	61.9	62.0	62.3	64.3
Spinach pound	11.4	11.6	12.7	11.6	11.7	12.4	11.3	11.9	11.6	9.9	11.1	10.2	11.3

	[illegible]	[illegible]	9.0	9.4	9.5	10.0	10.9	11.5	11.4	8.6	7.7	7.7	9.3
bunch	9.4	9.7	9.3	9.4	9.6	10.9	12.6	9.0	8.4	8.1	8.2	8.9	8.7
Canned fruits:													
Peaches, No. 2½ can	27.6	27.6	27.7	27.9	27.6	27.4	27.5	27.4	27.2	27.3	27.5	28.0	27.8
Pineapple, do	26.6	26.6	26.4	26.8	26.9	26.7	26.9	26.9	26.3	26.3	26.3	26.5	26.4
Grapefruit juice, No. 2 can	14.4	14.3	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.5	14.5	14.3	14.3
Canned vegetables:													
Beans, green, do	13.1	13.1	13.1	13.1	13.0	13.1	13.1	13.1	13.2	13.1	13.1	13.2	13.3
Corn, do	14.8	14.7	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.7	14.8
Peas, do	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.2	13.2	13.2	13.3	13.3	13.4
Tomatoes, do	12.2	12.0	12.0	12.1	12.2	12.2	12.1	12.2	12.2	12.1	12.2	12.4	12.5
Soup, vegetable [1], 11-ounce can	13.3	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.2	13.2	13.0	13.0	13.2
Dried fruits: Prunes, pound	17.5	17.2	17.2	17.5	17.7	18.0	17.7	17.7	17.4	17.5	17.3	17.1	17.4
Dried vegetables:													
Navy beans, do	11.4	11.2	11.2	11.3	11.4	11.4	11.4	11.5	11.5	11.5	11.5	11.4	11.3
Soup, dehydrated, chicken noodle [1], ounce	3.8	3.7	3.7	3.7	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.9
Beverages:													
Coffee, pound	30.5	30.3	30.3	30.3	30.4	30.4	30.4	30.4	30.5	30.6	30.6	30.7	30.7
Tea, ¼ pound	24.1	24.1	24.1	24.1	24.1	24.2	24.2	24.2	24.2	24.2	24.3	24.1	24.0
Cocoa [1], ½ pound	10.4	10.3	10.3	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.3	10.4
Fats and oils:													
Lard, pound	18.8	18.8	18.8	18.8	18.8	18.8	18.8	18.7	18.8	18.8	18.8	18.7	18.7
Shortening other than lard:													
In cartons, do	20.0	20.1	20.1	20.0	20.2	20.2	20.0	20.0	20.0	20.0	20.0	19.9	19.8
In other containers, do	24.6	24.7	24.7	24.6	24.6	24.6	24.5	24.5	24.5	24.5	24.5	24.5	24.5
Salad dressing, pint	25.1	25.7	25.6	25.6	25.5	25.6	25.3	24.3	24.2	24.0	24.5	24.7	25.6
Oleomargarine, pound	24.1	24.1	24.1	24.1	24.2	24.2	24.0	23.8	23.9	24.3	24.3	24.1	23.7
Peanut butter, do	28.7	28.4	28.3	28.3	28.4	28.4	28.5	28.5	28.6	28.6	28.6	29.3	31.0
Oil, cooking or salad [1], pint	30.4	30.7	30.7	30.7	30.8	30.8	30.6	30.4	30.5	30.0	30.0	29.9	29.8
Sugar and sweets:													
Sugar, pound	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.6	6.6	6.7
Corn sirup, 24 ounces	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.7	15.7
Molasses [1], 18 ounces	15.8	15.8	15.8	15.7	15.7	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8
Apple butter [1], 16 ounces	14.0	13.5	13.5	13.6	13.8	13.9	13.9	14.1	14.1	14.2	14.3	14.4	14.6

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[1] Not included in the index.

[2] Costs of fresh and/or frozen fish are included in the index, but average prices are not computed.

TABLE 5.—*Annual average retail prices of principal foods, by cities, 1944 and 1945*

Article		United States		New England											
				Boston		Bridgeport		Fall River		Manchester		New Haven		Portland, Maine	
		1944	1945	1944	1945	1944	1945	1944	1945	1944	1945	1944	1945	1944	1945
		Cents	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
Cereals and bakery products:															
Cereals:															
Flour, wheat	10 pounds	64.7	64.2	65.0	64.3	65.6	65.9	65.5	65.7	64.2	64.0	69.2	67.9	63.3	64.6
Macaroni	pound	15.7	15.7	16.2	16.1	17.3	17.9	17.7	17.7	16.7	16.9	15.5	15.8	16.7	16.5
Wheat cereal [1]	28 ounces	23.2	23.3	23.9	23.8	23.5	23.4	22.1	22.3	22.8	23.3	25.5	25.8	22.4	22.3
Corn flakes	8 ounces	6.5	6.6	6.5	6.5	6.8	6.9	6.6	6.7	6.7	6.7	6.9	6.8	6.7	6.6
Corn meal	pound	6.2	6.4	6.9	6.7	6.9	7.0	7.9	6.9	6.5	6.5	6.7	6.8	6.3	6.5
Rice [1]	do	12.8	12.8	13.3	13.7	14.0	14.2	13.3	13.9	12.9	13.2	13.0	13.1	13.2	14.0
Rolled oats	do	9.4	10.4	9.3	10.4	9.4	10.3	9.5	10.4	9.5	10.4	9.4	10.4	9.1	10.0
Flour, pancake [1]	20 ounces	12.1	12.4	12.9	13.0	12.6	12.8	12.8	13.2	11.7	11.8	12.7	13.1	12.5	12.5
Bakery products:															
Bread, white	pound	8.8	8.8	8.5	8.5	8.6	8.6	8.4	8.4	8.7	8.9	8.6	8.5	9.0	9.0
Bread, whole-wheat	do	9.7	9.7	9.4	9.2	9.7	9.5	9.3	9.2	9.6	9.7	9.9	9.6	9.7	9.5
Bread, rye	do	9.9	9.9	9.3	9.4	9.8	9.8	9.4	9.3	9.7	9.7	9.5	9.6	9.6	9.6
Vanilla cookies	do	28.5	28.9	20.3	36.5	29.6	25.0	19.0	19.0	31.2	34.2	27.4	31.2	34.8	29.2
Soda crackers	do	18.9	18.9	19.8	19.8	18.9	18.9	18.7	19.3	19.6	19.6	19.6	19.3	19.4	19.3
Meats:															
Beef:															
Round steak	do	41.4	40.6	44.2	43.1	45.4	43.7	44.1	42.3	40.9	40.7	44.4	43.1	42.5	42.0
Rib roast	do	33.4	32.8	34.3	34.6	35.8	34.1	34.3	33.1	31.7	32.4	36.0	34.3	33.4	33.2
Chuck roast	do	28.8	28.1	34.7	31.7	31.7	29.8	30.4	30.4	28.5	28.6	31.7	29.6	29.1	29.9
Stew meat [1]	do	31.2	29.6	35.6	37.0	36.8	34.2	34.7	32.6	33.7	32.6	35.3	35.3	33.9	32.5
Liver	do	37.3	37.0	37.3	36.8	37.9	36.9	36.6	36.2	35.2	35.7	37.6	36.7	36.3	36.0
Hamburger	do	28.0	27.4	28.5	27.5	30.1	27.5	28.7	27.4	29.2	27.9	29.0	27.3	28.0	27.7
Veal:															
Cutlets	do	45.2	44.1	45.1	44.4	48.9	46.4	52.6	49.6	44.3	43.6	46.7	46.4	44.6	43.1
Roast, boned and rolled [1]	do	35.5	34.9	33.3	31.9	34.3	33.6	32.1	32.1	34.2	32.6	34.3	33.4	34.2	33.9
Pork:															
Chops	do	37.3	37.1	37.8	37.8	38.5	37.6	38.4	37.9	37.8	37.7	38.2	37.9	38.2	37.2
Bacon, sliced	do	41.1	41.1	41.0	41.3	40.6	40.7	39.6	40.3	39.9	41.1	41.3	41.6	40.7	41.0
Ham, sliced	do	50.8	49.5	50.8	49.5	52.3	49.2	52.8	51.3	50.4	51.2	52.8	50.7	52.2	49.5
Ham, whole	do	35.4	34.7	35.5	34.0	35.5	33.5	36.3	34.5	35.0	33.3	35.3	31.7	35.0	33.9
Salt pork	do	22.3	22.1	20.3	19.5	21.6	21.7	19.3	19.8	18.5	19.1	26.1	20.8	19.4	20.0
Liver [1]	do	22.1	22.1	22.0	22.0	21.9	22.0	22.0	22.0	22.4	22.2	22.6	22.0	22.1	22.0
Sausage [1]	do	38.3	38.5	45.3	45.4	41.3	41.7	43.6	43.7	41.3	39.7	42.0	41.0	44.3	44.1
Bologna, big [1]	do	34.3	33.9	34.6	34.2	36.1	35.9	34.1	34.0	32.8	33.5	37.2	35.7	33.2	33.2
Lamb:															
Leg	do	40.0	40.0	41.0	41.2	41.4	40.8	40.0	40.0	39.9	39.7	41.1	41.2	39.8	39.9
Rib chops	do	45.3	45.5	46.2	46.9	47.7	46.7	47.3	45.8	43.5	44.4	47.4	46.9	45.3	45.6
Poultry:															
Roasting chickens	do	45.1	46.6	45.7	46.7	45.5	47.2	45.4	47.2	45.4	47.2	45.8	47.0	45.1	47.3
Fish: [2]															
Salmon, pink	16-ounce can	23.5	23.3	23.5	24.8	23.9	22.1	22.9	22.5	25.2	23.4	23.9	23.8	23.3	23.1
	do	41.8	40.3	41.6	40.5	41.4	40.1	41.4	39.7	42.9	39.6	44.4	43.6	41.3	39.0
												50.3	50.6	49.4	50.0

													35.5	35.4	34.4	34.1	33.3
				16.0	16.0	16.0	16.0	16.0	16.0	15.5	15.5	16.0	16.0	15.5	15.5
(grocery)	do	14.5	14.5	15.0	15.1	15.0	15.0	15.2	15.2	15.5	15.5	15.2	15.2	15.8	15.9
Milk, evaporated	14½-ounce can	10.0	10.0	10.4	10.4	10.3	10.4	10.2	10.2	10.2	10.2	10.4	10.4	10.2	10.2
Eggs:															
Eggs, fresh	dozen	54.5	58.1	55.8	59.8	57.1	59.9	53.6	59.1	52.5	57.8	57.5	59.4	54.2	58.4
Fruits and vegetables:															
Fresh fruits:															
Apples	pound	11.2	12.6	10.2	12.5	10.8	12.7	11.0	12.9	9.3	11.8	10.6	12.6	9.9	12.4
Bananas	do	11.3	10.4	12.9	11.6	12.5	11.4	12.1	13.0	12.9	12.1	12.6	11.5	12.9	11.7
Oranges	dozen	46.0	48.5	44.8	46.9	47.0	51.1	47.1	48.9	46.4	48.1	44.4	50.2	46.4	47.9
Grapefruit [1]	each	8.8	9.8	9.8	10.1	9.8	11.1	9.3	10.5	9.0	10.2	10.0	10.5	9.8	10.1
Fresh vegetables:															
Beans, green	pound	18.7	19.6	19.1	19.3	20.0	20.9	18.7	20.7	18.9	20.3	20.8	20.9	17.9	19.5
Cabbage	do	5.3	6.1	6.0	6.9	6.0	6.2	6.6	6.5	5.8	6.3	6.1	6.5	5.4	5.7
Carrots	bunch	8.8	8.8	9.7	10.0	10.2	10.2	10.1	10.6	9.6	9.5	10.5	10.1	9.2	9.3
Lettuce	head	11.5	12.1	12.5	12.7	13.8	13.9	13.5	13.7	13.7	13.7	13.7	13.8	12.8	13.9
Onions	pound	6.9	6.9	7.4	11.5	8.0	7.7	7.3	8.0	7.7	7.6	8.3	7.8	8.1	7.4
Potatoes	15 pounds	69.8	74.0	66.3	66.2	68.7	72.1	62.1	67.2	61.6	66.8	69.8	71.4	62.7	66.8
Spinach	pound	10.9	11.4	11.1	11.7	11.6	11.1	11.7	11.9	11.4	11.6	12.3	11.5	11.5	12.0
Sweetpotatoes	do	10.4	9.5	12.1	9.8	11.9	10.8	11.9	11.5	11.3	9.3	12.1	11.3	11.8	8.9
Beets [1]	bunch	8.8	9.4	10.0	10.7	9.6	9.5	10.4	10.7	9.4	10.1	9.2	9.2	9.5	10.8
Canned fruits:															
Peaches	No. 2½ can	27.5	27.6	27.8	29.1	29.2	27.8	27.8	27.5	30.0	30.3	29.1	28.8	27.9	27.9
Pineapple	do	27.4	26.6	29.2	29.5	29.2	26.8	29.8	29.0	29.4	31.2	29.9	28.7	28.6	27.5
Grapefruit juice	No. 2 can	14.4	14.4	14.6	14.6	14.9	15.0	15.0	14.9	14.9	15.1	15.3	15.0	14.7	14.6
Canned vegetables:															
Beans, green	do	13.3	13.1	13.6	13.6	14.4	13.4	12.9	13.3	14.4	14.1	14.0	14.6	13.4	12.8
Corn	do	14.5	14.8	14.7	14.8	15.0	15.4	14.7	14.7	15.1	15.0	15.1	15.4	14.1	14.2
Peas	do	13.4	13.3	14.4	14.4	14.5	12.3	13.8	13.5	14.3	14.0	14.4	15.0	14.0	13.7
Tomatoes	do	12.0	12.2	12.5	12.2	12.6	11.7	12.1	12.5	12.3	12.8	12.7	12.9	12.6	12.5
Soup, vegetable [1]	11-ounce can	13.4	13.3	13.1	13.3	13.3	13.4	13.6	13.2	13.2	13.1	13.7	13.7	13.1	13.0
Dried fruits:															
Prunes	pound	17.0	17.5	16.6	17.5	17.6	18.2	17.0	17.3	18.0	17.6	18.9	17.7	18.0	17.1
Dried vegetables:															
Navy beans	do	10.7	11.4	11.9	12.5	11.0	11.7	10.8	12.1	11.0	12.0	10.7	11.1	12.0	12.0
Soup, dehydrated, chicken noodle [1]	ounce	3.7	3.8	3.8	3.7	3.8	3.9	4.1	4.1	3.7	3.7	3.8	3.7	4.0	4.2
Beverages:															
Coffee	pound	30.1	30.5	31.2	32.2	30.9	31.8	30.1	30.9	30.5	30.7	32.3	32.3	29.3	30.3
Tea	¼ pound	23.8	24.1	24.5	25.1	22.1	23.6	23.4	23.4	22.8	22.8	23.7	23.7	22.8	23.1
Cocoa [1]	½ pound	10.1	10.4	10.6	10.6	8.9	11.3	10.5	10.6	11.0	10.8	11.0	11.1	10.2	10.3
Fats and oils:															
Lard	pound	18.7	18.8	18.6	18.9	18.5	18.6	18.7	18.6	18.4	18.5	18.9	18.9	19.0	19.0
Shortening other than lard:															
In cartons	do	20.1	20.0	21.5	23.0	19.8	18.0	22.2	21.0	20.6	20.6	17.1	17.1	20.6	19.7
In other containers	do	24.8	24.6	24.7	24.5	24.8	24.6	24.8	25.0	24.8	24.9	25.5	25.6	24.6	24.6
Salad dressing	pint	25.6	25.1	25.8	28.2	26.9	25.7	25.9	26.8	25.6	25.3	26.6	27.1	26.7	26.1
Oleomargarine	pound	24.1	24.1	25.7	25.5	22.7	23.2	25.3	24.6	25.1	24.7	22.9	24.3	24.3	24.2
Peanut butter	do	28.5	28.7	27.7	28.0	28.9	29.3	27.5	28.1	27.7	27.7	28.8	29.0	27.9	28.6
Oil, cooking or salad [1]	pint	30.6	30.4	30.9	30.9	30.3	30.3	31.9	31.2	31.5	31.7	31.9	32.0	30.3	30.3
Sugar and sweets:															
Sugar	pound	6.7	6.7	6.6	6.5	6.9	6.8	6.8	6.7	6.8	6.6	6.8	6.8	6.9	6.8
Corn sirup	24 ounces	15.8	15.8	17.2	17.5	17.9	17.7	17.8	17.6	17.7	17.9	18.0	18.1	17.8	17.9
Molasses [1]	18 ounces	15.9	15.8	15.4	15.0	16.5	16.6	15.8	16.1	14.6	14.3	16.6	15.9	13.9	14.7
Apple butter [1]	16 ounces	13.3	14.0	15.2	14.0	14.2	14.7	12.9	15.1	12.7	13.2	13.6	13.4	22.6	18.6

See footnotes at end of table.

TABLE 5.—*Annual average retail prices of principal foods, by cities, 1944 and 1945*—Continued

Article		New England—Continued		Middle Atlantic											
		Providence		Buffalo		Newark		New York		Philadelphia		Pittsburgh		Rochester	
		1944	1945	1944	1945	1944	1945	1944	1945	1944	1945	1944	1945	1944	1945
Cereals and bakery products:		*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
Cereals:															
Flour, wheat	10 pounds	66.0	65.0	60.9	61.0	64.8	66.2	64.7	66.1	63.2	62.8	64.9	63.7	65.2	66.3
Macaroni	pound	14.5	14.5	16.1	16.0	17.0	17.2	16.2	16.7	17.0	16.6	16.8	16.6	16.5	16.4
Wheat cereal [1]	28 ounces	20.4	20.1	22.1	22.2	23.7	24.3	23.0	22.7	22.7	22.7	24.0	23.8	22.1	22.3
Corn flakes	8 ounces	6.3	6.5	6.4	6.6	6.6	6.5	6.8	6.7	6.4	6.6	6.5	6.5	6.7	6.7
Corn meal	pound	6.5	6.6	6.3	6.6	6.5	6.7	6.8	7.1	6.3	6.4	6.2	6.2	5.8	6.0
Rice [1]	do	12.7	13.0	12.9	13.1	14.2	13.8	13.4	13.6	13.4	13.3	12.5	12.5	12.4	12.8
Rolled oats	do	9.0	9.9	9.3	10.2	9.4	10.6	9.3	10.4	8.9	9.9	9.3	10.3	9.2	10.0
Flour, pancake [1]	20 ounces	11.2	12.5	12.0	11.8	11.5	12.0	12.2	12.7	11.9	11.8	12.1	11.9	11.6	11.8
Bakery products:															
Bread, white	pound	8.3	8.4	8.5	8.5	9.1	9.1	9.4	9.4	9.3	9.3	9.1	9.2	8.2	8.0
Bread, whole-wheat	do	10.0	9.7	10.0	10.1	10.0	10.0	10.1	10.2	10.7	10.6	10.8	10.8	9.1	8.7
Bread, rye	do	9.8	9.8	9.6	9.7	9.9	10.0	10.3	10.4	10.6	10.4	10.0	9.9	9.2	8.8
Vanilla cookies	do	37.2	31.2	39.0	34.5	34.9	32.0	30.7	26.2	26.3	26.3	28.1	30.1	22.2	31.2
Soda crackers	do	19.3	19.6	19.7	19.8	19.4	19.3	19.0	19.0	19.6	19.1	19.3	19.2	18.3	18.2
Meats:															
Beef:															
Round steak	do	43.5	40.8	40.5	39.9	44.6	43.0	42.8	41.9	44.3	42.9	41.7	40.3	42.1	41.3
Rib roast	do	33.4	32.7	33.2	32.9	36.1	35.4	33.6	32.8	34.2	33.4	34.0	32.4	33.5	33.2
Chuck roast	do	31.8	29.9	28.3	27.7	31.0	30.6	29.0	28.7	29.9	29.7	29.3	27.7	29.1	28.5
Stew meat [1]	do	32.8	31.5	32.6	28.6	36.5	35.4	33.5	29.1	34.4	34.3	27.0	26.2	34.4	33.7
Liver	do	36.9	36.6	35.9	34.4	38.4	37.5	38.8	38.1	37.8	37.6	36.2	36.9	36.6	36.0
Hamburger	do	27.9	27.8	26.7	27.4	28.9	28.1	28.9	27.9	28.5	28.0	27.7	27.1	27.5	27.7
Veal:															
Cutlets	do	45.0	43.3	46.6	43.6	47.6	47.2	45.0	44.1	48.6	46.1	45.3	43.5	45.6	45.0
Roast, boned and roll [1]	do	33.3	32.6	34.7	33.6	38.6	38.7	33.6	34.7	40.3	36.4	37.6	34.9	35.2	34.3
Pork:															
Chops	do	37.6	37.6	37.3	36.9	37.9	38.1	38.0	37.4	38.3	38.1	36.6	36.2	37.5	37.3
Bacon, sliced	do	40.3	40.6	39.4	39.8	40.6	41.0	40.2	41.0	41.4	41.9	40.6	40.1	39.7	40.1
Ham, sliced	do	50.2	49.9	50.8	47.3	48.9	48.5	48.3	47.3	51.0	50.3	50.6	48.6	50.6	50.2
Ham, whole	do	34.6	33.7	34.7	33.1	35.4	34.8	34.3	30.7	36.5	35.9	35.2	34.5	35.9	35.3
Salt pork	do	10.1	19.1	21.4	21.2	22.8	22.6	24.1	23.7	24.1	25.9	21.7	21.1	25.7	23.7
Liver [1]	do	22.0	22.0	21.8	22.0	22.1	22.1	21.8	22.0	21.8	22.0	21.9	21.9	22.1	21.8
Sausage [1]	do	45.3	45.3	35.9	37.0	39.7	39.2	41.1	39.0	40.7	40.0	37.7	38.3	37.0	37.5
Bologna, big [1]	do	34.2	33.3	33.8	33.9	35.9	35.5	35.3	34.7	38.0	35.0	34.3	33.2	33.6	33.6
Lamb:															
Leg	do	40.1	30.8	38.4	39.0	40.3	41.2	39.0	40.3	41.8	41.4	39.0	38.4	39.3	30.5
Rib chops	do	45.1	45.8	43.4	44.3	45.9	46.6	44.8	45.7	47.6	47.6	44.0	44.0	45.5	45.4
Poultry:															
Roasting chickens	do	45.6	46.0	45.2	46.5	45.2	46.5	45.4	46.0	45.8	47.1	44.9	46.3	45.3	46.8
Fish: [2]															
Salmon, pink	16-ounce can	23.0	23.1	23.2	22.1	27.0	25.0	23.7	23.3	23.0	23.6	23.3	22.1	23.3	22.6
Salmon, red [1]	do	40.6	30.2	42.6	30.5	44.8	42.6	40.8	39.1	41.2	40.2	41.0	39.0	42.2	39.9
Dairy products:															
	pound	49.5	50.0	49.5	50.1	50.3	50.0	50.1	50.8	50.2	50.8	49.2	49.1	49.3	50.0

Milk, fresh (grocery)	do	15.0	15.0	15.0	15.0	15.8	15.9	14.4	14.5	13.6	13.6	15.6	15.5	15.0	15.0
Milk, evaporated	14½-ounce can	9.9	10.0	10.1	10.1	10.4	10.4	10.3	10.3	10.0	10.2	9.7	9.9	10.0	10.1
Eggs:															
Eggs, fresh	dozen	55.3	58.6	53.0	57.4	58.8	59.6	58.5	59.5	56.5	59.1	55.5	59.0	53.0	58.4
Fruits and vegetables:															
Fresh fruits:															
Apples	pound	10.7	12.7	10.7	12.7	11.0	11.9	11.1	12.6	11.2	12.9	10.6	12.7	9.6	11.8
Bananas	do	12.7	12.7	12.0	10.8	11.7	10.8	11.9	10.6	11.9	10.5	11.6	10.4	11.4	10.4
Oranges	dozen	44.2	46.2	46.5	51.8	43.6	48.4	44.9	49.8	43.4	49.7	45.4	46.9	45.2	48.7
Grapefruit [1]	each	9.6	10.7	9.1	10.2	9.3	10.4	9.0	10.3	9.3	10.3	8.6	9.7	9.1	10.0
Fresh vegetables:															
Beans, green	pound	18.7	20.2	20.6	19.5	17.5	19.5	18.8	19.9	18.5	20.0	18.9	19.5	20.9	19.9
Cabbage	do	6.0	6.3	5.1	5.8	5.9	6.0	5.4	6.1	5.6	6.3	5.3	6.2	5.3	5.8
Carrots	bunch	9.6	9.7	8.8	9.0	9.7	9.6	9.6	9.3	9.7	9.5	9.3	9.0	8.6	8.9
Lettuce	head	14.0	13.6	12.0	12.7	12.9	13.5	12.0	13.3	12.9	13.9	12.0	12.3	13.3	13.4
Onions	pound	7.8	7.3	7.1	7.0	6.9	6.9	6.8	6.8	7.2	7.1	7.9	7.0	6.9	6.6
Potatoes	15 pounds	66.5	71.7	61.9	68.2	67.2	70.1	68.1	71.6	70.3	72.6	69.9	73.7	60.0	67.3
Spinach	pound	10.7	11.8	11.3	11.4	12.0	11.3	12.2	11.9	12.2	11.4	12.2	12.0	11.3	11.3
Sweetpotatoes	do	14.0	10.1	15.0	10.8	11.0	9.9	11.6	9.6	11.5	10.0	13.0	10.2	12.0	11.1
Beets [1]	bunch	10.1	10.5	8.2	8.8	8.1	8.6	8.5	9.4	7.5	8.9	8.3	9.4	7.6	8.9
Canned fruits:															
Peaches	No. 2½ can	29.2	28.6	28.2	27.8	29.8	28.9	28.1	27.3	26.9	27.8	27.6	27.6	28.3	27.6
Pineapple	do	28.1	27.1	27.6	25.2	29.9	31.9	28.8	27.4	27.3	28.2	27.3	26.3	27.2	25.9
Grapefruit juice	No. 2 can	14.5	14.9	14.4	14.6	15.0	14.9	14.6	14.6	13.7	13.8	14.7	14.7	14.3	14.4
Canned vegetables:															
Beans, green	do	14.3	14.5	14.0	13.9	13.5	12.7	13.2	13.1	13.0	12.7	13.1	13.3	13.3	13.3
Corn	do	14.4	14.7	14.4	14.5	15.1	15.7	14.8	15.1	14.5	15.0	14.4	14.5	13.9	14.2
Peas	do	14.8	14.5	13.5	14.0	13.3	13.3	13.1	13.6	13.2	12.9	13.7	14.5	13.8	13.8
Tomatoes	do	12.4	12.8	12.9	12.6	12.8	12.8	12.1	12.7	11.4	11.2	12.6	12.6	12.3	12.5
Soup, vegetable [1]	11-ounce can	12.7	12.8	13.3	13.0	13.4	13.3	13.1	13.1	13.2	12.9	13.3	13.3	13.0	12.7
Dried fruits:															
Prunes	pound	16.6	17.0	16.9	17.5	17.7	17.0	16.7	16.9	17.4	17.2	16.6	16.8	17.2	18.0
Dried vegetables:															
Navy beans	do	11.3	11.6	9.4	9.6	10.7	11.6	11.9	12.9	11.7	12.7	9.7	10.0	9.6	10.3
Soup, dehydrated, chicken noodle [1]	ounce	3.7	3.7	3.6	3.6	3.8	4.0	3.7	4.0	3.6	3.9	3.6	3.8	3.6	3.8
Beverages:															
Coffee	pound	30.2	31.1	26.9	28.2	29.9	31.0	30.3	30.8	28.4	28.9	29.7	30.4	27.3	27.7
Tea	¼ pound	22.2	22.6	23.1	23.4	23.5	23.6	22.8	23.6	22.9	22.8	24.1	23.8	22.1	22.9
Cocoa [1]	½ pound	10.1	10.5	10.2	10.1	10.0	10.3	9.5	10.1	10.4	10.6	10.6	10.3	9.7	10.2
Fats and oils:															
Lard	pound	18.3	18.3	18.4	18.6	18.9	18.9	18.5	18.3	18.8	19.1	19.4	18.4	18.5	18.6
Shortening other than lard:															
In cartons	do	22.4	21.7	20.1	19.3	18.5	20.3	19.9	21.2	19.5	19.2	19.0	19.2	19.6	19.5
In other containers	do	25.1	24.5	24.0	24.0	24.9	24.5	25.3	24.7	24.6	24.3	24.7	24.6	24.9	24.8
Salad dressing	pint	25.7	25.4	24.0	23.5	25.3	26.2	26.4	26.0	22.8	23.5	26.5	24.5	23.6	21.9
Oleomargarine	pound	23.4	24.7	24.0	23.9	25.8	25.7	23.3	23.0	22.5	22.1	23.4	22.1	24.1	24.9
Peanut butter	do	28.5	28.6	27.1	27.9	27.4	28.4	27.4	28.7	26.1	27.0	28.9	28.6	27.8	29.3
Oil, cooking or salad [1]	pint	30.0	30.1	30.4	30.0	29.3	30.3	30.0	31.0	30.6	30.0	29.5	29.1	30.6	30.8
Sugar and sweets:															
Sugar	pound	6.6	6.5	6.7	6.6	6.6	6.6	6.5	6.5	6.5	6.5	6.9	6.7	6.6	6.5
Corn sirup	24 ounces	17.1	17.4	16.6	16.7	16.8	16.6	16.8	16.6	16.6	16.6	15.9	15.8	16.7	16.7
Molasses [1]	18 ounces	15.4	15.5	15.0	15.6	15.4	15.2	16.2	16.4	15.6	15.7	16.7	15.8	15.0	15.3
Apple butter [1]	16 ounces	13.3	13.9	11.6	12.2	12.2	12.9	12.5	13.4	11.0	11.6	13.9	13.5	12.0	11.7

See footnotes at end of table.

TABLE 5.—*Annual average retail prices of principal foods, by cities, 1944 and 1945*—Continued

Article		Middle Atlantic—Continued		East North Central											
		Scranton		Chicago [3]		Cincinnati		Cleveland		Columbus		Detroit [3]		Indianapolis	
		1944	1945	1944	1945	1944	1945	1944	1945	1944	1945	1944	1945	1944	1945
		Cents	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
Cereals and bakery products:															
Cereals:															
Flour, wheat	10 pounds	61.4	60.8	61.8	61.8	61.6	60.8	65.0	65.3	60.5	59.9	65.2	64.2	59.8	59.4
Macaroni	pound	15.8	15.5	12.6	12.5	17.5	17.5	13.9	13.7	16.6	16.4	15.6	16.0	15.3	15.3
Wheat cereal [1]	28 ounces	22.1	21.4	23.3	23.0	20.8	22.9	22.1	22.3	19.9	20.3	23.4	23.5	24.0	23.5
Corn flakes	8 ounces	6.2	6.2	6.3	6.4	6.3	6.6	6.5	6.7	6.4	6.6	6.4	6.7	6.3	6.4
Corn meal	pound	6.4	6.5	6.4	6.6	6.1	6.5	6.5	6.6	5.7	6.1	6.0	6.4	5.8	6.6
Rice [1]	do	13.9	14.2	12.9	13.0	11.8	11.9	13.5	13.3	13.0	13.5	12.7	12.0	13.0	13.5
Rolled oats	do	9.3	10.1	9.2	10.2	9.1	10.0	9.5	10.3	9.3	10.3	9.0	9.7	8.9	9.9
Flour, pancake [1]	20 ounces	10.3	11.3	12.2	12.3	12.3	12.9	12.7	12.8	11.6	11.7	11.3	11.7	10.5	11.3
Bakery products:															
Bread, white	pound	9.0	8.8	7.7	7.7	8.1	8.1	8.6	8.6	8.2	8.2	8.5	8.4	8.0	8.1
Bread, whole-wheat	do	10.7	10.5	9.7	9.5	10.5	10.4	10.2	10.1	10.2	10.2	10.4	10.4	10.1	10.2
Bread, rye	do	10.5	10.1	9.1	9.1	10.0	10.0	9.5	9.5	10.0	9.9	10.1	10.1	9.6	9.8
Vanilla cookies	do	23.7	25.0	38.3	39.4	22.1	21.6	32.0	32.0	27.7	28.1	29.9	31.6	37.6	36.4
Soda crackers	do	17.2	17.3	19.1	19.2	17.4	17.4	18.8	19.0	17.4	17.9	19.5	19.7	17.1	17.3
Meats:															
Beef:															
Round steak	do	43.5	40.5	39.9	39.1	40.5	40.1	40.2	39.8	39.4	39.0	41.1	40.3	39.9	40.1
Rib roast	do	34.4	30.7	33.3	32.6	33.0	32.1	33.3	32.8	32.2	31.3	33.2	31.9	32.0	32.4
Chuck roast	do	30.1	28.5	27.8	27.1	28.4	28.0	28.6	27.9	27.6	26.9	28.7	28.0	28.1	27.9
Stew meat [1]	do	29.3	25.6	30.6	29.4	27.9	27.4	30.7	29.8	28.4	28.3	31.7	30.9	28.6	27.7
Liver	do	36.5	37.6	36.7	36.6	35.6	35.8	36.8	36.7	34.8	34.5	37.9	37.5	36.2	36.5
Hamburger	do	31.4	27.1	27.0	26.4	27.6	27.4	26.9	26.6	28.0	26.8	27.9	27.8	26.8	26.8
Veal:															
Cutlets	do	45.9	42.9	43.1	42.3	44.3	43.4	45.0	43.3	43.8	41.3	45.1	44.1	42.9	41.9
Roast, boned and rolled [1]	do	39.9	34.3	35.4	34.4	35.1	36.2	34.5	33.7	35.0	34.2	34.7	34.2	36.4	34.2
Pork:															
Chops	do	38.4	37.4	36.8	36.5	36.4	36.2	36.8	36.6	36.3	36.3	37.5	37.2	36.5	36.4
Bacon, sliced	do	40.6	41.2	41.3	40.9	40.0	40.0	39.8	40.0	39.7	40.3	41.8	41.2	40.1	40.4
Ham, sliced	do	51.7	49.6	50.8	49.7	49.1	48.1	49.4	48.6	49.8	49.2	51.4	49.4	50.2	49.6
Ham, whole	do	35.4	35.1	35.5	34.9	33.4	33.5	35.2	34.6	34.3	34.1	36.5	35.6	34.4	34.8
Salt pork	do	23.5	22.0	22.2	22.4	21.6	21.5	21.3	21.0	21.0	21.0	23.1	22.1	21.3	21.6
Liver [1]	do	21.2	22.0	21.7	22.0	21.4	21.7	22.2	22.1	21.6	21.8	22.4	23.0	21.5	21.3
Sausage [1]	do	38.8	39.4	35.8	37.0	32.9	34.4	33.8	37.3	36.4	36.8	37.6	38.2	35.1	36.5
Bologna, big [1]	do	35.2	34.7	35.1	34.8	29.7	30.4	33.2	32.7	31.0	31.3	33.6	34.0	31.1	31.7
Lamb:															
Leg	do	39.7	39.5	38.7	38.2	38.6	38.6	38.4	38.5	37.5	37.0	39.3	39.4	38.2	38.2
Rib chops	do	46.3	45.2	43.9	43.7	44.7	44.5	45.0	44.6	43.8	44.2	45.5	44.7	43.8	43.5
Poultry:															
Roasting chickens	do	44.8	47.2	45.3	47.2	43.7	45.6	44.1	45.3	45.7	47.9	45.9	47.0	43.3	46.1
Fish: [2]															
Salmon, pink	16-ounce can	23.3	22.0	25.4	23.2	23.1	24.4	23.2	22.9	24.0	22.7	23.6	23.4	24.3	24.7
Salmon, red [1]	do	40.5	39.5	41.7	40.4	40.7	41.1	41.1	39.7	43.0	39.8	43.6	40.7	45.5	44.2
				[illegible]	[illegible]	49.0	49.6	48.9	49.7	48.9	49.8	51.4	51.7	48.8	49.7

Milk, fresh (grocery)	do	15.0	15.0	14.7	14.9	13.9	13.9	14.0	14.0	13.4	13.4	14.4	14.6	13.1	13.1
Milk, evaporated	14½-ounce can	9.9	10.1	9.7	9.7	9.9	9.9	9.8	9.8	9.9	9.9	9.8	9.8	9.6	9.7
Eggs:															
Eggs, fresh	dozen	52.1	58.3	54.6	58.1	49.0	55.2	55.8	58.5	48.6	55.7	55.3	58.7	48.7	54.6
Fruits and vegetables:															
Fresh fruits:															
Apples	pound	9.9	12.2	11.8	13.7	11.8	12.7	10.9	12.7	10.8	12.5	11.1	12.1	10.8	12.1
Bananas	do	12.3	10.9	11.1	10.2	11.3	10.2	10.9	9.9	11.1	10.0	10.5	9.4	10.8	9.7
Oranges	dozen	42.5	47.2	47.9	51.2	50.3	47.9	47.5	46.9	46.6	47.4	50.6	51.5	44.9	50.0
Grapefruit [1]	each	9.2	10.4	8.7	9.8	8.7	9.7	8.7	9.5	9.1	9.4	8.5	10.4	9.2	9.9
Fresh vegetables:															
Beans, green	pound	18.3	19.8	19.2	20.9	18.3	18.8	20.1	21.0	18.9	19.3	19.2	19.5	16.7	18.4
Cabbage	do	5.1	5.1	5.0	5.7	5.3	6.1	5.1	6.4	5.4	6.9	5.0	6.2	5.4	5.6
Carrots	bunch	9.7	9.8	8.3	8.6	9.3	9.3	9.3	9.1	9.2	9.2	9.0	9.1	9.3	9.3
Lettuce	head	12.6	12.7	10.9	11.7	12.0	12.7	12.5	12.6	12.0	12.7	11.7	13.0	12.3	13.3
Onions	pound	7.7	6.8	6.4	6.6	8.0	7.3	7.6	7.0	8.0	7.0	6.7	6.5	7.1	7.0
Potatoes	15 pounds	58.4	64.5	74.0	78.2	73.0	79.9	72.1	76.8	73.8	72.9	68.3	72.8	70.8	73.6
Spinach	pound	10.9	9.7	11.4	11.9	11.6	12.4	11.3	12.3	12.5	12.5	11.7	11.2	11.4	12.8
Sweetpotatoes	do	12.3	9.9	11.7	10.1	10.4	9.8	12.2	10.5	11.4	10.3	11.5	10.5	10.0	9.8
Beets [1]	bunch	8.2	8.9	7.5	7.8	8.3	8.6	9.5	11.1	8.2	8.6	10.4	11.0	7.0	7.6
Canned fruits:															
Peaches	No. 2½ can	28.2	29.1	27.9	27.6	25.6	27.9	27.1	26.6	26.7	27.6	27.7	27.9	26.0	27.7
Pineapple	do	27.1	24.7	26.6	24.9	28.2	26.0	27.1	25.1	26.9	26.3	26.4	27.8	26.9	25.2
Grapefruit juice	No. 2 can	14.1	14.0	14.5	14.6	14.2	14.2	14.8	14.5	14.5	14.5	14.4	14.6	14.2	14.3
Canned vegetables:															
Beans, green	do	12.8	12.7	13.2	13.4	12.8	12.3	12.8	12.4	12.5	11.7	12.7	12.9	12.8	12.4
Corn	do	14.4	14.9	14.4	14.8	14.4	14.3	14.2	14.5	13.6	14.0	14.0	13.8	13.9	14.2
Peas	do	13.5	13.8	12.9	12.7	14.0	13.3	13.4	13.2	14.2	14.7	12.4	12.1	13.1	12.9
Tomatoes	do	12.2	12.5	12.4	12.1	12.0	12.6	12.6	12.7	12.1	12.3	11.7	12.1	11.7	12.6
Soup, vegetable [1]	11-ounce can	13.0	13.2	13.5	13.3	13.4	13.1	13.3	13.5	13.3	13.1	13.2	12.8	13.0	13.0
Dried fruits:															
Prunes	pound	16.8	17.5	18.5	18.6	16.4	16.4	18.4	18.2	17.8	17.2	16.5	17.0	16.7	17.2
Dried vegetables:															
Navy beans	do	9.0	8.9	10.4	11.6	9.0	9.3	10.8	11.0	8.8	8.8	10.4	11.7	9.5	10.0
Soup, dehydrated, chicken noodle [1]	ounce	3.6	3.5	3.6	3.8	4.4	3.9	3.6	3.7	3.9	3.5	3.8	3.8	4.0	3.9
Beverages:															
Coffee	pound	26.9	27.1	30.8	31.2	29.0	29.3	28.8	29.2	28.6	29.1	31.3	31.5	30.1	30.0
Tea	¼ pound	21.8	22.8	24.3	24.5	26.1	25.9	22.4	22.5	25.4	24.9	24.2	25.0	24.7	25.2
Cocoa [1]	½ pound	9.5	9.2	9.3	9.8	10.6	11.1	9.9	10.1	10.4	10.4	9.3	9.5	10.0	10.5
Fats and oils:															
Lard	pound	18.8	19.0	19.3	19.0	18.5	18.8	18.6	18.5	18.0	18.7	19.2	19.2	17.9	18.1
Shortening other than lard:															
In cartons	do	19.1	19.1	24.4	26.2	22.0	19.2	24.3	23.7	22.9	23.2	21.2	21.5	21.6	21.6
In other containers	do	24.4	24.5	24.9	25.0	24.2	23.9	25.0	25.3	24.1	23.9	25.0	24.6	24.3	24.4
Salad dressing	pint	22.7	23.0	26.4	25.1	25.3	25.9	25.0	25.1	26.3	25.5	26.7	24.2	25.8	25.6
Oleomargarine	pound	21.3	21.3	23.2	24.2	24.0	22.3	21.6	21.4	21.8	21.5	24.2	24.8	21.2	23.0
Peanut butter	do	26.5	27.4	28.9	29.5	27.7	29.9	27.1	26.6	28.5	28.7	29.5	30.1	29.1	26.9
Oil, cooking or salad [1]	pint	30.4	29.9	31.1	30.9	29.8	30.3	32.4	32.4	31.6	31.1	32.1	31.5	30.4	29.9
Sugar and sweets:															
Sugar	pound	6.6	6.6	7.0	7.0	6.9	6.8	6.8	6.8	6.8	6.8	6.7	6.7	6.7	6.8
Corn sirup	24 ounces	15.7	16.2	14.0	14.1	15.2	15.2	15.7	15.5	15.2	15.3	15.5	15.6	14.4	14.5
Molasses [1]	18 ounces	15.0	14.9	16.4	16.6	16.3	15.4	15.5	15.7	15.4	15.6	14.1	14.3	16.0	16.2
Apple butter [1]	16 ounces	11.1	11.3	13.0	15.5	12.9	13.4	13.4	13.8	14.1	13.8	13.5	14.2	13.8	14.4

See footnotes at end of table.

TABLE 5.—*Annual average retail prices of principal foods, by cities, 1944 and 1945*—Continued

Article		East North Central—Continued						West North Central							
		Milwaukee		Peoria [3]		Springfield [3]		Cedar Rapids [3]		Kansas City [3]		Minneapolis		Omaha	
		1944	1945	1944	1945	1944	1945	1944	1945	1944	1945	1944	1945	1944	1945
Cereals and bakery products:		*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
Cereals:															
Flour, wheat	10 pounds	64.5	64.1	66.2	65.4	62.9	62.8	65.1	65.4	58.7	57.8	64.3	63.9	58.7	58.1
Macaroni	pound	12.9	12.8	13.1	14.0	12.9	13.1	17.9	18.6	18.0	18.5	15.0	14.9	18.1	18.1
Wheat cereal [1]	28 ounces	23.3	23.3	22.2	23.5	23.0	24.0	22.4	23.2	23.4	22.9	22.8	22.8	23.5	23.5
Corn flakes	8 ounces	6.6	6.6	6.5	6.6	6.5	6.5	6.9	6.9	6.5	6.7	6.8	6.9	6.6	6.7
Corn meal	pound	6.1	6.2	5.8	6.1	6.2	6.6	6.4	6.4	6.6	6.8	6.2	6.4	5.5	6.0
Rice [1]	do	13.1	13.4	13.2	13.0	13.5	13.3	13.7	13.7	12.0	11.6	12.6	12.6	12.7	12.8
Rolled oats	do	9.6	10.4	9.5	10.3	9.5	10.4	9.6	10.6	9.4	10.5	9.8	10.5	9.4	10.4
Flour, pancake [1]	20 ounces	11.4	12.0	11.8	13.0	10.6	11.5	12.9	13.1	13.0	13.1	11.5	11.9	12.2	12.4
Bakery products:															
Bread, white	pound	8.1	8.0	9.2	9.2	9.6	9.6	8.7	8.7	9.2	9.5	8.9	8.9	8.6	8.7
Bread, whole-wheat	do	10.0	9.9	9.8	9.7	10.6	10.5	8.8	8.8	9.5	9.6	11.4	11.5	10.4	10.7
Bread, rye	do	9.0	8.9	9.5	9.1	9.5	9.5	10.8	10.8	10.0	10.0	10.8	10.8	10.6	10.6
Vanilla cookies	do	32.5	33.2	35.2	31.5	26.7	33.2	35.9	38.0	29.5	27.8	34.8	33.0	32.3	32.6
Soda crackers	do	18.1	17.7	20.0	19.4	19.4	20.2	19.3	19.3	19.6	19.5	18.6	18.5	17.5	18.0
Meats:															
Beef:															
Round steak	do	38.8	38.2	41.4	40.3	39.7	39.3	38.8	38.3	39.3	38.9	40.0	39.6	40.3	40.1
Rib roast	do	31.8	31.2	32.8	31.2	32.0	31.7	30.6	30.0	31.9	30.6	33.3	32.8	32.1	32.0
Chuck roast	do	26.7	26.1	29.5	28.1	28.1	27.4	27.5	27.0	27.1	26.6	28.5	28.3	27.9	27.5
Stew meat [1]	do	27.7	26.8	33.2	23.9	29.2	25.0	25.5	25.1	27.0	29.4	32.1	31.4	30.3	30.4
Liver	do	35.7	34.7	37.7	37.3	36.0	37.1	35.6	36.6	36.5	36.2	35.3	35.4	35.8	35.7
Hamburger	do	26.9	26.0	27.4	26.8	28.4	26.9	26.9	25.9	25.5	25.0	25.6	25.6	25.6	25.3
Veal:															
Cutlets	do	43.4	42.1	44.9	43.7	43.7	42.5	42.3	41.0	40.4	40.1	45.6	45.7	42.8	42.6
Roast, boned and rolled [1]	do	33.6	33.7	37.1	35.4	41.8	38.7	31.0	32.5	32.6	32.7	32.7	32.9	32.6	32.1
Pork:															
Chops	do	36.3	35.8	37.0	36.4	36.6	36.6	35.7	35.9	35.4	35.2	35.4	35.7	34.8	34.9
Bacon, sliced	do	40.6	40.3	43.0	41.2	41.6	41.2	41.9	40.6	40.3	40.1	41.1	40.3	40.2	39.8
Ham, sliced	do	49.7	49.3	51.1	49.0	50.3	49.3	49.8	49.3	49.8	48.9	51.1	50.9	49.1	49.1
Ham, whole	do	35.2	34.6	35.7	35.2	35.9	35.2	35.2	34.3	34.9	34.7	34.5	34.4	34.2	34.3
Salt pork	do	21.9	21.9	22.5	21.2	21.8	22.5	21.6	21.3	21.2	20.7	21.7	21.7	20.9	20.9
Liver [1]	do	19.9	19.9	22.4	22.1	22.6	22.1	21.3	21.1	20.8	20.5	20.6	20.3	20.0	19.9
Sausage [1]	do	36.4	37.0	35.9	37.4	37.9	37.6	36.6	38.0	38.0	37.7	33.8	33.4	29.8	30.3
Bologna, big [1]	do	34.4	34.4	34.9	35.9	33.2	33.3	31.2	32.0	31.3	32.5	34.2	33.9	29.3	31.2
Lamb:															
Leg	do	38.0	37.3	39.8	37.8	37.6	37.7	37.5	37.0	36.9	36.9	37.7	38.0	37.4	37.9
Rib chops	do	43.4	43.0	44.5	42.5	42.7	43.3	42.4	42.2	42.2	42.0	44.5	44.6	42.7	43.0
Poultry:															
Roasting chickens	do	43.9	44.5	40.6	44.0	43.5	46.7	40.3	42.6	43.2	46.2	42.0	43.0	38.5	40.0
Fish:[2]															
Salmon, pink	16-ounce can	24.6	23.4	24.2	22.4	24.1	22.3	25.1	24.3	23.3	22.5	24.2	24.1	24.1	24.1
Salmon, red [1]	do	42.5	41.3	41.2	43.7	44.4	40.4	49.4	49.8	42.4	40.0	43.5	42.8	44.1	47.4
				[illegible]	[illegible]	49.9	50.7	48.9	49.8	49.0	50.1	48.9	49.7	48.7	49.7

		[illegible]	12.1	14.6	14.4	15.6	15.6	11.8	11.6	14.4	14.4	11.9	11.9	12.1	12.1
evaporated	14½-ounce can	10.2	10.1	10.1	10.1	10.0	10.1	10.3	10.4	9.7	9.8	10.2	10.3	9.9	9.9
Eggs:															
Eggs, fresh	dozen	48.2	54.7	41.9	48.0	40.3	46.6	39.6	43.8	50.5	55.2	47.1	54.6	43.3	47.9
Fruits and vegetables:															
Fresh fruits:															
Apples	pound	11.6	13.3	12.3	13.9	12.0	13.5	12.0	13.8	11.8	13.5	12.4	13.6	11.5	13.7
Bananas	do	11.4	10.2	11.2	9.2	11.2	9.5	12.5	11.0	10.6	9.6	12.5	11.1	11.5	10.4
Oranges	dozen	53.2	53.6	47.4	53.0	49.2	51.5	51.5	52.8	49.1	50.9	49.1	49.4	52.7	51.2
Grapefruit [1]	each	8.5	10.1	8.5	10.6	8.6	9.9	8.9	9.4	8.3	9.1	8.5	9.7	8.7	10.1
Fresh vegetables:															
Beans, green	pound	18.4	20.0	18.8	21.5	18.6	20.6	18.9	19.5	18.6	20.1	20.1	20.2	20.3	21.6
Cabbage	do	5.0	5.6	5.4	6.0	5.4	6.3	5.5	6.5	5.2	5.5	5.3	6.0	5.2	5.8
Carrots	bunch	7.7	8.1	9.5	9.5	9.3	9.5	9.4	9.4	8.9	9.1	9.0	9.2	9.0	9.0
Lettuce	head	11.7	11.8	11.9	12.8	11.7	12.6	11.9	12.6	12.4	13.1	12.1	12.5	11.9	12.3
Onions	pound	6.6	6.4	7.8	7.5	8.1	7.2	7.7	7.3	6.7	6.7	7.3	7.0	6.8	6.6
Potatoes	15 pounds	66.9	73.5	73.1	79.8	68.0	78.3	70.5	76.4	72.3	75.2	68.0	73.8	69.5	73.3
Spinach	pound	11.0	11.8	10.6	11.4	10.9	12.1	14.5	12.0	11.2	11.1	12.1	11.9	11.4	11.2
Sweetpotatoes	do	11.7	10.6	10.6	10.5	9.4	10.2	11.1	10.1	10.4	9.8	11.8	10.5	10.8	9.9
Beets [1]	bunch	7.6	8.5	8.5	7.7	8.0	7.7	9.1	8.7	6.7	7.3	8.1	8.6	7.8	9.3
Canned fruits:															
Peaches	No. 2½ can	28.9	30.4	29.6	28.3	29.7	29.3	30.6	30.9	26.5	26.6	29.9	30.7	27.7	28.2
Pineapple	do	26.1	28.2	29.8	26.7	27.9	26.6	28.9	26.4	28.0	31.1	28.0	26.3	27.3	25.4
Grapefruit juice	No. 2 can	14.8	14.9	15.4	15.4	14.1	14.3	15.9	15.8	14.3	14.3	15.0	15.0	14.6	14.7
Canned vegetables:															
Beans, green	do	14.1	13.6	14.1	13.7	13.4	14.2	15.1	14.1	11.9	12.2	13.7	13.1	12.4	11.9
Corn	do	14.3	14.5	14.3	15.0	14.8	15.1	14.6	15.1	14.1	14.2	14.2	14.3	13.1	13.8
Peas	do	13.4	12.8	14.2	13.9	13.6	13.4	14.1	13.4	13.2	12.8	13.9	13.3	13.2	12.7
Tomatoes	do	13.4	12.7	12.5	12.8	12.4	12.4	12.8	13.2	11.2	12.3	13.1	13.3	11.9	12.4
Soup, vegetable [1]	11-ounce can	13.8	13.2	14.1	13.6	13.7	13.1	14.6	13.9	13.2	12.7	13.8	13.9	13.6	13.5
Dried fruits:															
Prunes	pound	18.9	18.4	18.4	17.6	18.9	18.0	19.4	19.6	16.6	16.9	17.4	17.3	17.2	17.6
Dried vegetables:															
Navy beans	do	9.4	11.1	10.0	10.0	9.7	10.3	9.8	10.2	10.0	10.5	10.0	11.0	9.4	10.5
Soup, dehydrated, chicken noodle [1]	ounce	3.5	3.5	3.7	4.0	3.6	3.9	3.6	3.9	3.8	3.9	3.4	3.5	3.7	3.8
Beverages:															
Coffee	pound	30.1	30.3	31.8	31.8	29.6	29.6	33.1	33.4	29.4	30.0	31.5	31.5	31.0	30.1
Tea	¼ pound	25.8	26.2	26.7	26.7	26.5	26.8	26.7	26.2	24.7	25.0	26.2	26.3	26.5	26.5
Cocoa [1]	½ pound	10.6	10.4	8.4	10.6	10.4	10.9	11.2	10.8	10.4	10.1	11.5	11.3	11.1	11.1
Fats and oils:															
Lard	pound	18.8	18.6	19.3	19.4	19.0	19.2	19.4	19.7	18.3	18.1	18.3	18.4	17.5	17.7
Shortening other than lard:															
In cartons	do	21.3	22.5	22.2	23.0	21.8	22.4	22.3	20.7	19.7	19.6	19.0	19.0	23.0	20.8
In other containers	do	24.6	24.0	26.5	25.4	25.9	25.5	25.8	25.8	25.3	24.8	25.6	25.4	23.8	23.9
Salad dressing	pint	26.4	24.3	28.4	26.6	27.1	25.5	27.0	25.2	24.5	23.7	26.2	26.3	25.3	24.5
Oleomargarine	pound	(4)	(4)	26.6	26.8	27.0	27.0	30.3	31.4	22.2	22.0	21.8	21.7	22.3	23.1
Peanut butter	do	31.0	31.1	29.9	29.9	30.0	30.6	30.7	33.4	25.9	26.9	30.3	31.5	28.5	29.5
Oil, cooking or salad [1]	pint	32.1	31.7	33.9	32.7	33.9	33.1	35.3	34.7	31.1	30.8	32.9	32.2	31.9	31.4
Sugar and sweets:															
Sugar	pound	7.0	6.9	7.0	7.0	7.1	7.2	7.2	7.5	7.1	7.3	7.0	7.0	6.9	6.8
Corn sirup	24 ounces	14.5	14.5	15.4	14.9	15.2	15.4	15.3	15.8	15.3	14.6	15.1	15.1	14.7	14.7
Molasses [1]	18 ounces	16.0	15.7	18.3	17.7	18.4	18.0	18.1	18.8	17.2	17.0	15.2	15.8	15.9	15.7
Apple butter [1]	16 ounces	13.5	14.0	14.7	16.8	13.3	15.1	14.6	15.2	12.6	13.2	15.3	15.2	13.4	13.9

See footnotes at end of table.

TABLE 5.—*Annual average retail prices of principal foods, by cities, 1944 and 1945*—Continued

Article	West North Central—Continued						South Atlantic							
	St. Louis[3]		St. Paul		Wichita[3]		Atlanta		Baltimore		Charleston, S. C.		Jacksonville	
	1944	1945	1944	1945	1944	1945	1944	1945	1944	1945	1944	1945	1944	1945
	Cents	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
Cereals and bakery products:														
Cereals:														
Flour, wheat ... 10 pounds	63.8	63.6	63.6	64.4	59.1	56.2	71.1	68.6	62.6	62.9	73.2	73.3	69.3	68.6
Macaroni ... pound	16.7	15.6	15.2	15.1	19.4	19.3	17.4	17.4	16.3	15.8	17.6	17.9	16.8	16.4
Wheat cereal[1] ... 28 ounces	24.5	24.6	24.5	24.7	25.6	25.5	23.3	23.1	22.5	22.6	23.8	23.9	22.8	23.0
Corn flakes ... 8 ounces	6.7	6.8	6.9	6.8	6.6	6.7	6.7	6.5	6.7	6.6	6.8	6.8	6.2	6.3
Corn meal ... pound	6.4	6.6	6.4	6.5	6.5	6.8	5.5	5.7	5.5	6.0	5.8	6.3	7.7	8.1
Rice[1] ... do	12.3	12.0	13.5	13.0	12.7	12.2	12.4	12.0	12.7	12.5	11.2	12.3	11.4	10.3
Rolled oats ... do	9.5	10.3	9.8	10.8	9.7	10.5	9.5	10.2	9.2	10.3	9.6	10.5	9.4	10.2
Flour, pancake[1] ... 20 ounces	10.3	10.5	12.1	12.7	13.6	13.0	12.1	12.2	10.8	11.2	13.6	13.8	12.3	11.5
Bakery products:														
Bread, white ... pound	9.3	9.3	9.0	8.9	9.7	9.6	9.8	9.7	8.9	8.9	10.5	10.5	10.2	10.1
Bread, whole-wheat ... do	10.2	10.2	11.4	11.6	8.6	8.5	9.9	9.9	10.9	10.9	10.7	10.6	11.8	11.6
Bread, rye ... do	10.6	10.0	10.2	10.3	10.0	10.0	12.8	12.7	10.5	10.6	10.9	10.9	12.1	11.2
Vanilla cookies ... do	32.1	30.8	34.8	31.3	34.0	41.8	24.1	23.3	27.4	29.0	23.6	25.6	29.9	35.2
Soda crackers ... do	18.9	18.6	18.4	18.4	18.1	19.5	16.3	16.6	19.2	19.1	17.6	17.7	18.9	18.5
Meats:														
Beef:														
Round steak ... do	40.9	39.5	39.0	38.8	39.5	38.8	40.2	39.7	43.2	42.7	40.1	39.4	41.8	40.4
Rib roast ... do	33.0	32.0	32.3	32.5	32.7	32.5	31.7	31.5	34.1	34.0	33.0	32.3	34.2	33.6
Chuck roast ... do	28.3	27.4	27.6	27.3	27.7	27.1	27.9	27.4	30.2	29.4	27.9	27.9	29.8	28.3
Stew meat[1] ... do	31.9	28.2	29.9	28.5	26.1	24.2	25.3	25.5	30.5	29.5	22.5	22.5	36.5	33.3
Liver ... do	37.0	36.8	35.5	35.7	37.1	37.3	37.5	37.3	37.3	37.9	37.6	37.4	37.9	38.6
Hamburger ... do	28.1	26.8	25.8	25.3	26.4	26.2	27.5	27.8	28.0	27.7	28.0	28.0	28.2	27.8
Veal:														
Cutlets ... do	47.1	44.5	42.3	40.0	43.3	41.6	43.7	42.3	47.6	46.5	42.5	42.4	46.1	45.9
Roast, boned and rolled[1] ... do	(4)	(4)	32.4	31.4	28.6	28.0	34.6	34.3	39.7	42.5	34.1	34.5	39.3	34.6
Pork:														
Chops ... do	36.8	36.7	35.4	35.3	38.0	38.2	37.8	37.8	38.2	38.3	37.7	37.5	37.8	37.6
Bacon, sliced ... do	41.5	40.8	40.4	39.9	42.6	42.6	40.8	41.0	40.8	41.3	40.9	40.8	41.4	41.4
Ham, sliced ... do	52.7	51.0	49.7	48.7	54.3	53.7	50.0	49.4	48.2	46.1	48.8	48.0	52.3	52.1
Ham, whole ... do	36.1	35.4	32.9	34.0	36.7	36.7	35.2	34.9	34.1	33.4	35.0	34.1	35.8	35.3
Salt pork ... do	21.7	21.2	21.7	21.8	24.7	25.5	22.2	22.4	22.5	22.5	22.8	22.1	22.3	22.1
Liver[1] ... do	22.3	21.7	20.4	20.0	23.2	23.3	22.5	22.2	21.9	22.3	22.1	22.1	21.5	21.8
Sausage[1] ... do	37.0	36.9	35.2	34.9	37.9	39.2	36.7	37.4	38.3	38.9	40.1	38.2	40.6	40.3
Bologna, big[1] ... do	34.1	33.8	32.3	32.3	34.3	35.1	32.6	33.1	37.9	37.5	34.0	34.1	33.3	33.5
Lamb:														
Leg ... do	38.8	38.1	37.5	37.7	39.7	39.1	38.0	37.6	39.9	40.0	39.8	39.5	40.0	40.1
Rib chops ... do	45.9	44.6	43.7	43.5	46.2	45.2	43.5	42.8	46.9	46.6	45.2	44.9	46.6	46.8
Poultry:														
Roasting chickens ... do	44.4	45.3	41.9	44.3	48.6	49.4	40.7	44.2	44.6	46.9	44.4	50.5	43.7	43.5
Fish:[3]														
Salmon, pink ... 16-ounce can	23.5	23.1	24.1	25.0	26.5	26.8	22.5	22.0	23.2	22.8	23.9	22.3	23.2	22.2
do	42.3	40.9	42.9	42.4	45.8	46.0	39.7	39.0	40.5	39.3	43.5	40.1	41.3	39.0
										51.3	49.8	50.9	50.7	51.5

	14½-ounce can	9.7	9.7	10.2	10.2	10.0	10.0	9.7	9.7	10.1	10.3	10.3	10.4	9.5	9.6
Eggs:															
Eggs, fresh	dozen	48.6	53.4	46.3	53.4	42.8	49.5	50.8	56.6	54.2	58.5	52.6	58.6	53.8	57.6
Fruits and vegetables:															
Fresh fruits:															
Apples	pound	12.5	12.7	11.9	13.6	13.0	13.9	11.0	11.8	11.0	12.7	11.1	13.3	11.8	13.2
Bananas	do	11.9	10.6	12.2	10.7	11.9	10.6	10.0	9.6	11.7	10.7	10.1	10.1	10.3	9.4
Oranges	dozen	49.9	49.2	49.4	50.5	54.5	50.9	38.8	44.2	42.3	45.7	41.5	47.1	37.5	42.8
Grapefruit [1]	each	8.3	9.2	8.4	9.7	8.9	9.3	8.2	8.8	9.3	9.9	8.6	10.0	7.7	8.1
Fresh vegetables:															
Beans, green	pound	18.8	19.7	20.3	21.1	16.8	19.8	15.5	17.7	18.9	20.1	17.6	19.1	17.4	18.4
Cabbage	do	5.4	5.7	5.4	5.7	5.5	6.3	5.1	5.3	5.6	6.3	5.4	6.1	4.9	5.5
Carrots	bunch	9.3	9.2	9.0	9.1	9.0	9.2	9.0	9.1	9.9	9.7	10.4	10.3	9.3	9.4
Lettuce	head	11.9	12.0	12.4	12.1	13.6	14.7	11.5	12.5	13.7	12.9	12.1	12.8	12.0	13.0
Onions	pound	7.4	6.9	7.6	7.0	6.8	6.4	7.4	7.4	7.4	7.5	8.5	8.2	8.3	7.7
Potatoes	15 pounds	73.2	79.5	64.0	72.6	73.4	84.6	70.9	74.3	74.4	80.9	76.5	81.6	73.1	77.1
Spinach	pound	11.3	11.9	12.2	11.4	12.2	12.6	11.7	11.1	13.3	12.3	13.3	12.5	13.9	12.9
Sweetpotatoes	do	9.2	8.5	11.9	10.8	11.5	10.4	9.8	8.7	11.0	10.1	9.0	8.4	9.6	9.8
Beets [1]	bunch	7.1	7.3	7.5	8.3	9.7	9.6	12.6	13.8	9.4	9.2	12.0	13.7	13.5	13.8
Canned fruits:															
Peaches	No. 2½ can	27.2	27.0	28.6	30.1	28.8	27.7	25.4	25.1	28.1	29.8	27.4	25.6	27.3	27.2
Pineapple	do	26.4	24.5	28.4	27.8	30.5	31.0	25.1	25.0	26.6	26.1	28.6	25.6	29.5	26.4
Grapefruit juice	No. 2 can	14.2	14.1	15.4	15.5	15.7	15.4	13.3	13.3	14.4	14.6	14.3	14.2	13.4	13.3
Canned vegetables:															
Beans, green	do	13.5	12.9	13.9	14.5	13.4	13.4	12.0	12.1	12.8	12.5	13.8	13.6	12.4	12.6
Corn	do	14.3	14.3	14.2	14.3	15.0	14.3	14.5	14.8	13.9	14.2	15.0	15.2	15.3	14.7
Peas	do	13.9	13.6	14.0	13.9	13.9	13.2	13.4	13.5	13.2	14.1	14.9	15.2	13.7	12.9
Tomatoes	do	12.8	13.0	13.7	13.8	12.2	12.9	12.2	12.3	12.0	12.7	12.4	12.5	12.4	12.1
Soup, vegetable [1]	11-oz. can	13.7	13.7	14.0	13.6	14.3	13.9	13.2	12.9	13.5	13.2	14.1	13.8	13.1	13.0
Dried fruits:															
Prunes	pound	17.4	17.5	17.5	18.0	18.3	18.5	15.8	16.2	16.3	18.5	18.1	18.1	18.3	17.6
Dried vegetables:															
Navy beans	do	10.2	11.3	10.2	10.7	10.7	11.6	10.1	10.4	11.0	10.6	10.6	11.3	10.1	9.8
Soup, dehydrated, chicken noodle [1]	ounce	3.8	4.0	3.3	3.3	4.1	4.2	3.6	3.6	3.6	3.6	3.7	3.8	3.6	3.6
Beverages:															
Coffee	pound	29.0	29.3	32.7	32.6	34.2	34.6	31.2	31.1	30.1	30.1	32.7	33.0	31.0	32.0
Tea	¼ pound	26.6	26.1	26.9	27.2	27.5	28.0	24.7	24.9	23.8	24.0	26.7	27.0	24.2	24.4
Cocoa [1]	½ pound	11.5	11.2	12.1	11.6	11.7	11.4	9.8	9.9	8.4	9.5	11.1	11.6	10.2	10.0
Fats and oils:															
Lard	pound	18.3	18.1	18.0	18.3	19.4	19.5	18.7	18.7	18.6	18.9	18.7	18.8	18.6	18.6
Shortening other than lard:															
In cartons	do	20.5	19.5	25.2	26.0	22.4	22.5	19.6	19.6	19.4	19.5	20.1	20.2	19.7	19.7
In other containers	do	25.0	24.3	25.7	25.5	24.9	24.4	24.6	21.3	24.8	25.3	24.5	24.3	24.9	24.6
Salad dressing	pint	25.3	24.6	27.5	26.3	28.3	28.8	23.8	22.8	27.2	26.0	27.9	28.2	26.3	26.0
Oleomargarine	pound	24.4	24.0	23.6	22.5	26.8	27.0	24.5	24.4	24.1	24.3	25.1	25.1	24.3	24.5
Peanut butter	do	28.1	27.9	32.5	32.7	32.2	29.2	26.8	26.5	27.1	28.0	30.6	29.9	25.6	25.5
Oil, cooking or salad [1]	pint	32.2	30.9	32.5	32.5	32.5	32.9	29.2	28.1	29.1	29.4	30.3	29.5	29.5	28.4
Sugar and sweets:															
Sugar	pound	6.9	6.9	7.1	7.2	7.1	7.2	6.4	6.5	6.5	6.5	6.7	6.7	6.4	6.4
Corn sirup	24 ounces	14.5	14.3	15.2	15.1	16.4	16.4	15.8	15.9	15.2	16.3	16.4	16.4	15.9	16.1
Molasses [1]	18 ounces	17.2	17.5	16.0	15.6	19.1	18.3	14.9	14.6	16.0	16.1	15.3	16.3	15.3	16.2
Apple butter [1]	16 ounces	12.5	13.5	15.2	14.5	14.1	14.3	13.4	13.7	11.7	12.2	14.4	14.5	13.4	13.3

See footnotes at end of table.

TABLE 5.—*Annual average retail prices of principal foods, by cities, 1944 and 1945*—Continued

Article	South Atlantic—Continued										East South Central			
	Norfolk		Richmond		Savannah		Washington D. C.		Winston-Salem		Birmingham [3]		Jackson [3]	
	1944	1945	1944	1945	1944	1945	1944	1945	1944	1945	1944	1945	1944	1945
	Cents	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
Cereals and bakery products:														
Cereals:														
Flour, wheat ... 10 pounds	68.3	66.6	60.3	58.9	71.1	70.4	65.9	65.1	72.8	71.2	74.9	72.8	68.5	71.5
Macaroni ... pound	14.2	15.3	15.1	15.5	17.6	17.3	15.6	15.6	18.9	18.8	16.9	17.0	18.6	19.8
Wheat cereal [1] ... 28 ounces	23.8	23.8	24.3	24.3	23.2	23.2	24.2	24.3	24.9	25.1	23.5	23.5	26.0	26.2
Corn flakes ... 8 ounces	6.9	6.9	6.8	6.9	6.8	6.8	6.6	6.8	7.1	6.8	6.8	7.0	6.8	7.3
Corn meal ... pound	6.5	6.6	6.2	6.4	5.7	6.2	5.8	6.2	5.8	6.0	5.7	5.9	5.8	6.7
Rice [1] ... do	12.6	12.7	11.9	11.0	10.6	10.5	13.1	13.1	13.5	13.1	12.6	12.6	11.7	13.7
Rolled oats ... do	9.3	10.1	9.0	9.8	9.3	10.4	9.4	10.4	9.6	10.8	9.3	10.2	9.3	15.7
Flour, pancake [1] ... 20 ounces	11.5	11.5	10.8	10.9	11.7	12.2	10.9	11.2	11.9	12.2	12.2	12.6	13.2	14.1
Bakery products:														
Bread, white ... pound	9.7	9.7	9.3	9.2	10.7	10.7	8.3	8.3	10.4	10.4	10.0	10.0	8.5	8.9
Bread, whole-wheat ... do	10.4	10.4	11.0	10.8	11.9	11.8	9.1	9.0	10.7	10.7	10.0	10.1	8.4	8.6
Bread, rye ... do	10.7	10.6	10.3	10.1	10.6	10.5	9.6	9.6	10.0	10.0	10.2	10.2	8.6	8.3
Vanilla cookies ... do	20.4	20.9	19.0	18.8	24.9	23.7	26.9	25.2	27.0	22.7	24.0	23.8	21.9	25.2
Soda crackers ... do	19.7	19.7	18.4	18.4	17.3	17.5	18.3	18.3	19.0	19.1	18.0	18.0	18.7	19.2
Meats:														
Beef:														
Round steak ... do	40.4	39.9	41.2	40.6	40.5	39.3	42.1	41.0	40.5	40.0	40.8	39.8	40.5	41.4
Rib roast ... do	30.7	31.3	33.3	32.4	33.6	32.9	31.7	30.8	32.3	31.1	33.4	32.0	31.1	38.6
Chuck roast ... do	27.9	27.9	28.4	27.0	28.4	27.6	28.7	27.7	28.9	28.0	28.1	27.3	27.7	27.9
Stew meat [1] ... do	26.0	25.3	25.4	26.5	24.5	21.2	29.4	28.3	30.9	27.2	21.8	20.5	22.0	23.1
Liver ... do	37.1	34.7	35.5	35.1	38.2	37.3	37.1	37.1	37.1	37.7	37.8	38.1	35.2	38.4
Hamburger ... do	28.4	27.7	27.5	27.3	27.6	27.6	27.2	27.2	29.4	27.9	28.3	28.2	28.2	28.2
Veal:														
Cutlets ... do	45.1	43.2	45.3	43.5	44.0	42.6	44.9	43.0	47.4	43.6	43.5	42.2	44.5	44.7
Roast, boned and rolled [1] ... do	43.0	43.5	38.9	37.8	34.3	33.8	37.5	35.5	35.6	34.1	35.4	34.3	35.7	41.8
Pork:														
Chops ... do	37.9	37.2	37.7	37.4	38.1	37.7	37.7	37.3	38.1	37.2	38.1	37.9	37.8	39.4
Bacon, sliced ... do	40.9	41.0	39.7	40.5	40.7	40.7	40.5	41.1	40.1	40.2	41.3	41.5	40.2	42.4
Ham, sliced ... do	50.6	47.0	49.9	48.3	50.5	48.9	49.3	48.7	51.1	49.0	50.9	50.0	51.1	51.8
Ham, whole ... do	35.2	33.4	34.7	34.1	35.5	34.5	33.5	33.9	34.6	32.1	35.6	35.7	35.4	38.8
Salt pork ... do	23.2	24.1	22.9	22.2	22.2	22.2	23.0	22.1	21.6	21.0	21.9	22.3	22.6	21.2
Liver [1] ... do	21.3	20.6	21.2	20.8	22.1	22.1	20.3	21.4	22.0	22.1	22.5	22.4	22.7	23.2
Sausage [1] ... do	37.8	37.7	35.1	36.4	37.7	38.4	37.9	38.0	36.7	37.0	37.0	36.7	35.7	38.6
Bologna, big [1] ... do	33.5	33.9	30.9	31.6	33.1	33.1	35.8	35.0	30.3	30.9	32.1	32.7	29.1	31.4
Lamb:														
Leg ... do	39.1	38.4	39.0	38.1	39.6	39.4	39.6	39.0	40.3	38.8	38.4	38.3	38.5	40.7
Rib chops ... do	44.6	44.1	45.8	44.1	45.6	44.6	45.5	44.4	48.2	44.4	43.4	42.7	45.2	46.6
Poultry:														
Roasting chickens ... do	44.1	45.4	44.2	44.6	46.1	47.0	45.0	46.4	47.2	52.6	41.7	44.0	46.3	50.9
Fish: [2]														
Salmon, pink ... 16-ounce can	23.2	22.8	22.4	22.0	23.0	22.5	22.7	22.2	22.8	22.5	23.2	22.4	25.8	29.1

do	18.1	18.0	16.0	16.0	18.0	18.0	13.2	13.2	17.0	17.0	16.6	16.6	15.2	15.2
Milk, evaporated 14½-ounce can	9.9	9.8	9.7	9.7	10.1	10.0	10.4	10.3	10.4	10.4	10.2	10.2	9.8	10.1
Eggs:														
Eggs, fresh dozen	54.9	58.4	52.9	57.4	52.2	57.6	55.0	58.0	49.5	56.4	51.0	58.0	49.8	57.1
Fruits and vegetables:														
Fresh fruits:														
Apples pound	10.7	11.7	10.3	11.7	11.1	12.4	10.3	12.1	9.9	10.7	11.8	12.2	12.2	14.1
Bananas do	10.4	10.0	10.8	9.9	9.8	8.9	11.1	10.1	10.6	9.4	11.5	10.4	11.6	11.2
Oranges dozen	42.0	45.0	40.8	44.2	39.6	45.1	42.7	47.6	40.8	45.6	39.4	45.9	39.7	52.7
Grapefruit [1] each	8.2	9.7	8.6	9.8	7.7	8.9	8.8	9.8	8.2	9.1	8.3	9.9	8.5	11.4
Fresh vegetables:														
Beans, green pound	17.2	18.0	17.0	18.0	17.2	17.9	17.5	18.4	16.1	18.0	17.5	18.9	20.5	21.7
Cabbage do	5.1	5.5	5.1	5.1	5.1	5.6	5.2	5.9	5.3	5.4	5.0	5.4	5.6	6.8
Carrots bunch	9.7	9.8	9.5	9.3	9.7	9.5	9.4	9.1	10.3	10.1	9.0	9.1	9.6	10.4
Lettuce head	12.2	12.7	12.5	12.0	12.0	12.6	13.6	14.3	13.0	13.1	11.4	12.5	11.9	13.7
Onions pound	8.0	7.2	6.8	7.1	8.1	7.6	6.4	6.9	7.8	8.0	7.6	7.3	7.1	7.7
Potatoes 15 pounds	69.9	72.6	68.5	70.5	73.0	80.1	67.9	71.7	74.6	76.7	72.7	77.4	76.5	88.8
Spinach pound	10.0	11.1	11.5	11.9	13.9	11.8	11.1	10.8	12.9	12.0	12.6	12.9	9.0	13.1
Sweetpotatoes do	9.6	8.9	9.6	8.2	8.9	8.5	10.6	9.8	8.1	8.2	7.3	6.9	8.2	9.1
Beets [1] bunch	10.5	10.5	11.6	11.2	14.4	14.3	9.5	9.3	11.2	11.4	9.3	9.3	10.1	10.8
Canned fruits:														
Peaches No. 2½ can	27.7	28.0	27.4	26.7	27.2	26.8	28.4	29.0	27.7	27.1	28.3	27.6	29.5	30.9
Pineapple do	26.7	26.0	26.2	26.0	27.5	25.5	28.1	26.9	33.6	31.2	27.8	27.8	30.6	30.6
Grapefruit juice No. 2 can	13.9	14.0	13.4	13.3	13.9	13.8	14.0	13.9	14.7	14.1	13.8	14.1	14.6	14.1
Canned vegetables:														
Beans, green do	12.9	13.6	12.8	13.0	13.2	12.5	12.4	11.9	14.0	14.0	12.8	13.1	13.9	13.7
Corn do	14.2	14.7	13.6	14.0	15.7	15.2	14.6	14.7	14.9	14.9	14.5	15.0	15.6	15.6
Peas do	13.3	13.7	13.1	12.6	14.9	14.3	13.2	12.9	14.4	13.5	14.2	14.3	15.3	13.8
Tomatoes do	11.3	11.5	11.0	11.1	12.8	12.3	11.5	11.2	12.2	12.1	12.7	13.2	13.5	14.1
Soup, vegetable [1] 11-ounce can	13.2	13.2	13.0	12.8	14.0	13.3	13.2	12.6	14.0	13.4	13.6	13.4	12.9	14.5
Dried fruits:														
Prunes pound	16.3	16.8	16.5	16.1	18.9	16.5	17.6	18.0	17.3	17.2	16.2	18.0	19.8	19.7
Dried vegetables:														
Navy beans do	9.7	10.1	9.4	9.9	10.2	10.2	11.6	12.5	10.0	10.7	10.3	10.6	10.3	12.5
Soup, dehydrated, chicken noodle [1] ounce	3.7	3.8	3.6	3.6	3.6	3.5	3.4	3.6	3.9	3.7	3.8	3.9	3.9	4.1
Beverages:														
Coffee pound	26.6	26.6	29.1	28.9	31.9	31.6	28.5	28.4	30.7	30.3	29.3	29.3	35.0	35.7
Tea ¼ pound	23.2	23.8	22.6	22.8	25.4	25.0	25.9	25.8	25.7	25.0	24.7	21.9	27.6	28.5
Cocoa [1] ½ pound	9.8	9.7	9.9	9.9	10.7	10.1	10.4	10.5	6.1	7.5	9.6	10.1	11.8	11.7
Fats and oils:														
Lard pound	19.1	19.0	18.2	18.5	18.8	18.7	18.2	18.5	18.9	18.9	18.7	19.0	19.1	19.5
Shortening other than lard:														
In cartons do	20.0	19.9	19.8	19.5	20.1	20.0	19.4	19.2	20.4	20.1	20.1	19.9	20.3	20.3
In other containers do	25.2	24.8	25.1	24.6	25.1	24.6	24.4	24.0	24.7	24.1	24.5	24.1	24.6	24.1
Salad dressing pint	28.5	26.0	27.2	26.1	26.7	24.4	25.4	24.2	27.4	23.4	25.0	26.6	28.0	29.5
Oleomargarine pound	23.9	24.7	23.9	23.7	24.9	24.5	22.5	22.9	25.2	24.9	24.9	24.4	25.3	25.8
Peanut butter do	26.3	27.3	24.1	25.2	29.2	27.2	26.7	26.6	29.7	29.1	26.1	26.0	24.2	28.7
Oil, cooking or salad [1] pint	29.6	29.2	29.0	27.9	29.4	28.9	29.5	29.5	31.3	29.3	30.1	28.5	29.4	29.1
Sugar and sweets:														
Sugar pound	6.5	6.4	6.7	6.7	6.5	6.6	6.7	6.4	6.7	6.8	6.7	6.6	6.8	6.9
Corn sirup 24 ounces	16.0	15.9	15.5	15.7	16.3	16.1	15.6	15.4	17.2	16.7	15.6	15.6	17.1	16.2
Molasses [1] 18 ounces	17.3	16.6	15.0	14.4	16.1	16.1	15.3	15.1	17.3	17.4	15.3	15.2	12.5	18.6
Apple butter [1] 16 ounces	13.7	14.2	12.9	12.8	14.1	14.3	12.0	12.2	14.1	12.9	13.6	14.2	17.4	17.8

See footnotes at end of table.

TABLE 5.—*Annual average retail prices of principal foods, by cities, 1944 and 1945*—Continued

Article	East South Central—Continued								West South Central					
	Knoxville		Louisville		Memphis		Mobile [3]		Dallas		Houston		Little Rock [3]	
	1944	1945	1944	1945	1944	1945	1944	1945	1944	1945	1944	1945	1944	1945
Cereals and bakery products:	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
Cereals:														
Flour, wheat ... 10 pounds	73.2	70.6	68.3	66.0	78.3	78.5	69.8	68.7	61.8	58.8	61.1	60.4	71.6	71.7
Macaroni ... pound	16.8	16.8	13.7	14.2	11.8	12.5	18.5	18.7	17.2	17.2	17.0	16.8	18.2	19.1
Wheat cereal [1] ... 28 ounces	25.6	26.2	23.3	23.3	25.7	25.7	24.2	24.5	21.4	22.0	22.6	22.8	27.2	27.0
Corn flakes ... 8 ounces	6.8	7.0	6.5	6.6	6.9	7.0	6.5	6.8	6.3	6.4	6.3	6.5	6.6	6.8
Corn meal ... pound	5.4	5.5	5.9	6.0	5.8	6.4	5.7	6.2	5.7	6.0	6.1	6.3	6.7	6.8
Rice [1] ... do	12.7	11.6	11.9	11.9	11.9	12.6	11.8	12.1	12.1	11.8	10.4	10.5	12.2	12.1
Rolled oats ... do	10.0	11.0	9.2	10.0	9.4	10.4	9.4	10.4	8.7	9.4	8.8	10.1	9.6	10.7
Flour, pancake [1] ... 20 ounces	13.2	14.1	11.1	11.0	12.7	12.7	12.7	12.7	11.5	11.7	12.0	12.2	14.5	15.2
Bakery products:														
Bread, white ... pound	9.5	9.4	8.7	8.8	8.7	8.7	11.9	12.0	8.0	8.6	7.9	7.8	9.1	9.2
Bread, whole-wheat ... do	8.6	8.5	11.0	10.6	9.0	9.0	11.1	11.1	9.3	9.4	9.5	9.5	9.0	9.0
Bread, rye ... do	10.0	9.9	9.0	9.0	9.5	9.5	11.2	11.2	9.8	9.8	9.6	9.6	9.4	9.3
Vanilla cookies ... do	27.9	27.0	24.1	25.5	23.5	25.0	22.8	22.6	24.5	24.1	24.0	23.8	25.5	25.5
Soda crackers ... do	19.7	19.7	18.7	18.9	19.0	19.1	18.8	18.9	18.2	18.2	18.9	19.0	20.6	20.4
Meats:														
Beef:														
Round steak ... do	40.3	40.3	40.0	39.9	40.3	39.4	42.1	41.4	38.0	38.3	38.1	36.4	41.5	40.7
Rib roast ... do	32.4	32.7	32.1	32.0	32.6	33.3	33.8	33.5	30.6	30.0	30.2	29.8	33.0	32.5
Chuck roast ... do	28.4	28.3	28.2	27.9	28.3	27.2	28.7	28.0	26.4	25.9	25.9	25.0	28.7	28.2
Stew meat [1] ... do	30.4	25.9	25.0	24.3	23.6	24.1	24.0	22.9	20.0	18.7	21.1	18.2	25.2	25.3
Liver ... do	36.5	36.9	36.3	36.5	36.2	36.8	38.3	37.7	34.4	35.0	35.3	35.0	35.8	35.2
Hamburger ... do	28.4	28.6	26.4	26.3	27.8	27.5	29.1	28.7	21.4	21.0	24.9	24.6	27.7	27.1
Veal:														
Cutlets ... do	46.4	44.9	44.3	43.5	44.0	43.0	44.5	44.3	39.9	39.8	42.4	41.4	46.7	44.5
Roast, boned and rolled [1] ... do	35.7	35.0	34.7	35.6	(4)	45.0	35.4	36.8	31.7	32.5	31.7	32.8	35.2	35.4
Pork:														
Chops ... do	37.3	38.0	36.5	36.5	36.6	36.3	38.1	38.7	36.1	36.1	36.4	36.3	37.4	37.6
Bacon, sliced ... do	40.3	41.1	40.2	40.3	40.6	40.4	41.7	42.0	40.4	40.6	40.8	41.1	40.8	41.2
Ham, sliced ... do	51.1	50.8	47.7	47.2	49.6	46.4	51.3	50.9	50.0	49.4	50.0	49.2	51.3	49.9
Ham, whole ... do	35.5	35.5	33.4	32.7	34.2	32.0	35.8	35.7	35.0	34.3	34.7	35.0	36.1	35.3
Salt pork ... do	22.8	22.6	21.0	21.0	22.1	21.3	22.5	22.6	21.6	21.2	21.5	20.9	22.7	22.0
Liver [1] ... do	22.7	22.6	21.5	21.1	22.6	21.4	22.8	22.7	21.3	21.5	20.3	21.7	22.6	21.6
Sausage [1] ... do	36.7	37.9	35.8	35.9	37.0	37.6	38.0	38.5	37.2	37.8	39.1	37.6	35.9	37.0
Bologna, big [1] ... do	28.4	29.9	33.0	32.6	29.9	31.0	33.3	33.6	30.4	29.7	31.6	31.6	29.7	30.0
Lamb:														
Leg ... do	39.1	39.2	39.0	38.8	38.2	38.2	37.6	38.2	36.6	36.2	37.2	36.4	39.4	39.2
Rib chops ... do	44.7	44.4	43.7	44.0	46.7	44.7	44.5	44.6	42.3	41.1	43.0	41.9	47.1	44.1
Poultry:														
Roasting chickens ... do	48.2	51.9	44.3	46.8	42.7	45.1	42.9	51.6	47.6	48.3	48.4	50.1	42.3	50.9
Fish: [2]														
Salmon, pink ... 16-ounce can	22.7	22.0	23.2	22.5	22.4	22.0	23.0	22.6	22.7	22.1	23.8	24.5	28.3	27.9
... do	39.9	39.0	36.1	32.1	(4)	(4)	40.7	43.0	41.7	(4)	40.3	39.8	49.1	(4)

													38.3	37.9
						13.0	18.4	18.4	15.0	15.0	15.5	15.5	16.0	16.0
	[illegible]	14.9	15.2	15.2	13.0	13.0	18.4	18.4	14.3	14.3	14.6	14.6	16.0	16.0
evaporated……14½-ounce can	10.5	10.4	10.0	10.0	10.5	10.4	9.9	9.9	9.9	9.8	9.7	9.7	10.1	10.1
Eggs:														
Eggs, fresh……dozen	47.5	56.3	50.5	56.4	53.0	57.1	54.0	58.0	50.5	55.9	49.2	54.9	51.7	57.2
Fruits and vegetables:														
Fresh fruits:														
Apples……pound	11.6	12.5	12.0	12.6	11.5	13.0	12.8	14.0	11.9	12.7	12.7	13.3	12.4	13.4
Bananas……do	11.3	10.6	10.9	10.1	10.7	9.2	9.8	9.5	10.3	9.5	10.4	9.8	11.7	11.5
Oranges……dozen	43.6	47.1	42.2	45.0	45.7	49.1	42.0	48.2	47.3	46.3	48.7	46.1	48.9	49.2
Grapefruit [1]……each	8.9	9.8	9.1	9.7	8.5	9.6	8.7	9.8	7.6	8.3	8.0	8.5	7.9	9.1
Fresh vegetables:														
Beans, green……pound	17.3	19.3	18.1	18.3	17.7	19.3	18.2	19.4	16.8	17.6	18.8	19.7	20.4	20.7
Cabbage……do	5.7	6.0	5.3	5.9	5.2	5.7	5.3	6.3	4.8	5.4	5.0	5.5	5.2	5.7
Carrots……bunch	10.8	10.3	9.3	9.4	8.7	9.1	9.0	9.0	7.3	7.4	8.0	8.2	8.4	9.2
Lettuce……head	13.0	12.8	11.7	11.7	12.6	12.5	12.3	12.6	10.9	11.8	11.4	11.8	12.0	12.6
Onions……pound	8.9	8.1	7.4	6.8	7.5	7.5	6.9	7.3	5.6	5.8	6.5	6.6	7.0	6.8
Potatoes……15 pounds	77.8	84.6	74.7	72.7	81.9	85.4	76.7	85.5	74.1	79.7	81.4	87.8	73.1	77.5
Spinach……pound	15.3	14.3	11.7	12.0	11.1	11.9	12.3	10.8	11.0	10.7	13.0	11.3	10.7	14.6
Sweetpotatoes……do	9.2	9.7	10.4	9.7	9.8	9.1	7.1	7.9	9.7	9.3	9.5	9.4	9.1	8.6
Beets [1]……bunch	12.6	16.2	8.8	9.5	9.1	9.8	11.0	10.3	8.2	8.6	10.7	11.1	9.6	10.1
Canned fruits:														
Peaches……No. 2½ can	26.0	28.1	27.0	28.5	27.1	26.7	28.0	28.1	28.0	27.5	25.7	26.8	34.8	27.5
Pineapple……do	25.2	25.9	26.6	25.1	30.0	29.5	26.1	25.0	27.2	25.1	28.6	24.9	35.5	36.0
Grapefruit juice……No. 2 can	14.6	14.9	14.0	14.0	14.3	14.3	13.6	14.0	13.3	13.5	12.3	12.8	15.4	15.1
Canned vegetables:														
Beans, green……do	13.7	13.5	13.2	13.2	12.9	12.1	12.9	10.8	12.2	12.2	11.9	12.3	12.8	15.1
Corn……do	14.7	15.8	14.1	13.8	14.5	14.6	15.7	14.8	15.2	15.1	14.5	15.2	14.3	14.7
Peas……do	13.7	13.5	13.3	13.5	14.5	13.5	13.0	12.6	13.1	12.9	14.3	14.6	15.2	15.2
Tomatoes……do	12.8	12.9	12.3	12.2	12.2	12.7	13.3	13.2	11.4	11.8	10.7	11.2	12.5	13.1
Soup, vegetable [1]……11-ounce can	14.4	14.4	13.4	13.1	13.4	13.2	13.6	13.5	13.8	13.8	13.5	13.4	14.2	15.1
Dried fruits:														
Prunes……pound	18.5	19.7	18.8	18.5	19.0	18.9	17.9	17.1	17.2	18.3	15.6	16.3	16.8	16.8
Dried vegetables:														
Navy beans……do	9.7	9.7	9.6	9.8	10.4	11.1	9.9	10.2	12.3	12.3	12.2	13.6	10.6	11.3
Soup, dehydrated, chicken noodle [1]……ounce	4.1	4.1	3.8	3.9	4.0	4.0	3.7	3.9	3.5	3.8	3.7	3.6	3.8	3.9
Beverages:														
Coffee……pound	29.5	29.2	30.7	30.5	30.9	30.6	33.4	34.2	29.1	30.2	28.2	27.9	31.7	32.5
Tea……¼ pound	26.0	26.5	25.1	25.7	28.3	27.9	26.4	27.3	23.3	24.0	24.1	24.6	28.2	27.5
Cocoa [1]……½ pound	9.6	12.1	9.9	9.9	11.6	11.8	9.8	10.7	9.6	10.0	9.6	10.1	13.1	12.4
Fats and oils:														
Lard……pound	18.9	19.0	17.7	18.2	18.3	19.2	19.4	19.4	18.1	17.9	18.4	18.6	19.3	19.4
Shortening other than lard:														
In cartons……do	20.4	20.2	19.5	19.0	20.3	20.2	20.1	20.0	19.9	19.8	19.4	19.7	21.1	21.1
In other containers……do	24.6	24.1	24.7	24.7	24.7	24.2	23.5	23.3	23.9	24.1	23.9	24.1	25.9	24.6
Salad dressing……pint	26.7	25.7	26.6	26.0	27.2	26.2	24.4	25.2	24.0	23.4	23.8	22.7	26.9	29.1
Oleomargarine……pound	24.9	24.4	26.2	26.0	22.4	22.8	25.9	26.1	24.0	22.8	25.2	24.2	26.4	26.5
Peanut butter……do	27.5	28.8	26.9	27.5	29.4	29.0	25.8	25.7	26.3	26.3	25.9	25.4	30.2	29.6
Oil, cooking or salad [1]……pint	31.2	29.7	29.8	30.5	31.3	30.7	28.9	28.5	29.1	29.0	29.2	28.7	30.2	30.5
Sugar and sweets:														
Sugar……pound	6.9	6.8	6.7	6.8	6.9	6.8	6.5	6.5	6.7	6.8	6.6	6.5	7.2	7.2
Corn sirup……24 ounces	16.5	16.2	14.5	14.3	15.5	15.3	15.7	16.0	15.9	16.0	16.0	16.2	16.8	16.9
Molasses [1]……18 ounces	18.8	18.4	17.6	16.0	16.0	16.1	14.1	14.2	15.7	16.0	14.3	15.2	17.6	17.6
Apple butter [1]……16 ounces	13.5	14.3	12.3	13.0	13.2	14.0	12.8	13.5	16.1	14.3	14.5	14.4	15.7	14.7

See footnotes at end of table.

TABLE 5.—*Annual average retail prices of principal foods, by cities, 1944 and 1945*—Continued

Article	West South Central—Continued		Mountain						Pacific							
	New Orleans[3]		Butte		Denver[3]		Salt Lake City		Los Angeles		Portland, Oreg.		San Francisco		Seattle	
	1944	1945	1944	1945	1944	1945	1944	1945	1944	1945	1944	1945	1944	1945	1944	1945
Cereals and bakery products:	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
Cereals:																
Flour, wheat .... 10 pounds	73.3	70.0	56.8	57.4	55.3	55.5	58.4	58.9	66.0	66.9	58.7	58.8	69.2	69.6	61.4	61.2
Macaroni .... pound	11.0	10.5	18.3	18.2	16.2	16.4	17.7	17.1	14.7	15.0	16.1	16.2	18.3	18.2	16.7	16.4
Wheat cereal[1] .... 28 ounces	23.9	24.0	25.1	25.0	24.1	24.7	24.2	24.0	23.5	23.6	24.0	24.1	24.2	24.3	24.9	24.8
Corn flakes .... 8 ounces	6.7	6.6	6.8	6.9	6.5	6.6	6.7	6.9	6.4	6.8	6.6	6.7	6.7	6.8	6.9	7.1
Corn meal .... pound	6.3	6.6	7.8	7.7	6.3	6.8	8.7	9.0	8.4	8.6	8.3	8.3	9.0	9.0	9.0	8.7
Rice[1] .... do	11.3	11.5	15.0	15.0	12.0	12.0	12.7	12.7	13.5	13.4	12.4	13.1	11.7	12.1	12.5	13.3
Rolled oats .... do	9.4	10.6	10.4	11.2	9.5	10.2	10.5	11.3	10.4	11.3	11.0	11.7	11.4	12.1	10.7	11.9
Flour, pancake,[1] .... 20 ounces	13.3	13.6	13.7	14.3	13.4	13.6	14.0	14.2	12.8	13.5	14.3	14.6	13.7	14.0	13.5	13.2
Bakery products:																
Bread, white .... pound	9.6	9.6	9.9	9.9	8.4	8.6	8.7	8.7	8.3	8.5	9.3	9.3	9.6	9.6	9.8	9.9
Bread, whole-wheat .... do	9.7	9.7	10.0	10.0	8.0	8.4	8.6	8.6	8.4	8.5	9.5	9.5	9.7	9.7	9.8	9.8
Bread, rye .... do	10.5	11.2	10.0	10.0	10.5	10.4	11.2	10.2	9.8	9.8	10.9	10.9	10.9	11.0	10.7	10.7
Vanilla cookies .... do	30.9	30.5	31.9	34.7	31.1	31.8	30.3	31.7	26.7	24.5	28.3	29.5	29.3	28.2	28.2	31.9
Soda crackers .... do	19.4	19.5	16.8	17.3	18.6	19.4	19.2	18.9	18.1	18.2	19.5	19.2	19.0	18.9	19.4	18.8
Meats:																
Beef:																
Round steak .... do	42.3	41.1	39.0	38.7	39.0	39.1	40.9	40.2	41.6	41.2	40.4	40.2	43.2	42.0	41.7	41.6
Rib roast .... do	33.7	34.0	30.9	31.3	32.4	32.8	33.0	32.7	33.9	33.3	33.2	32.9	35.0	34.2	35.1	35.0
Chuck roast .... do	28.5	28.6	27.9	27.4	27.4	27.5	27.8	27.5	28.7	28.5	28.5	27.8	29.7	28.2	29.0	28.7
Stew meat[1] .... do	28.3	23.5	29.4	28.1	31.8	32.6	30.9	29.6	32.6	29.6	37.3	35.5	38.0	35.6	34.7	33.6
Liver .... do	38.5	38.3	33.2	33.8	35.8	36.5	36.8	37.2	38.8	38.7	38.1	38.5	39.1	38.7	40.2	40.0
Hamburger .... do	28.8	27.5	27.4	27.1	25.6	25.7	27.3	27.3	29.3	29.3	29.4	29.4	29.6	29.4	30.1	29.7
Veal:																
Cutlets .... do	46.0	44.7	44.3	44.8	42.3	44.2	45.3	44.3	46.3	46.6	47.5	46.4	47.3	46.3	46.6	45.9
Roast, boned and rolled[1] ... do	35.7	35.4	36.0	(4)	(4)	31.7	37.4	44.8	36.0	36.4	29.9	(4)	37.5	36.4	(4)	44.5
Pork:																
Chops .... do	38.8	38.6	37.5	37.9	38.0	38.2	38.5	38.8	38.6	38.7	39.2	39.0	39.1	39.1	40.2	40.1
Bacon, sliced .... do	42.1	42.3	43.0	43.0	43.0	42.2	43.5	43.2	42.6	42.5	43.1	42.7	43.1	42.6	41.5	44.3
Ham, sliced .... do	53.3	51.0	52.8	52.7	51.0	50.8	53.4	53.5	53.4	53.5	53.2	52.2	52.8	52.6	54.6	54.5
Ham, whole .... do	36.4	36.2	36.0	36.9	36.1	36.3	37.4	37.8	37.0	37.2	37.2	36.6	36.8	36.6	37.9	38.0
Salt pork .... do	23.2	23.3	23.5	23.0	22.2	22.5	23.8	23.8	23.1	23.4	24.9	24.8	24.0	24.4	25.0	24.5
Liver[1] .... do	22.4	23.0	22.7	22.1	20.3	21.4	23.6	23.9	24.3	24.0	24.8	24.2	24.2	24.0	25.4	26.0
Sausage[1] .... do	41.4	40.6	33.4	35.8	37.4	38.0	35.1	35.3	37.8	39.2	33.2	34.2	39.0	39.0	38.0	39.7
Bologna, big[1] .... do	33.7	34.6	32.3	32.4	32.1	33.1	32.6	32.0	33.3	34.0	27.9	29.4	36.8	36.1	36.5	36.4
Lamb:																
Leg .... do	40.1	39.9	37.5	37.3	37.0	37.8	38.5	38.9	39.9	40.5	39.0	39.5	40.8	40.5	40.2	40.4
Rib chops .... do	46.9	45.0	41.8	42.2	42.7	43.5	44.3	43.4	45.8	46.6	45.0	45.1	46.7	46.7	45.4	46.6

Roasting chickens..........do....	42.5	47.8	39.3	41.2	40.6	41.3	46.0	47.2	44.3	47.9	46.3	47.4	46.2	46.1	47.2	49.0
Fish: [2]																
Salmon, pink......16 ounce can..	24.6	23.4	25.2	25.6	23.7	27.5	24.0	23.2	22.1	23.9	22.7	23.9	23.9	23.1	24.3	24.6
Salmon, red [1]..............do....	41.2	(4)	44.7	43.2	43.4	51.0	42.9	40.9	40.1	39.8	44.3	43.4	44.9	44.2	45.2	47.4
Dairy products:																
Butter..................pound..	51.4	52.2	49.0	49.8	50.6	51.1	50.7	51.7	51.3	52.1	50.0	50.7	51.1	52.1	53.6	54.0
Cheese.....................do....	36.2	36.5	37.8	36.7	40.8	40.7	37.5	36.9	36.8	36.1	38.1	37.6	42.8	37.5	39.1	39.0
Milk, fresh (delivered).......quart..	16.5	16.5	14.0	14.0	13.7	13.6	13.3	12.2	14.5	14.5	14.0	14.0	15.5	15.0	14.3	14.3
Milk, fresh (grocery)..........do....	16.1	16.0	14.0	14.0	12.8	12.7	12.6	12.4	13.6	13.6	14.0	14.0	14.5	14.5	13.3	13.3
Milk, evaporated....14½-ounce can..	9.9	9.8	10.6	10.5	9.9	9.7	10.0	10.0	10.0	10.0	9.7	9.7	10.3	10.3	10.5	10.4
Eggs:																
Eggs, fresh..................dozen..	54.3	58.3	54.4	59.8	53.1	58.8	51.5	57.1	56.1	59.9	52.7	59.4	58.4	60.3	59.2	63.2
Fruits and vegetables:																
Fresh fruits:																
Apples.................pound..	12.2	13.9	11.3	12.7	12.4	13.3	10.7	11.5	11.4	12.8	10.5	11.6	11.2	11.5	11.4	12.2
Bananas..................do....	9.5	9.0	12.3	12.6	11.4	10.1	11.8	12.2	9.4	11.0	11.3	12.0	9.5	10.9	12.6	12.5
Oranges.................dozen ..	44.5	48.2	52.7	49.2	55.6	52.4	47.4	46.7	40.1	41.7	46.3	48.5	46.4	44.8	55.0	52.1
Grapefruit [1]...............each..	8.2	9.3	10.5	11.2	8.7	10.7	9.1	10.8	7.9	8.6	9.0	11.0	8.6	9.0	10.3	11.3
Fresh vegetables:																
Beans, green.............pound..	19.3	19.3	23.7	28.0	17.8	19.3	23.8	19.9	19.5	19.2	19.5	17.2	22.9	19.9	24.3	17.9
Cabbage..................do....	4.6	4.9	5.5	7.5	5.1	5.6	4.8	5.4	4.4	7.8	5.2	7.6	4.6	6.0	6.3	8.9
Carrots..................bunch..	7.9	8.1	8.9	9.1	7.1	7.4	6.4	7.7	7.0	7.3	8.3	8.6	7.2	7.3	8.9	8.7
Lettuce..................head..	11.3	13.0	12.0	14.3	11.3	12.5	10.3	10.9	9.3	9.2	10.3	11.9	8.7	9.4	10.8	12.7
Onions...................pound..	7.1	6.8	6.9	7.4	6.1	5.6	6.1	5.7	5.3	6.6	6.0	6.7	6.4	6.8	6.5	7.0
Potatoes.............15 pounds..	74.8	78.5	61.2	65.7	64.3	68.6	60.8	67.9	70.3	74.0	65.7	71.5	70.5	75.4	68.7	72.9
Spinach..................pound..	13.5	10.1	13.0	11.7	11.3	11.5	11.1	12.0	8.4	10.4	10.2	12.2	12.0	12.7	9.4	11.1
Sweetpotatoes.............do....	7.5	8.4	13.6	12.2	11.3	11.0	12.6	11.4	12.7	11.7	13.1	11.0	13.5	11.5	14.1	11.6
Beets [1]..................bunch..	9.6	9.2	9.7	10.7	9.0	9.2	7.7	10.9	8.6	9.7	9.5	10.7	8.4	8.3	6.7	5.7
Canned fruits:																
Peaches ....No. 2½ can..	29.3	28.8	29.2	29.0	28.0	28.6	27.8	27.8	25.1	25.1	27.0	27.1	25.9	26.0	25.9	27.3
Pineapple..................do....	27.3	25.7	29.5	33.6	30.7	34.8	27.8	25.7	25.9	24.7	25.5	27.1	25.8	25.8	26.4	28.4
Grapefruit juice.......No. 2 can..	14.3	12.9	15.1	15.4	14.5	14.4	15.1	14.6	14.8	14.6	15.0	14.7	15.3	15.0	15.3	15.3
Canned vegetables:																
Beans, green...............do....	13.4	13.3	13.9	14.2	13.6	13.3	12.7	12.7	13.9	13.3	13.7	13.5	14.3	14.0	14.6	13.6
Corn......................do....	16.1	16.2	15.2	15.9	14.5	14.4	14.1	15.2	15.0	15.6	14.7	15.7	15.8	16.3	15.5	16.4
Peas......................do....	14.9	14.1	13.4	14.2	14.1	13.5	12.7	11.3	12.8	12.8	13.1	13.2	13.4	13.2	13.3	13.1
Tomatoes..................do....	13.8	14.1	12.4	13.0	12.8	12.8	[5] 15.1	[5] 15.7	[5] 14.3	[5] 15.2	[5] 15.3	[5] 15.8	[5] 14.3	[5] 15.5	[5] 16.7	[5] 18.2
Soup, vegetable [1]...11-ounce can..	13.9	13.8	14.1	14.1	14.2	13.9	14.1	14.2	13.4	13.5	13.9	13.8	14.1	13.9	14.1	14.6
Dried fruits:																
Prunes...................pound..	19.6	17.5	15.3	16.7	16.8	17.9	17.0	17.1	16.0	18.5	15.2	15.2	15.7	16.3	16.8	16.9
Dried vegetables:																
Navy beans.................do....	10.6	11.5	9.7	10.2	10.3	10.5	9.6	10.8	11.9	12.5	11.6	11.2	12.2	12.5	11.5	12.3
Soup, dehydrated, chicken noodle [1]..............ounce..	3.6	3.7	3.7	3.9	3.6	3.8	3.8	3.7	3.5	3.8	3.5	3.6	3.4	3.6	3.7	3.3
Beverages:																
Coffee....................pound..	28.6	27.8	33.6	33.0	34.4	34.8.	33.2	33.4	29.7	30.6	30.7	31.2	32.7	33.7	34.0	34.3
Tea....................¼ pound..	26.6	26.8	26.3	27.3	26.8	28.1	26.9	26.4	25.0	25.8	26.6	26.8	27.0	27.2	27.9	29.4
Cocoa [1]................½ pound..	10.8	11.1	11.6	11.3	11.6	11.5	11.2	11.2	10.6	10.9	11.5	13.3	11.1	11.3	11.9	11.8

See footnotes at end of table.

TABLE 5.—*Annual average retail prices of principal foods, by cities, 1944 and 1945*—Continued

Article	West South Central—Continued		Mountain						Pacific							
	New Orleans		Butte		Denver		Salt Lake City		Los Angeles		Portland, Oreg.		San Francisco		Seattle	
	1944	1945	1944	1945	1944	1945	1944	1945	1944	1945	1944	1945	1944	1945	1944	1945
Fats and oils:																
Lard ________ pound __	*Cents* 19.6	*Cents* 19.8	*Cents* 19.3	*Cents* 19.7	*Cents* 19.2	*Cents* 19.1	*Cents* 19.1	*Cents* 19.8	*Cents* 20.0	*Cents* 19.8	*Cents* 20.4	*Cents* 20.5	*Cents* 20.6	*Cents* 20.2	*Cents* 21.4	*Cents* 21.2
Shortening other than lard:																
In cartons ________ do ____	20.6	20.5	20.0	23.0	20.0	20.3	20.4	20.4	20.1	19.7	21.4	20.9	20.5	20.0	21.3	21.7
In other containers ________ do ____	25.3	25.1	24.3	24.8	24.3	24.7	24.4	24.8	24.3	24.1	24.0	23.7	25.1	24.9	25.8	25.2
Salad dressing ________ pint __	28.3	27.8	28.2	29.2	27.2	28.4	27.6	26.1	25.5	24.6	27.7	26.9	27.2	26.2	26.7	26.8
Oleomargarine ________ pound __	25.1	25.4	27.0	25.6	26.6	26.8	30.5	29.6	24.4	24.8	25.9	25.8	26.6	26.9	29.0	29.2
Peanut butter ________ do ____	29.5	28.5	27.0	28.1	35.6	37.2	32.8	33.1	30.7	30.7	31.1	29.7	33.1	33.3	29.5	30.6
Oil, cooking or salad [1] ________ pint __	30.1	29.8	33.2	33.0	32.0	32.0	31.0	30.2	29.5	28.0	30.0	29.8	30.2	29.4	32.0	32.4
Sugar and sweets:																
Sugar ________ pound __	6.4	6.4	7.9	7.6	7.4	7.3	7.2	7.3	6.8	6.7	7.3	6.8	6.8	6.6	6.9	6.9
Corn sirup ________ 24 ounces __	17.2	17.0	16.4	16.4	15.8	15.6	16.1	15.3	15.7	15.6	16.6	16.2	16.2	16.1	16.9	17.6
Molasses [1] ________ 18 ounces __	15.2	15.7	14.3	14.7	15.5	14.0	16.4	17.1	16.5	15.8	17.7	16.4	16.6	16.4	13.2	13.2
Apple butter [1] ________ 16 ounces __	15.1	16.1	16.0	17.7	15.0	15.0	15.4	16.3	14.0	15.6	15.4	17.2	15.1	17.2	14.3	17.5

[1] Not included in the index.

[2] Costs of fresh and/or frozen fish included in index, but average prices are not computed.

[3] Sales tax included.

[4] Not available.

[5] Price per No. 2½ can.

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UNITED STATES DEPARTMENT OF LABOR
L. B. Schwellenbach, *Secretary*
BUREAU OF LABOR STATISTICS
Ewan Clague, *Commissioner*

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Union Health and Welfare Plans

Bulletin No. 900

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Letter of Transmittal

United States Department of Labor,
Bureau of Labor Statistics,
Washington, D. C., March 5, 1947,

The Secretary of Labor:

I have the honor to transmit herewith a report on union health and welfare plans, which consists of two articles.

The first article brings up to date collective-bargaining developments in the field. It also notes several of the medical service plans entailing a health center and the recently established United Mine Workers' program. This article was prepared in the Bureau's Industrial Relations Branch, Boris Stern, Chief.

The second article was written by Nathaniel M. Minkoff, secretary-treasurer of the New York Dressmakers' Joint Board, International Ladies' Garment Workers' Union (AFL). It treats principally of the experience of that organization with its own program and emphasizes some of the administrative problems which that union, and all unions, must encounter and solve.

Ewan Clague, *Commissioner.*

Hon. L. B. Schwellenbach,
Secretary of Labor.

Bulletin No. 900 of the
United States Bureau of Labor Statistics

[Reprinted from the MONTHLY LABOR REVIEW, February 1947]

Union Health and Welfare Plans

COLLECTIVE-BARGAINING DEVELOPMENTS IN HEALTH AND WELFARE PLANS[1]

WORKERS covered by some type of health-benefit [2] plans negotiated
by employer and union more than doubled in number since 1945, as
evealed by recent estimates made by the Bureau of Labor Statistics.
n 1945, some 600,000 workers were so included; at present (early 1947)
pproximately 1,250,000 are covered. Except for a few outstanding
nstances, including coal mining, the plans were negotiated by the
ame unions studied in the 1945 report, and are merely extensions of
heir programs.[3]

The principal industries in which a large proportion of workers
otaling approximately 1,100,000) are covered by some type of
ealth benefit plan are clothing (men's and women's), textiles, and
al mining. Other industries in which a part of the workers are
vered (totaling over 100,000) are building trades; fur and leather;
rniture; hotel; laundry, cleaning, and dyeing; machinery (particu-

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Prepared in the Bureau's Industrial Relations Branch by Lucy M. Kramer, with the assistance of Rose
eodore, under the direction of Harold S. Roberts.

See Health-Benefit Programs Established Through Collective Bargaining, Bureau of Labor Statistics
lletin No. 841 (reprinted from Monthly Labor Review, August 1945).

Most of the plans described in the 1945 Bureau of Labor Statistics report have been negotiated by the
wing unions: International Ladies' Garment Workers' Union (AFL); Amalgamated Clothing Workers
merica (CIO); United Hatters, Cap, and Millinery Workers' International Union (AFL); Textile
rkers' Union of America (CIO); United Textile Workers of America (AFL); International Fur and
ther Workers' Union of America (CIO); United Electrical, Radio, and Machine Workers of America
O); Upholsterers' International Union of North America (AFL); United Furniture Workers of America
O); Industrial Union of Marine and Shipbuilding Workers of America (CIO); Hotel and Restaurant
ployees' International Alliance and Bartenders' International League of America (AFL); United
erworkers (CIO); United Retail, Wholesale, and Department Store Employees of America (CIO);
lgamated Association of Street, Electric Railway, and Motor Coach Employees of America (AFL).
itional unions which have recently included health-benefit plans in their collective bargaining agree-
ts are: Building Service Employees' International Union (AFL); Progressive Mine Workers (Inde-
ent); United Mine Workers (AFL); United Office and Professional Workers (CIO); Brotherhood of
ters, Decorators, and Paperhangers (AFL); and United Association of Plumbers and Steamfitters
L).

larly electrical); office; paper; retail and wholesale trade; shipbuilding; and street and electric railway.

Although extensive employee coverage is found at the present time in only three industries, there are an increasing number and variety of industries in which some proportion of the workers are covered.

Types of Health-Benefit Plans

ADMINISTRATIVE CONTROL

In the Bureau's 1945 study of health-benefit plans established through collective bargaining agreements, it was found that there were three types of benefit plans—(1) those administered by the union solely, (2) plans administered jointly, and (3) programs administered by a private insurance company wherein the employer pays the premium directly or into a special premium fund. Most of the plans studied were financed entirely by the employer. This was true of all union-administered plans, of almost all jointly administered programs, and of more than half the plans administered by insurance companies.

Most of the agreements stipulate a specific percentage of the employer's pay roll (usually 2 or 3 percent) to be paid into the fund. If the contribution is not specified, the employer either defrays all expenses or supplements employee contributions as required. The health-benefit plans included weekly cash benefits during illness and disability caused by nonoccupational accidents, hospital and surgical expenses, and sometimes payment of doctor bills. In most cases dental care and preventive medicine were not usually included.

UNION HEALTH CENTERS

The first Union Health Center of the International Ladies' Garment Workers' Union (AFL) was established in 1912 in New York City, and still functions. In addition to furnishing medical care to garment workers at the Center, it inspects sick-benefit plans and serves as a health education center. It is concerned primarily with ambulatory cases—in the nature of a clinic. It does not offer service to the families, nor complete medical service to the members, and its financing varies with the craft.[4] In addition to cash benefit payments, and clinical medical services, the program provides some preventive medical care. The eye conservation plan, which provides that every shop is to be visited and each worker examined, is unique.[5] For 1 years the Center also provided dental care, but discontinued this service for organizational reasons.

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[4] Health Program of International Ladies' Garment Workers' Union, by L. Price, in Monthly Lab Review, October 1939; The Employee's Viewpoint on Group Hospitalization and Medical Care, by Held, American Management Association (New York, 1946, Insurance Pamphlet No. 65).

[5] Social Welfare Through Collective Bargaining, by Julius Hochman (1945), *in* Collective Bargain Negotiations and Contracts (p. 13:101), Bureau of National Affairs, Washington.

The New York Union Health Center, administered and financed to some extent jointly by labor and management, was not the result of collective bargaining originally. Similar health centers, however, have been established recently, through such negotiations, in Philadelphia, Fall River, Boston, and other smaller communities throughout the country.[6] Furthermore, when the joint labor-management health programs were incorporated into collective agreements in the needle trades in recent years, the health center became the central agency for the administration of the health-benefit program. Until 1943 the New York Center was financed by local union contributions. Since the incorporation of health-benefit funds (financed by employer contribution) into the agreements, however, a large part of the Center's financial support has come from these funds.

ST. LOUIS PLAN

A recent health-benefit plan negotiated by the St. Louis Joint Council, United Retail, Wholesale, and Department Store Employees (CIO), referred to as the St. Louis Plan, is of interest in that a health nstitute was established, through employer contribution, which offers omplete medical services. Every medical bill of members and their amilies, for service in the home, hospital, or clinic, is to be met by he St. Louis Labor Health Institute. The organizational plans as utlined in 1945 would open the institute not only to union members nd their nonvoting families, but also to outsiders as nonvoting aproved participants. This may result in a union health-benefit plan hat will include many unions jointly in the St. Louis area.

COAL MINERS' WELFARE FUNDS

In coal mining, both anthracite and bituminous, the coal miners cured, as a result of negotiations in May and June 1946, provisions their current agreements whereby about 450,000 miners (375,000 tuminous, 75,000 anthracite) in 3,000 mines in 23 States are to hieve a considerable measure of security through the operation of ree welfare funds.[7]

In the soft-coal industry (Government operated), one fund, designted as a "welfare and retirement fund," is to be raised by levying ax of 5 cents on each ton of soft coal produced. It is to be admin-

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. Held, op. cit. (p. 25); J. Hochman, op. cit. (p. 13:106); Bureau of Labor Statistics Bulletin No. 841, it. (p. 15).

or a brief discussion of the 1946 soft-coal negotiations and agreement, see The Changing Status of minous Coal Miners, by Witt Bowden, Monthly Labor Review, August 1946 (reprinted as Bulletin 882). See also New York Times, June 27, 1946. The provisions of the health and welfare program e contract are given in detail on pp. 7-9.

istered by three trustees—one appointed by the U. S. Coal Mines Administrator, one by the union, and one jointly. A second fund, designated as a "medical and hospital fund," is to be accumulated from wage deductions presently being checked off from miners' wages, or authorized in the future by the union. This fund is to be turned over to the union, and is to be administered by trustees appointed by the president of the United Mine Workers of America (AFL). The agreement calls for cooperation between the trustees of the two funds.

For the anthracite industry, a fund is to be raised similarly by a tax of 5 cents on each ton. This is a welfare and retirement fund, and is to be administered by three trustees—two to be appointed by the president of the United Mine Workers and one by the operators.

The technique of levying a tax on coal produced for the establishment and maintenance of a welfare fund is one that has been in existence in countries other than the United States for a number of years: Great Britain has had such a practice since 1920, New Zealand since 1925, the Netherlands since 1936, and British India and Spain more recently.[8]

Current Interest in Welfare Negotiations

Some voluntary prepaid medical-care plans,[9] entirely employer-sponsored or sponsored entirely by unions (as consumers), were in existence for many years prior to World War II—in at least one outstanding case such a plan was included in an agreement as a result of an arbitration award as far back as 1926.[10] It was during the recent war period, however, that the inclusion of health-benefit plans in union agreements gained headway.

Whether it was the national wage stabilization policy primarily which encouraged health and welfare benefits in lieu of wage increases during this period, or the necessity to maintain and increase wartime production by reducing the loss of man-hours caused by illness, or the heightened social awareness of the need for security for the wage earner, the fact remains that at the present time an increasing number of unions have such health and welfare clauses in their contracts, or have indicated their desire to negotiate for such provisions.

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[8] Welfare Provisions for Miners in Six Foreign Countries, Monthly Labor Review, June 1946.

[9] Voluntary prepaid medical-care plans may be classified, according to Margaret C. Klem, Chief of the Medical Economics Section of the Social Security Administration, into six types: industrial, medical society, or consumer-sponsored plans, private group clinics, Government plans, and Farm Security Administration plans.

Industrial plans, those established in connection with industry, and consumer-sponsored plans established by labor organizations, are the two types pertinent to the current analysis.

Industrial plans include those initiated by the employer alone, as well as plans put into effect by co lective bargaining. Of the 115 industrial medical-care plans studied in 1945 by Margaret C. Klem, in the costs were borne entirely by the employer, in 49 entirely by employee pay-roll deduction, and in by the two jointly. (Prepayment Medical Care Organizations, Social Security Board, Washington, 194 Bureau Memo. No. 55, p. 4.)

[10] In 1926, the Amalgamated Association of Street and Electric Railway employees secured from th Chicago Rapid Transit Co. a clause requiring the latter to bear the entire sickness and life insurance f its employees. (Beneficial Activities of American Trade-Unions, Bureau of Labor Statistics Bullet No. 465, 1928, p. 31.)

The potential role of health and welfare plans in collective bargaining was apparent in the last convention of the American Federation of Labor, held in Chicago in October 1946, when President Green, in his keynote speech, stated:

> I say to you * * * that that objective [the creation of welfare funds] will now be the objective of organizations affiliated with the American Federation of Labor; we must establish in this Nation security in every condition of life—old age, illness, and infirmity—and in addition we must provide hospitalization and nursing facilities and medical care for every man and woman in the United States.[11]

The Congress of Industrial Organizations, at its recent convention held in Atlantic City in November 1946, adopted a broad resolution on various aspects of security through collective bargaining, which concluded:

> The CIO intends immediately to develop a broad program so that workers may be given a rounded protection in their living standards through collective argaining contracts providing for adequate pension plans, health insurance lans, group hospitalization plans, and the guaranteed minimum annual wage.[12]

Current demands for inclusion of employee welfare clauses in union greements are recognized by management. Research services used argely by employers [13] each have devoted considerable space in their urrent loose-leaf publications on labor relations to employee welfare nd health-benefit plans in collective bargaining—the techniques of argaining, the types of plans, the coverage, etc.[14]

The March 1946 conference of the American Management Associaon devoted time to trends in employee benefits, and heard a detailed port by Adolph Held, International Ladies' Garment Workers' nion official, on the Employee's Viewpoint on Group Hospitalization d Medical Care,[15] based on his experience as director of the Inter-

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Report of Proceedings of the Sixty-fifth Convention of the American Federation of Labor, for ober 7-17, 1946 (p. 12).

See Resolution No. 34, in Daily Proceedings of the Eighth Constitutional Convention of the Cons of Industrial Organizations, for November 20, 1946 (p. 5).

See services of Research Institute of America (New York); Bureau of National Affairs (Washington); ntice-Hall (New York).

The RIA Labor Coordinator (Vol. 2, p. 38,005) in its Employee Welfare section, reminds management "employee welfare plans are no longer fringe issues. You must be prepared when union demands nade. What factors do you have to consider in evaluating a plan? Do you know the union arguments vor of these plans, and, what's more, do you know the answers? Can you include your nonunion loyees in a plan the union wants, and how is this done?" e also footnote 5.

Trends in Workmen's Compensation and Employee Benefits, American Management Association, York, 1946 (Insurance Series No. 65).

national Ladies' Garment Workers' Union Welfare and Health Benefits Department.

At the recent meeting of the American Medical Association on industrial health, held in Boston, a panel discussion was devoted to New Horizons in Industrial Health and Welfare, in which health-benefit plans played a large part, particularly those achieved through collective bargaining.[16] The American Medical Association, in its November 30, 1946, issue of the Journal, devoted to industrial health, editorializes as follows:

> In spite of impending legislation, health and welfare are likely to be important factors in future collective bargaining. Labor may ask for greater direct participation not only in industrial medical service but in plans for general medical care. Both the Council on Industrial Health and the Council on Medical Service [of the Association] have been actively concerned with the medical implications in the coal-mine wage agreement and the probable extension of similar contracts to other occupational groups. Herein lie many opportunities for constructive medical leadership.[17]

Outlook for Health-Benefit Plans

There is no doubt, from past practice and current statements of unions, from recent management concern with welfare funds and their bargaining importance, from recent interest of the medical profession in the role of labor and management in industrial health, from the general interest of a considerable portion of the public in the Nation's health,[18] that welfare funds and health benefits will play an increasingly important role in future contract negotiations.

The increasing importance of welfare funds is generally accepted. However, the trend in financing such funds is not so clearly defined as to the relation of the employer-to-employee contribution. The establishment and extension of welfare funds through employer contributions were given impetus during the war years. In many instances, these payments were made in lieu of wage increases,[19] and employers generally assumed full financial responsibility.

Postwar conditions may put a new emphasis, not so much on welfare funds, but on their financing. With the elimination of the wage stabilization policy, with an increased labor force, and with the modification in tax exemption, the question which may receive greate attention in future negotiations may be the relative proportions in employer-employee contributions to welfare funds.

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[16] See Journal of American Medical Association, November 30, 1946, for complete texts of the papers rea by Rear Admiral Joel T. Boone on Industrial Health; Andrew Fletcher, of the Industrial Hygiene Founda tion, on Management in Medical Plans; Boris Stern, of the U. S. Bureau of Labor Statistics, on Labor an Management at the Conference Table.

[17] *Idem*, p. 788.

[18] Witness the wide interest in the Murray-Wagner-Dingell national health bill in the last Congress, an the activities of individuals and organizations interested in a Government-sponsored health-insuran program.

[19] See The Administration, Under Collective Bargaining, of Welfare Plans Based on Employer Contr butions, by David J. Farber, U. S. National Wage Stabilization Board, Washington, 1946.

Sample Welfare Clauses in Specific Agreements

PHILADELPHIA BEDDING MANUFACTURERS' ASSOCIATION AND UPHOLSTERERS' INTERNATIONAL UNION OF NORTH AMERICA (AFL)

The employer hereby agrees to pay to the Upholsters' International Union Social Security Department, each and every month, in advance, between the first and fifth day of every month, beginning with ---------- 19--; a sum equaling 3 percent of the gross wages earned by his employee-members of this union. The said sum of 3 percent shall be calculated on the basis of the total aggregate wages earned by said employee-members during the pay periods of 4 or 5 weeks, terminating during the preceding calendar month.

The above described sum of 3 percent shall be paid by the employer as a contribution to the Social Security Fund of the Upholsterers' International Union of North America above described. In consideration for the payment of said contribution, the union agrees to extend, beginning the same date the employer's first contribution is due as set forth in the preceding paragraph, the benefits of said fund to said employee-members, in accordance with the rules and bylaws under which said fund is administered, and in accordance with the general laws of the International.

The union has contracted or will contract for the issuance of a blanket-coverage insurance policy or policies to provide for the payment of the various benefits as therein provided; a policy now being in force with the ------------- Co. It is agreed that the premiums for the maintenance of a group policy or policies on behalf of the employee-members shall be paid out of the periodic contributions paid by the employer as above described. The rights and duties of all parties, including the union, the employer, and the employee-members, shall be governed by the provisions of said blanket coverage policy.

The union agrees that the program of social security benefits hereinabove described shall be maintained in full force and effect for the entire period of time during which this supplemental agreement is in effect and the terms hereof fully complied with in all respects by the employer.

The 3 percent contribution of the employer to the social security plan is not o be increased during the life of this agreement; if the cost to the union is decreased, then the contribution by the employer is to be reduced by an equivalent mount. Two-thirds of the entire contribution is to go toward the payment of ccident and health insurance covered by the provisions of said policy, and the emaining one-third of the entire contribution goes toward the payment of death enefits as provided by the Social Security Department of the union and for the dministrative expenses of said department.

. S. COAL MINES ADMINISTRATOR AND UNITED MINE WORKERS OF AMERICA (AFL)

[Bituminous-coal mines]

ealth and welfare program

There is hereby provided a health and welfare program in broad outline—and is recognized that many important details remain to be filled in—such program consist of three parts, as follows:

(a) *A welfare and retirement fund.*—A welfare and retirement fund is hereby eated, and there shall be paid into said fund by the operating managers 5 cents r ton on each ton of coal produced for use or for sale. This fund shall be managed by three trustees, one appointed by the Coal Mines Administrator, one appointed by the president of the United Mine Workers, and the third chosen by the other two. The fund shall be used for making payments to miners, and their dependents and survivors, with respect to (1) wage loss not otherwise compensated at all or adequately under the provisions of Federal or State law and resulting from sickness (temporary disability), permanent disability, death, or retirement, and (2) other related welfare purposes, as determined by the trustees. Subject to the stated purposes of the fund, the trustees shall have full authority with respect to questions of coverage and eligibility, priorities among classes of benefits, amounts of benefits, methods of providing or arranging for provision of benefits, and all related matters.

The Coal Mines Administrator will instruct the operating managers that the obligation to make payments to the welfare and retirement fund becomes effective with reference to coal produced on and after June 1, 1946; the first actual payment is to be made on August 15, 1946, covering the period from June 1 to July 15; the second payment to be made on September 15, covering the period from July 15 to August 31; and thereafter payments are to be made on the 15th day of each month covering the preceding month.

(b) *A medical and hospital fund.*—There shall be created a medical and hospital fund, to be administered by trustees appointed by the president of the United Mine Workers. This fund shall be accumulated from the wage deductions presently being made and such as may hereafter be authorized by the union and its members for medical, hospital, and related purposes. The trustees shall administer this fund to provide, or to arrange, for the availability of medical, hospital, and related services for the miners and their dependents. The money in this fund shall be used for the indicated purposes at the discretion of the trustees of the fund; and the trustees shall provide for such regional or local variations and adjustments in wage deductions, benefits and other practices, and transfers of funds to local unions, as may be necessary and as are in accordance with agreements made within the framework of the union's organization.

The Coal Mines Administrator agrees (after the trustees make arrangements satisfactory to the Coal Mines Administrator) to direct each operating manager to turn over to this fund, or to such local unions as the trustees of the fund may direct, all such wage deductions, beginning with a stated date to be agreed upon by the Administrator and the president of the United Mine Workers: *Provided*, however, that the United Mine Workers shall first obtain the consent of the affected employees to such turn-over. The Coal Mines Administrator will cooperate fully with the United Mine Workers to the end that there may be terminated as rapidly as may be practicable any existing agreements that earmark the expenditure of such wage deductions, except as the continuation of such agreements may be approved by the trustees of the fund.

Present practices with respect to wage deductions and their use for provision of medical, hospital, and related services shall continue until such date or dates as may be agreed upon by the Coal Mines Administrator and the president of the United Mine Workers.

(c) *Coordination of the welfare and retirement fund and the medical and hospital fund.*—The Coal Mines Administrator and the United Mine Workers agree to use their good offices to assure that trustees of the two funds described above will cooperate in and coordinate the development of policies and working agreements necessary for the effective operation of each fund toward achieving the result that each fund will, to the maximum degree practicable, operate to complement the other.

Survey of medical and sanitary facilities

The Coal Mines Administrator undertakes to have made a comprehensive survey and study of the hospital and medical facilities, medical treatment, sanitary, and housing conditions in the coal-mining areas. The purpose of this survey will be to determine the character and scope of improvements which should be made to provide the mine workers of the Nation with medical, housing, and sanitary facilities conforming to recognized American standards.

STANDARD CONTRACT: MEN'S AND BOYS' CLOTHING MANUFACTURERS AND AMALGAMATED CLOTHING WORKERS OF AMERICA (CIO)

Commencing on the pay day for the week of December 10, 1945, and weekly thereafter, the employer shall pay to the trustees (hereinafter called the trustees) designated under a new agreement and declaration of trust dated as of December 10, 1945 (a copy of which said new agreement and declaration of trust dated as of December 10, 1945, has been exhibited to the employer and approved by the employer) the terms and provisions of which new agreement and declaration of trust are herein specifically incorporated by reference, sums of money determined as follows:

(a) Two percent of the wages payable for the preceding pay period to all the employees of the employer, plus

(b) Three percent of the wages payable for the preceding pay period to those employees of the employer who are members of the union.

All of the foregoing sums shall be administered and expended by the trustees pursuant to the provisions of the said new agreement and declaration of trust (dated as of December 10, 1945) for the purpose of providing benefits upon their retirement because of old-age, and life, accident and health insurance, and such other forms of group insurance for medical care and hospitalization as the trustees may reasonably determine, to members of the union employed by the employer, and members of the union employed by other employers who are members of the group embraced within the general plan in the men's and boys' clothing industry.

The employer shall furnish to the trustees, upon request, such information and reports as they may require in the performance of their duties under any of the agreements and declarations of trust. The trustees, or any authorized agent or representative of the trustees, shall have the right at all reasonable times during business hours to enter upon the premises of the employer and to examine and copy such of the books, records, papers, and reports of the employer as may be necessary to permit the trustees to determine whether the employer is fully complying with the provisions of paragraph 3 [above].

No employee shall have the option to receive instead of the benefits provided for by any of the agreements and declarations of trust any part of the contribution of the employer. No employee shall have the right to assign any benefits to which he may be or become entitled under any of the agreements and declarations of rust or to receive a cash consideration in lieu of such benefits either upon termination of the trust therein created, or through severance of employment or otherwise.

* * * * * * *

In the event that the union receives written notice from one or more of the rustees, designated by the trustees for that purpose, that the employer has ailed to pay in full any sum due the trustees under paragraph 3 and that such ailure has continued for 5 days, the union may direct its members to discontinue ork in the plant of the employer and to discontinue work upon clothing being anufactured for the employer by contractors until all sums due from the employer under paragraph 3 above have been paid in full. The remedy provided for in this subparagraph shall be in addition to all other remedies available to the union and the trustees and may be exercised by the union, anything in the collective bargaining agreement to the contrary notwithstanding.

The trustees, in their own names as trustees, may institute or intervene in any proceeding at law, in equity, or in bankruptcy for the purpose of effectuating the collection of any sums due to them from the employer under the provisions of paragraph 3.

In the event that legislation is enacted by the Federal Government levying a tax or other exaction upon the employer for the purpose of establishing a federally administered system of life, health, accident, medical care, or hospitalization insurance under which the employees of the employer are insured, the employer shall be credited against the sums payable under paragraph 3 for each pay period, with the amount of such tax or exaction, payable by him for such pay period, provided that the amount of such credit shall in no event exceed 2 percent of the wages payable to the employees of the employer for such pay period.

ATLANTIC COTTON FELT CO., NEWARK, N. J., AND UNITED FURNITURE WORKERS OF AMERICA (CIO)

The employer hereby agrees, as long as this agreement remains in force, to contribute monthly on or before the ---------- day of each month, commencing with the effective date of this agreement to -------------- as trustees of United Furniture Workers Insurance Fund, a sum equal to 3 percent of the previous month's production pay roll, to be used by said trustees for the sole benefits of the employees covered by this agreement for the purchase of group life insurance, group accidental death and dismemberment insurance, group accident and health insurance, hospitalization insurance, and group surgical insurance, in accordance with the schedule of such respective forms of insurance attached hereto entitled "Schedule of Amounts of Insurance." It is further understood and agreed that these contributions to the above-mentioned trustees will be held and managed by them under the terms of a trust agreement drawn between the union and said trustees. (It is further understood and agreed that the employer shall be under no obligation to see to the application of moneys paid to the trustees pursuant to this paragraph for the purposes and uses above mentioned; but the union, nevertheless, agrees to render reports at regular intervals to the employer respecting application of the moneys received and benefits paid.)

The employer agrees to make available to the union or the trustees above-named any and all records of employees hired, classifications of employees, names, social security numbers and amount of wages paid, and social security pay roll records, that the union or the trustees may require in connection with the sound and efficient operation of the trust fund above mentioned, or that may be required by the insurance companies covering the employee.

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TRADE-UNION WELFARE PROGRAMS [1]

By NATHANIEL M. MINKOFF, *Secretary-Treasurer, Joint Board Dressmakers' Union, International Ladies' Garment Workers' Union*

Development of the Movement

GROWING preoccupation of unions with health and welfare programs is not a new departure in labor policy; this preoccupation dates back to the early days of trade-unionism in this country.

The first organizations of workers in the United States, as in Great Britain, were generally mutual aid associations, such as loan, sick benefit, or burial societies. Overt organization for collective bargainng was still forbidden by law, and these mutual aid groups, almost rom the start, assumed what today would be called "industrial functions," in addition to the narrower tasks of providing the mutual aid for which they were ostensibly formed. It was these mutual aid groups which initiated the modern labor movement, and from them the trade-unions of today have derived the habit of referring fraternally to members as brothers and sisters, as well as some of the ceremonials and rituals of initiation and procedure.

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[1] This article deals primarily with the experience of the New York Dress Joint Board of the International adies' Garment Workers' Union.

The views expressed are those of the author and are not necessarily shared by the Bureau.

With time and favoring circumstance, the essentially industrial character of these organizations became explicit. The Philadelphia Typographical Society, for instance, organized in 1802, was incorporated in 1810 as a benevolent society. In 1833 it gave way to the Philadelphia Typographical Society whose "primary and paramount intention" was "the determination and support of adequate wages for journeymen printers." The Pennsylvania Society of Journeymen Cabinetmakers of Philadelphia (1806) was likewise formed for purely benevolent purposes. In 1829, the society constitutionally established itself "as a criterion for workmen to endeavor to settle all disputes arising between them and their employers." The Brotherhood of Locomotive Firemen and Enginemen was formed as late as 1873 as a benevolent society, and it was not until 12 years later that it assumed its role as a labor union. The Iron Molders' Union, established in 1859, operated an extensive benefit system before it assumed industrial functions. Curiously enough, all benefits were suspended by this union in 1880 on the ground that such features interfered with the industrial tasks of the organization. After a decade, however, the welfare program was resumed.

Other groups, organized in later years as labor unions in the modern sense, soon expanded their activities to include welfare programs. The Barbers' Union, set up in 1887, initiated its benefit program in 1893. The Tobacco Workers, organized in 1895, established its sick benefit program in 1896. The Plumbers' Union (1889) established its benefits in 1903. In one way or another, welfare and mutual aid programs became a recognized feature of American trade-unionism and helped greatly to give it a much needed stability in its early days.

By the end of the First World War, however, trade-union welfare activities were definitely on the decline. The attitude of the topmost labor leadership was troubled and unfriendly. In 1930, Matthew Woll stated:

> Benefit systems, where they are still in operation, are a constant source o trouble. They are encountering all of the troubles that beset unscientific insti tutions. Their assessments must be raised constantly to meet rising ages, an increases of assessments are always resented. All manner of complication result. * * * Few union operations are today productive of as much wo and uncertainty as the benefit systems that remain in operation.[2]

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[2] Why Trade-Union Group Insurance Rather Than a Benefit Plan? (*In* The American Photo-E graver, April 1930.)

Daniel J. Tobin, president of the Teamsters' Union, said very much the same thing in recent years:

> Our advice to local unions is to keep away from the sick benefit and from the unemployment benefit as much as possible. * * * Local unions should not overload themselves with liabilities during these prosperous days. Build up your treasuries. Remember there are lean years ahead of us.[3]

Welfare programs had come to be regarded as of little importance when, in the early 1930's, union leaders, in launching their campaign to organize the mass-production industries, found to their dismay that in many instances workers were reluctant to join bona fide unions because their own "company unions" were providing them with various forms of health and welfare benefits and recreational facilities which the bona fide unions could not match. Hence, those unions which succeeded in organizing mass-production industries had to promise their newly organized members, in addition to increased earnings and shorter hours, the continuation of the welfare features to which they had become accustomed. Thus, a number of labor unions unexpectedly and sometimes unwillingly undertook social welfare programs quite out of line with their general outlook.

Stimulus Under Little Steel Formula

At this point a basic change in the nature of "union welfare programs" took place. Hitherto, the term implied plans financed by the workers themselves, through regular payments or assessments; henceforth it was to mean funds and programs financed—in part at least—by the employers, in accordance with an understanding reached through collective bargaining and often embodied in the collective agreement. The limitation of wage increases during World War II under the Little Steel Formula greatly promoted this development. Beyond the 15 percent increase above January 1941 levels uthorized for direct wage increases, it was possible to obtain indirect ncreases in the form of "fringe adjustments" including employernanced health, welfare, and vacation plans. As E. E. Witte, of the National War Labor Board, explained:

> It is clear from all these cases that the Board will not normally order an employer to institute a group insurance plan or direct the liberalization of a plan in xistence. Each case, however, will be judged on its own facts, and where it is early necessary in the interests of a fair and equitable disposition of the dispute require the employer to institute or liberalize a group insurance plan, the oard will so direct.[4]

Under the pressure of the war, and in view of the high profits which dustry was earning, management was not averse to this directive.

International Teamster, April 1944.

Daily Report on Labor-Management Problems, No. 76 (Bureau of National Affairs), April 13, 1945.

As a result, union welfare programs were initiated in many segments of the trade-union movement.

Present-Day Types of Programs

The type of welfare program in operation today varies with the circumstances in the particular industry or locality in which it functions. In some instances—for example, the erstwhile Kaiser shipbuilding enterprise on the West Coast—the program is financed entirely by deductions from the workers' earnings, but is managed exclusively by the company. The Endicott Johnson Co. of Binghamton, N. Y., has a different approach: It not only assumes the entire administration of the plan, but also furnishes all the finances as well. A third type is that maintained by the Consolidated Edison Co. of New York, whereby the program is financed by contributions from both the employees and the employer, although administration is the exclusive prerogative of the company. The fourth kind—which will be discussed here in detail—is that of the International Ladies' Garment Workers' Union local unions. Here the programs are financed entirely by management, but the day-to-day administration is left to the union, subject to review of a council on which the employers are represented.

Ladies' Garment Workers' Health and Welfare Programs

History.—The International Ladies' Garment Workers' Union entered the field of welfare programs soon after the historic cloakmakers' strike of 1910. Several local unions, notably Pressers' Local 35 and Cloak Tailors' Local 9, both of New York City, established tuberculosis benefit funds, to which each member contributed a dollar a year. Workers found suffering from tuberculosis were eligible to a cash benefit of $100, or a sojourn in the country for a minimum period of 10 weeks at the full expense of the union.

Not so long ago, it will be recalled, the needle trades constituted a thoroughly sweated industry, giving rise to the term "sweatshop." Not much attention was paid to the plight of the workers except by the weak and struggling unions (which, single-handedly, were unable to do much), and by a few reformers. Most of the garment factories in New York City were located in the tenement slums of the East Side; building piled upon building without vacant space for admitting sunshine, light, or air. Sanitary facilities were lacking. The long hours of employment and low wages compelled many workers to use the factory as a lodging. Employers did not object to this arrangement, because it saved them the expense of a watchman. There were no factory laws to observe.

Under these conditions, it was inevitable that tuberculosis should become the chief occupational disease in the garment industry. Such an environment also led to one of the most disastrous industrial catastrophes known in our country, wherein 147 young women workers lost their lives in a fire which broke out in the Triangle Waist Shop in March 1911. It was definitely established, at the criminal trial which followed, that the owners had the factory doors (including those leading to the fire escapes) locked during working hours.

These startling facts came to light as a result of an industry-wide investigation conducted by the United States Public Health Service in 1912 in cooperation with the Joint Board of Sanitary Control. This unique institution came into being as a result of the signing of the "protocol of peace," which followed the prolonged and bitter general strike of the coat and suit makers of New York in 1910. Its main objectives were the elimination of dreaded sweatshop conditions and of fire hazards.

Louis D. Brandeis, Louis Marshall, and Hamilton Holt were the chief architects of this idea. The Board was originally administered by representatives of the employers, the workers, and the public, the latter consisting of Dr. William J. Schieffelin, Lillian D. Wald, and Dr. Henry Moskowitz. Its medical director, the late Dr. George M. Price, succeeded several years thereafter in interesting the parties not only in the maintenance and observance of more desirable working conditions, but also in the improvement of the health of the workers.

UNION HEALTH CENTER

Thus, from a small beginning involving only a few thousand workers, a huge institution today, known as the Union Health Center,[5] was created. It is owned and operated on a nonprofit basis by the ILGWU. Housed at present in its own modern, fireproof 27-story building, it is serving the needs of the 150,000 ILGWU members located in the New York area. In 1945, it rendered no less than 164,636 medical services to 28,056 patients. During the same year, it handled a total of 11,881 disability cases, to whom it rendered 24,652 services. The institution is at present under the directorship of Dr. Leo Price, son of the founder and first administrator of the Center. It has a medical staff of about 100, with a lay staff of over 150.

From the public health standpoint, the Union Health Center is unique. It was the first institution of its kind in the country, and its director is frequently called into consultation by government bureaus and other agencies interested in public health problems.

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[5] See Monthly Labor Review, October 1939 (p. 811), for description of the ILGWU health program.

GROWTH OF PROGRAM

In the years that followed, local unions of the ILGWU began to inaugurate first a tuberculosis benefit fund and later a limited form of sickness insurance. Both of these benefits were financed by a 35-cent monthly stamp paid by the workers. The actual amount of benefits varied, but the high point was reached in the payment of $150 to tubercular members and a weekly sick benefit of $7 for a period of 8 to 10 weeks.

At the present time, the great majority of the ILGWU's 350,000 members, distributed in 420 separate local unions in 275 communities in 35 States and Canada, enjoy some form of health and welfare benefit.

New York Dress Joint Board

The largest single unit in this integrated union welfare program of the ILGWU is the New York Dress Joint Board, which includes three local unions (22, 60, and 89), with a membership of approximately 60,000. (Cutters Local 10, though part of the Joint Board, is for the present not participating in the program.)

When the collective agreement between the Dress Joint Board and the employers' associations in the New York dress industry was renewed on May 6, 1944, a new clause was included providing for a 3½-percent pay roll contribution by the employers to maintain a health and welfare program. The funds, according to the terms of the agreement, "shall be used exclusively for the members of the union and for the payment of the operating and administrative expenses thereof."

"The health fund," by further provision of the agreement, "shall be administered by the Joint Board, and the Joint Board shall determine what proportionate amount of the health fund shall be allocated for health benefit and what proportionate amount shall be allocated for vacation benefit. With respect to health benefits, the parties hereby create a council consisting of two representatives of the Affiliated Association, two of the National Association, and two of the Popular Association, and six representatives of the Joint Board of the Dress and Waistmakers' Union, which shall be presided over by the Impartial Chairman. The council shall have the right to determine the types and amounts of health benefits which the members of the union shall receive and which, however, shall not exceed the total amount allocated by the union for health benefit. The Joint Board shall file with the council any rules and regulations relating to health benefits which it may adopt, and amendments which it may make thereto, and shall report periodically to the council the accomplishments of the health fund with respect to health and vacation benefits. With respect to vacation benefits, the parties agree that the Joint Board shall have the right to adopt rules and regulations in connection therewith and to establish the eligibility of members of the union for benefits and the amounts of benefits to be paid them."

TYPES OF BENEFITS PAID BY THE BOARD

Benefits currently paid by the New York Dress Joint Board are as follows:

(1) *Cash benefit.*—Members who are ill and unable to work are entitled to a cash benefit of $15 a week for a period of 10 weeks each calendar year. It is paid upon certification by the medical department of the union (Union Health Center), and continues as long as the member is unable to work, up to 10 weeks.

(2) *Hospitalization.*—Members are entitled to a benefit of $5 per day for each day of hospitalization up to 60 days in any calendar year.

(3) *Surgery benefit.*—The union pays every member undergoing a surgical operation a sum varying from $10 to $50, depending upon the nature of the operation.

(4) *Medical credits.*—In addition to all the above benefits, every member of the union is entitled to $25-a-year medical service at the Union Health Center for general medical examination, special laboratory tests, or X-ray.

(5) *Maternity assistance.*—A $50 maternity benefit is paid members upon presentation of a board of health birth certificate. The plan is being enlarged to include stillbirths, etc.

(6) *Eye conservation program.*—Every member is entitled to free and unlimited eye treatment and to free eyeglasses.

(7) *Tuberculosis benefit.*—Members who are found to have tuberculosis are sent, at the expense of the fund, to any one of the many tuberculosis sanitariums with which it is affiliated, and are kept there until their health is fully restored. Those desiring to withdraw from membership and take care of their health independently of the fund's provisions are allowed a cash settlement of $250. The obvious difference in cost between an unlimited stay in a recognized health nstitution with all costs (including regular sick benefit and personal expenses) paid by the fund, and the alternative of $250 allowed a sick member who undertakes his own cure, is intended to deter members from asking for cash settlements and to encourage them to enter n institution where the chances for the arrest of the illness and its ltimate cure are so much better.

(8) *Vacation benefit.*—Every member of the union, employed or vailable for employment in the industry, is entitled to a cash vacation enefit ranging from $33 to $48, depending upon the particular craft f the worker. This sum is payable on the first of June of each year.

(9) *Death benefit.*—In addition to the $150 lump-sum death benefit paid by the home office of the ILGWU, for which the individual member pays $1 a year, most of the local unions pay an additional $150 without any contribution from the members. Death benefits, it should be noted, are not financed from the Joint Board Health Fund, but by the members' contributions supplemented by the local treasuries.

COST OF BOARD'S HEALTH AND WELFARE PROGRAM

The size and scope of the New York Dress Joint Board health and welfare system are indicated by the payment, during the first 8 months of 1946, of over $600,000 for seven kinds of health benefits (as shown by the following table) and of more than 2 million dollars in vacation benefits in 1946.

Comparative amount of health benefits paid during first 8 months of 1945 and 1946

Type of benefit	First 8 months		Increase	
	1946	1945	Amount	Percent
Total amount paid	$624, 199. 42	$393, 072. 37	$231, 127. 05	58. 8
Cash benefits	397, 042. 50	288, 224. 05	108, 818. 45	37. 8
Hospitalization benefit	82, 168. 00	40, 015. 00	42, 153. 00	105. 3
Surgery benefit	16, 980. 00		16, 980. 00	100. 0
Medical credit	83, 434. 87	37, 638. 75	45, 796. 12	121. 7
Maternity assistance	6, 725. 00		6, 725. 00	100. 0
Eye conservation program	32, 941. 95	25, 608. 57	7, 333. 38	28. 6
Tuberculosis benefit	4, 907. 10	1, 586. 00	3, 321. 10	209. 4

Per capita costs.—On the basis of the foregoing figures, it is estimated that the average cost in *health benefits* alone, excluding medical and general administration, is over $16 per member per year.

The cost is not uniform for the three local unions involved in the foregoing table Thus, Local 22, with a dues paying membership of 25,671, runs its various forms of benefits at an annual cost of $19.36. Local 89, with a membership of 30,405, averages $12.69, and Local 60, with 2,766 members, averages $19.34. The wide difference in costs between Local 89 and the other two locals is attributable largely to the fact that the former is composed of a considerably younger element; moreover, the whole benefit system is more recent in this union than in the other locals, with the result that its membership is not yet fully aware of what it has to offer, and so does not take the same advantages of the program as do the other two unions.

Actual *per capita costs* in *cash sick benefits*, including the medical fees involved in the examination of sick members, are as follows:

	1946	*1945*
Local 22	$11. 15	$8. 43
Local 60	10. 52	8. 44
Local 89	8. 45	6. 34

Cost of medical benefits (on a per capita basis) are distributed as follows:

	1946	*1945*
Local 22	$3.29	$1.64
Local 60	3.43	1.69
Local 89	.99	.32
	Claim rate per 1,000 (percent)	
Local 22	16⅔	12³⁄₁₀
Local 60	16⅓	12²⁄₁₀
Local 89	10⅘	8²⁄₁₀

General administration, including complete supervision as well as audit of employers' books, runs at the rate of 5 percent of gross collections.

A further examination of the foregoing table (p. 18) shows that as the health fund becomes better known to the members, payments increase correspondingly. This fact accounts for the 29 percent rise in the eye conservation program, wherein no change in benefit rate was made between the first and second year of operation.

Increases in the other parts of the program are due primarily to the change in schedules which went into effect on April 1, 1946, whereby the weekly rate of cash benefit was increased from $12 to $15, the hospitalization benefit from $3 to $5 per day and from 20 to 60 days per year, and medical credits from $15 to $25 per year. Two entirely new benefit forms were added—surgery benefit and maternity assistance.

There was also a substantial increase in the *vacation benefit* paid this year. From a preliminary report recently made available, it is evident that, although the total amount disbursed for vacation benefit or the full year ending May 30, 1945, amounted to $1,476,709.90, he vacation benefit paid out for the year ending May 30, 1946, mounted to at least $2,069,254.46, an increase of over 40 percent. This advance is explained in part by the fact that vacation benefits were increased by $10, and in part by the rise in the number of claimnts (51,077 to 53,503) for the benefit. The average cost of this type f benefit was about $39 per member during the 1946 period indicated.

The administrators of the health fund are not disturbed by these ncreases. The industry is still operating at a good pace and the eceipts in 1946 not only compared well with the previous year but lso showed an increase of 13.9 percent, as of August 1, 1946. As result of the added income, the health fund has been in a position to ut away a substantial reserve, from which it expects to be able to crease current benefits still further and gradually add new forms of enefits.

The types of benefits herein described are determined by the exrience which the union has gained from the operations of similar nds during the past 30 years and are also geared to the revenue derived during the past year. As already indicated, systematic upward readjustment is anticipated. Knowing the character of the industry—its sharp seasonal fluctuations and general instability—the union administration is taking a most careful attitude with respect to scales of payment since it does not want ever to be in a position which necessitates reduction in benefits.

HOW BENEFITS ARE PAID

We were faced with the problem of how to pay benefits. Instead of establishing a completely new department, with an individual record for each of the 60,000 dues-paying members, which would have required continuous posting of the members' records, we agreed to utilize the already existing sick-benefit departments of the individual locals and their records. Thus, members, who take sick, report directly to the local to which they belong. The health fund department of the locals, in accordance with uniform rules and regulations, then notifies the Union Health Center of the case. The member is examined within 3 days, and if disability is established, the first week's benefit is paid on the tenth day following the receipt of the report of illness. Thereafter, weekly checks are mailed upon the seventh day.

At the conclusion of each month, the local health fund departments submit detailed statements of disbursements to the secretary-treasurer of the Joint Board Health Fund Committee, who reimburses such amounts to the local health funds, subject to audit.

Any member who feels that he has been deprived of his rights or that he has not been paid in full for his disability, has ample opportunity to lay his grievance before his elected local officer. He can explain, in a language which both understand, his particular claim. He thus has the satisfaction of "talking it out" with the chief administrator of his local union, rather than having to be content with a mute, stereotyped form reply.

If he is still dissatisfied, he has an opportunity to appear before a committee on claims, which meets regularly in the office of the union. This committee is composed of two rank-and-file members from each of the affiliated local unions, and is presided over by the secretary-treasurer of the Joint Board. The rules and regulations of the health fund empower this committee to make whatever adjustments the facts would seem to justify.

In this fashion, we have established a machinery which allows for a centrally controlled administration and at the same time offers wide flexibility, giving the local unions a substantial degree of autonomy and the individual member a feeling that he is not hopelessly removed from the administration of his union and its funds.

Other Considerations

EMPLOYERS' COOPERATION

Obviously the comprehensive health and welfare program here outlined could not have been undertaken without the security and strong organization which the ILGWU has been able to develop in the past 30 years. When a trade-union must devote all of its energies and resources in struggling for adequate wages and decent working conditions, it has neither the time nor the means to think in terms of social welfare programs. Once it has achieved a substantial degree of unionization and control over workers in the industry, it can undertake these "extracurricular" activities, which then become a legitimate part of its industrial program.

In fairness to the employers in our industry, it should be said that they, too, are entitled to credit for the inauguration and development of our welfare program. In the course of the past 30 years of collective bargaining these employers have learned to recognize a responsibility beyond providing adequate earnings and decent working conditions to the men and women in their employ. They have become acquainted at first hand with the social and economic value of human welfare.

WIDE ACCEPTANCE OF UNION WELFARE PROVISIONS

Encouraged by the success which the ILGWU has scored in the field of social welfare, many other unions have, in recent years, succeeded in incorporating similar provisions in their collective agreements. Among them are the Amalgamated Clothing Workers of America (CIO), including its New York and Chicago divisions; Federation of Dyers, Finishers, Printers, and Bleachers of America (CIO); United Furniture Workers of America (CIO); United Hatters, Cap, and Millinery Workers' International Union (AFL); Upholsterers' International Union of North America (AFL); New York Hotel Trades Council;[6] Chain Service Restaurant Employees' Union;[6] International Jewelry Workers' Union (AFL); International Union of Mine, Mill, and Smelter Workers (CIO); and International Print-ng Pressmen's and Assistants' Union of North America (AFL). More recently this movement was spurred by the United Mine Workers of America (AFL), which in a recent agreement has provided or a minimum of social security for the hundreds of thousands of oal miners. Because of the grave industrial hazards to which miners are always exposed, this form of protection would have been esirable even before the garment workers and others began to enjoy . Henceforth welfare benefits become an important issue in employer-employee negotiations. This was made clear by President William L. Green in his report to the convention of the American Federation of Labor held in Chicago in October 1946.[7]

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[6] Members of the Hotel and Restaurant Employees International Alliance (AFL) in Greater New York.

EFFECT OF PROGRAM ON UNION

What has been the effect of this welfare program upon the organization? Does it make for a stronger union? Definitely, yes. Among the chief factors making for the strength and effectiveness of the ILGWU have been its comprehensive benefit services, including, of course, its highly developed educational and cultural program.

In the early stages of the ILGWU, its membership was in a constant state of flux. The industry in all its branches was sharply seasonal. Shop strikes would break out on the eve of every season. The workers would obtain some wage increases here and there, only to see them disappear several weeks later. There was nothing to bind the garment worker to his union. He would join and drop out at frequent intervals. The turn-over in membership was tremendous.

With the introduction of the benefit system conditions changed radically. Today the person who joins the ILGWU has every good reason to maintain his membership even in slack periods. He no longer drops his membership at the end of the busy season as he did formerly, because today his membership is a form of security against illness, unemployment, accident, and death. This makes for stability, organizational strength, and effectiveness on the industrial field and gives the union real capacity for expansion.

New Programs Create New Problems

The administration of union health and welfare plans carries with it certain new responsibilities and creates certain new problems which are already beginning to make themselves felt.

1. I should like to stress particularly the need for actuarial experience and guidance in the operation of welfare programs. Heretofore unions have relied on whatever data they were able to obtain from governmental and private sources, together with their own meage information acquired in the course of experience. Benefit scale have been fixed simply on the basis of availability of funds. Little account has been taken of such facts as the increasing age of the membership and the consequent higher incidence of illness. Will the unions be in a financial position to pay the present benefits in th years ahead, when the needs will become greater and the means mo limited? This is but one example of the kind of questions that mu be considered. So many factors are involved that, unless the actuarial aspect is properly handled, the entire program may be jeopardize.

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[7] See p. 5 for statement from Mr. Green's report.

2. It appears to me that the trade-unions ought to begin pooling their experience with a view to setting up definite criteria to enable welfare programs to stand the strains and stresses inevitable under our present economic set-up. It is my feeling that the more efficiently and the more scientifically our funds are administered, the more likely we are to preserve their voluntary character.

3. Another problem which has come to the fore is that of investment. The profitable and secure investment of union health funds, as well as of union funds in general, constitutes a tremendous responsibility upon union leadership. Because persons directly in charge of union funds are free from the governmental restrictions to which most of the nonprofit fraternal organizations, savings banks, and insurance companies are subject, they have to use extreme prudence and care. Investment is a study in itself, and few of the union officials in charge of funds are trained in it. What may appear as a sound proposition to one man may be discarded by another for the sake of an additional fractional percent of interest. Most funds have met the problem by limiting investment to the purchase of Federal, State, and municipal bonds. This seems to be a fairly safe course to follow, and one which will not subject the administrator to criticism in the event the bonds drop in value. But even here there are elements of danger. Some municipalities and States represent a better risk than others. Standards should be set up as to types of investment. The question of maturities is similarly important. Portfolios must be so arranged that advantage is taken of changed financial conditions. It is a mistake to think that, once a Government bond is bought, it must be kept to maturity.

4. The complete segregation of health and welfare funds from the
general funds of the union is not only desirable but absolutely neces-
ary. It has already been noted that some unions were at times
ompelled to suspend or entirely liquidate their health and sick benefit
rograms because of industrial conflicts that completely drained their
esources. No union can consider itself forever immune from labor-
anagement clashes. Unless the health and welfare funds are prop-
rly segregated, there is danger that they may be used, directly or
directly, for general union activity. In this connection, there comes
mind an incident in the course of one of our perennial strikes in the
te 1920's. When I told the strike committee that the money to
hich reference was made was the property of the sick-benefit fund
e of the strike leaders told me, "If we don't win this strike, there'll
no union and no sick fund." To this I replied, "As long as there is
is sick fund, something will always be left of the union." Experience
t only in the ILGWU but in many other sections of the labor move-
nt has proved these words correct.

In the International Ladies' Garment Workers' Union and all its affiliates segregation of funds is an established and fixed policy. Its supreme governing body—the general executive board—has long ago laid down the law that in no instance and under no circumstances are funds to be intermingled.

Needless to say, trade-unions have entered the field of social welfare out of sheer necessity. The attitude of some employers with respect to the health and welfare of their workers and the past inadequacy of governmental plans left them no other course. However, it is hoped that the social security program of the Federal Government, which now offers only a limited form of protection, will eventually embrace all forms of sickness insurance and medical, mental, hospital, surgical, dental, and prenatal care. When this happens, some unions will gladly turn over their responsibilities to the Government and continue to pioneer in other fields of social reform and economic justice.

How well the Government will run this program, no one can tell. Some trade-unionists do not relish the idea of exposing their members to the potential red tape of bureaucratic management. When we reach that point, it may be well to rely upon the experience which the European trade-unionists had in this respect. In pre-Hitler Germany and Austria, as well as in the Scandanavian countries, welfare funds, under the name of "Arbeiter-Kranken und Sterbe-Kasse," functioned very satisfactorily on a tripartite basis—Government, industry, and labor. It may be that we can do the same, and with our American ingenuity, may be able to improve upon it. But I am not prepared to formulate any definite program of administration. We lack sufficient experience to come to definite conclusions. We should, however, endeavor to develop a workable and, above all, a humane approach to the problem. In the administration of health and welfare programs, we are constantly dealing with sick and disabled people. To restore them to health and at the same time help them retain their human dignity is a task worthy of our best talents and attention.

U. S. GOVERNMENT PRINTING OFFICE: 1947

UNITED STATES DEPARTMENT OF LABOR
L. B. Schwellenbach, *Secretary*
BUREAU OF LABOR STATISTICS
Ewan Clague, *Commissioner*

DIRECTORY
of
LABOR UNIONS IN THE UNITED STATES

National and International Unions
State Labor Organizations
and
Union Research Directors

May 1947

Bulletin No. 901

UNITED STATES
GOVERNMENT PRINTING OFFICE
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Letter of Transmittal

UNITED STATES DEPARTMENT OF LABOR,
BUREAU OF LABOR STATISTICS,
Washington, D. C., February 10, 1947.

The Secretary of Labor:

The attached directory of trade unions in the United States was prepared in response to the many requests received for information concerning labor organizations. It lists all national and international unions, various State labor bodies, and union research directors.

The directory was prepared in the Bureau's Industrial Relations Branch by John M. Brumm and Richard Shoemaker under the supervision of Nelson M. Bortz, chief of the Union and Management Research Division.

EWAN CLAGUE, *Commissioner.*

HON. L. B. SCHWELLENBACH,
Secretary of Labor.

Bulletin No. 901 of the
United States Bureau of Labor Statistics

Directory of Labor Unions in the United States

This directory of labor unions in the United States lists the addresses and principal officers of the American Federation of Labor and the Congress of Industrial Organizations, and of their affiliated unions and organizations. It also includes all national and international unions not affiliated with either the AFL or CIO which have come to the attention of the Department of Labor. A total of 105 AFL affiliates, 40 CIO affiliates and 52 independent or unaffiliated unions are listed. In addition, the directory contains a separate roster of union research directors.

Membership of national and international unions in the United States according to union statements and estimates based on union sources totaled approximately 15,000,000 at the beginning of 1947.

During 1946 a number of changes occurred in the affiliation and structure of American labor unions. These included the reaffiliation with the AFL in January 1946 of the United Mine Workers of America and the affiliation, also with the AFL during the year, of four other formerly independent unions—the National Association of Postal Supervisors, the Brotherhood of Railroad Signalmen of America, the Railroad Yardmasters of America and the Southern Tenant Farmers, Union, now known as the National Farm Labor Union.

The International Association of Machinists, suspended by the AFL in December 1945, and the Progressive Mine Workers of America, ssumed an independent or unaffiliated status. Two former AFL ffiliates, the International Union of United Brewery, Flour, Cereal nd Soft Drink Workers and the Amalgamated Lithographers of merica, received CIO charters in 1946.

One newly organized union, the Radio Directors Guild, was granted n AFL charter in September 1946, and the Air Line Dispatchers ssociation, formerly an AFL federal union, was chartered by the FL in February 1947. The United Public Workers of America CIO) was formed by the amalgamation of two former CIO unions, e United Federal Workers of America and the State, County and unicipal Workers of America.

Five small unions also became part of larger unions having jurisction in the same general field: The Air Line Communication nployees Association (Ind.) entered the American Communications sociation; the International Federation of Architects, Engineers, emists and Technicians (CIO) merged with the United Office and

Professional Workers of America (CIO); the United Financial Employees (Ind.) joined the Office Employees' International Union (AFL); the National Federation of Rural Letter Carriers merged with the National Association of Letter Carriers; and the United Licensed Officers of the U. S. A. (Ind.) became a part of the United Mine Workers of America, District 50 (AFL).

AMERICAN FEDERATION OF LABOR

901 Massachusetts Ave. NW
Washington 1, D. C.

President
WILLIAM GREEN

Secretary-Treasurer
GEORGE MEANY

Originally formed in 1881 as the Federation of Organized Trades and Labor Unions of the United States and Canada, the American Federation of Labor adopted its present name in 1886. In that year the Federation comprised 13 national and international unions with a total membership of approximately 150,000. Today the AFL has five major departments, 105 national and international unions and 50 State and Territorial branches. As of March 1947 the membership of the AFL, based on per capita tax payments received from affiliated unions, was in excess of 7,500,000.

DEPARTMENTS OF AMERICAN FEDERATION OF LABOR

Building & Construction Trades Dept.

901 Massachusetts Ave. NW
Washington 1, D. C.

President
RICHARD J. GRAY

Secretary-Treasurer
HERBERT RIVERS

Affiliated Organizations

Asbestos Workers, Int'l Ass'n of Heat & Frost Insulators &
Boilermakers, Iron Ship Builders & Helpers of America, Int'l Bro. of
Bricklayers, Masons & Plasterers Int'l Union of America
Bridge, Structural & Ornamental Iron Workers, Int'l Ass'n of
Carpenters & Joiners of America, United Bro. of
Electrical Workers of America, Int'l Bro. of
Elevator Constructors, Int'l Union of
Engineers, Int'l Union of Operating
Granite Cutters' Int'l Ass'n of America, The
Hod Carriers, Building & Common Laborers' Union of America, Int'l
athers, Int'l Union of Wood, Wire & Metal
Marble, Slate & Stone Polishers, Rubbers & Sawyers, Tile & Marble Setters Helpers & Terrazzo Helpers, Int'l Ass'n of
ainters, Decorators & Paperhangers of America, Bro. of
asterers' & Cement Finishers Int'l Ass'n of the U. S. & Canada, Operative

Plumbing & Pipe Fitting Industry of the U. S. & Canada, United Ass'n of Journeymen & Apprentices of the
Roofers, Damp & Waterproof Workers' Ass'n, United Slate, Tile & Composition
Sheet Metal Workers' Int'l Ass'n
Stonecutters' Ass'n of North America, Journeymen
Teamsters, Chauffeurs, Warehousemen & Helpers of America, Int'l Bro. of

Metal Trades Department
901 Massachusetts Ave. NW
Washington 1, D. C.

President
JOHN P. FREY

Secretary-Treasurer
J. A. BROWNLOW

Affiliated Organizations

Architects & Draftsmen's Union, Int'l Federation of Technical Engineers
Blacksmiths, Drop Forgers & Helpers, Int'l Bro. of
Boilermakers, Iron Ship Builders & Helpers of America, Int'l Bro. of
Bridge, Structural & Ornamental Iron Workers, Int'l Ass'n of
Electrical Workers of America, Int'l Bro. of
Engineers, Int'l Union of Operating
Firemen and Oilers, Int'l Bro. of
Hod Carriers, Building & Common Laborers' Union of America, Int'l
Metal Polishers, Buffers, Platers & Helpers Int'l Union
Molders & Foundry Workers Union of North America, Int'l
Pattern Makers' League of North America
Plumbing & Pipe Fitting Industry of the U. S. & Canada, United Ass'n of Journeymen & Apprentices of the
Sheet Metal Workers' Int'l Ass'n
Stove Mounters' Int'l Union of North America

Railway Employes' Department
936 No. Michigan Ave.
Chicago 11, Ill.

President
FRED N. ATEN

Secretary-Treasurer
J. M. BURNS

Affiliated Organizations

Blacksmiths, Drop Forgers & Helpers, Int'l Bro. of
Boilermakers, Iron Ship Builders & Helpers of America, Int'l Bro. of
Electrical Workers of America, Int'l Bro. of
Firemen and Oilers, Int'l Bro. of
Railway Carmen of America, Bro.
Sheet Metal Workers' Int'l Ass'n

Maritime Trades Department
265 W. 14th Street
New York 11, N. Y.

Temporary Secretary
John R. Owens

Affiliated Organizations

Firemen and Oilers, Int'l Bro. of
Longshoremen's Association, Int'l
Masters, Mates & Pilots of America, National Organization
Seafarers' International Union of North America
Telegraphers Union of North America, Commercial

Union Label Trades Department
901 Massachusetts Ave. NW
Washington 1, D. C.

President
Matthew Woll

Secretary-Treasurer
I. M. Ornburn

The function of the Union Label Trades Department is primarily to publicize the official emblems—union labels, shop cards, and service buttons—of 52 affiliated national and international unions. It also promotes the sale of union label goods and the patronage of union services.

CONGRESS OF INDUSTRIAL ORGANIZATIONS

718 Jackson Place NW
Washington 6, D. C.

President
PHILIP MURRAY

Secretary-Treasurer
JAMES B. CAREY

The Committee for Industrial Organizations (CIO) was formed in November 1935 to organize into unions all workers, irrespective of their skills, in certain mass production industries. The original committee was composed of 8 AFL unions. Differences between the AFL and its CIO-affiliated unions resulted in the latter's suspension and ultimate expulsion from the AFL. In 1938 the CIO adopted a constitution and its present name, the Congress of Industrial Organizations. The CIO currently has 40 national and international unions and 36 State branches and reports a membership of approximately 6,000,000 members.

INDEPENDENT (UNAFFILIATED) UNIONS

A number of unions are not affiliated with either the AFL or CIO and hence are commonly referred to as "unaffiliated" or "independent." The directory lists 52 independent unions known to the Bureau of Labor Statistics as having more than one local and holding collective bargaining agreements with more than one company.

At present, the largest and most widely known of the independent unions are the four train and engine service railroad brotherhoods with approximately 450,000 members, the International Association of Machinists, a former AFL affiliate, with 600,000 members, the National Federation of Telephone Workers numbering approximately 225,000 members, and the National Federation of Federal Employees reporting a total membership of 88,000. At the beginning of 1947, total independent union membership in the United States was estimated at slightly more than 1,750,000.

RAILWAY LABOR EXECUTIVES ASSOCIATION

10 Independence Ave. SW
Washington 4, D. C.

Chairman
T. C. CASHEN

Executive Secretary-Treasurer
A. E. LYON

The Railway Labor Executives Association, organized in 1926, is "an unincorporated and voluntary association of the chief executive officers of the following standard railway labor organizations representing substantially all organized railway workers in the United States and Canada:"

Brotherhood of Locomotive Firemen and Enginemen (Ind.)
Order of Railway Conductors of America (Ind.)
Switchmen's Union of North America (AFL)
Railroad Yardmasters of America (AFL)
Order of Railroad Telegraphers (AFL)
American Train Dispatchers' Association (Ind.)
Railway Employes' Department (AFL)
International Association of Machinists (Ind.)
International Brotherhood of Boilermakers, Iron Ship Builders and Helpers of America (AFL)
International Brotherhood of Blacksmiths, Drop Forgers and Helpers (AFL)
Sheet Metal Workers' International Association (AFL)
International Brotherhood of Electrical Workers (AFL)
Brotherhood Railway Carmen of America (AFL)
International Brotherhood of Firemen and Oilers (AFL)
Brotherhood of Railway and Steamship Clerks, Freight Handlers, Express and Station Employes (AFL)
Brotherhood of Maintenance of Way Employes (AFL)
Brotherhood of Railroad Signalmen of America (AFL)
National Organization Masters, Mates and Pilots of America (AFL)
National Marine Engineers' Beneficial Association (CIO)
International Longshoremen's Association (AFL)
Hotel and Restaurant Employes' International Alliance and Bartenders' International League of America (AFL)

NATIONAL AND INTERNATIONAL UNIONS

Union	*Affiliation*	*Officers*
Actors & Artistes of America, The Associated 45 W. 47th Street, New York 19, N. Y.	AFL	President and Acting Secretary, Paul Dullzell.
Air Line Dispatchers Ass'n, 655 Kearney St., Denver, Colo.	AFL	President, George E. Deininger.
Air Line Pilots Ass'n, Int'l 3145 W. 63d Street, Chicago 29, Ill.	AFL	President, David L. Behncke. Secretary, R. B. Andrews.
Architects & Draftsmen's Unions, Int'l Federation of Technical Engineers, 900 F Street NW, Rm. 706, Washington 4, D. C.	AFL	President, Foster J. Pratt. Secretary, D. M. Hancock.
Asbestos Workers, Int'l Ass'n of Heat & Frost Insulators and Ninth and Mt. Vernon Place, NW, Washington 1, D. C.	AFL	President, Joseph A. Mullaney. Secretary-Treasurer, C. W. Sickles.
Associated Unions of America, 161 W. Wisconsin Ave., Rm. 5118, Milwaukee 3, Wis.	IND.	President, Ramon LeZotte. Secretary-Treasurer, Donald F. Cameron.
✓Automobile, Aircraft & Agricultural Implement Workers of America, Int'l Union United 411 W. Milwaukee Ave., Detroit 2, Mich.	CIO + AFL	President, Walter P. Reuther. Secretary-Treasurer, George F. Addes.
Automobile Workers of America, United 231 W. Wisconsin Ave., Rm. 1013, Milwaukee 3, Wis.	AFL	President, Lester Washburn. Secretary-Treasurer, Anthony Doria.
✓**Bakery** & Confectionery Workers' Int'l Union of America, 2719 N. Wilton Ave., Chicago 14, Ill.	AFL	President, Herman Winter. Secretary-Treasurer, William F. Schnitzler.
Barbers & Beauty Culturists Union of America, 316 Flatbush Ave., Brooklyn, N. Y.	CIO	President, Ernest Hebert. Secretary-Treasurer, Lilian Moscowitz.
Barbers, Hairdressers & Cosmetologists' Int'l Union of America, The Journeymen 12th and Delaware Sts., Indianapolis 7, Ind.	AFL	President and Secretary-Treasurer, W. C. Birthright.
Bill Posters, Billers & Distributors, Int'l Alliance of Bessemer Bldg., Rm. 303, Pittsburgh, Pa.	AFL	President, Leo Abernathy. Secretary, John J. Grady, Longacre Bldg., Rm. 820, New York 18, N. Y.
✓Blacksmiths, Drop Forgers & Helpers, Int'l Bro. of 2922 Washington Blvd., Chicago 12, Ill.	AFL	President, John Pelkofer. Secretary-Treasurer, William F. Kramer.

Union	*Affiliation*	*Officers*
Boilermakers, Iron Ship Builders & Helpers of America, Int'l Bro. of Brotherhood Bldg., Suite 504, Kansas City 11, Kans.	AFL	President, Chas. J. MacGowan. Secretary-Treasurer, Wm. J. Buckley.
Bookbinders, Int'l Bro. of 901 Massachusetts Ave. NW, Washington 1, D. C.	AFL	President, John B. Haggerty. Secretary-Treasurer, J. B. Prewitt.
Brewery, Flour, Cereal, Soft Drink, & Distillery Workers of America, Int'l Union of United 2347–51 Vine Street, Cincinnati 19, Ohio	CIO	Secretary-Treasurer, Wm. J. Kromelbein. Corresponding Secretary, Karl Feller. Recording Secretary, Edward Hughlett.
Brick & Clay Workers of America, The United 1550 W. 95th Street, Chicago, Ill.	AFL	Acting President, H. R. Flegal. Secretary-Treasurer, Wm. Tracy.
Bricklayers, Masons & Plasterers Int'l Union of America, 815 15th Street NW., Washington 5, D. C.	AFL	President, Harry C. Bates. Secretary-Treasurer, Richard J. Gray.
Bridge, Structural & Ornamental Iron Workers, Int'l Ass'n of Syndicate Trust Bldg., Rm. 1615–20, St. Louis 1, Mo.	AFL	President, P. J. Morrin. Secretary, John H. Lyons.
Broadcast Engineers & Technicians, Nat'l Ass'n of 66 Court St., Rm. 501, Brooklyn 2, N. Y.	Ind.	President, A. T. Powley. Secretary-Treasurer, H. E. Hiller.
Broom & Whisk Makers' Union, Int'l 4457 N. Spaulding Ave., Chicago 25, Ill.	AFL	President, Tony Hohl. Secretary-Treasurer, O. A. Steinke.
Building Service Employees' Int'l Union, 212 W. Wisconsin Ave., Milwaukee 3, Wis.	AFL	President, Wm. L. McFetridge. Secretary-Treasurer, Wm. H. Cooper.
Carpenters & Joiners of America, United Bro. of Carpenters Bldg., Indianapolis 4, Ind.	AFL	President, Wm. L. Hutcheson. Secretary, Frank Duffy.
Cement, Lime & Gypsum Workers Int'l Union, United 549 W. Randolph St., Chicago 6, Ill.	AFL	President, Wm. Schoenberg. Secretary-Treasurer, Toney Gallo.
Chemical Workers Union, Int'l irst Central Tower Bldg., Rm. 605, kron 8, Ohio.	AFL	President, H. A. Bradley. Secretary-Treasurer, R. E. Tomlinson.
igar Makers' Int'l Union of America, 003 K Street NW., ashington 1, D. C.	AFL	President, A. P. Bower.
leaning & Dye House Workers, Int'l Ass'n of 771 E. 12th Street, leveland 14, Ohio.	AFL	President, W. S. Gross. Secretary-Treasurer, H. E. Greenwald.
lothing Workers of America, Amalgamated Union Square, ew York 3, N. Y.	CIO	President, Jacob S. Potofsky. Secretary-Treasurer, Frank Rosenblum.

Union	*Affiliation*	*Officers*
Communications Ass'n, American 5 Beekman St., Rm. 711, New York 7, N. Y.	CIO	President, Joseph P. Selly. Secretary-Treasurer, Joseph F. Kehoe.
Confederated Unions of America, 809 Eye St. NW., Washington 1, D. C.	Ind. Federation.	President, Atwood R. Wynn. Secretary-Treasurer, Harry Eller.
✓ Construction + gen laborers.		
Coopers' Int'l Union of North America, Park Square Bldg., Rm. 927, Boston 16, Mass.	AFL	President and Secretary-Treasurer, James J. Doyle.
Diamond Workers' Protective Union of America, 132 Joralemon St., Brooklyn 2, N. Y.	AFL	President, Jules Verbeeck. Secretary, Juda Oppasser.
Die Sinkers Conference, Int'l 5713 Euclid Ave., Rm. 202–7, Cleveland 3, Ohio.	IND.	President, J. C. Meiner. Secretary-Treasurer, Ernest E. Bourcier.
✓ Distillery, Rectifying & Wine Workers' Int'l Union of America, 1417 K Street NW., Washington 5, D. C.	AFL	President, Jos. O'Neill. Secretary-Treasurer, Sol Cilento.
✓ **Electrical,** Radio & Machine Workers of America, United 11 E. 51st St., New York 22, N. Y.	CIO	President, Albert J. Fitzgerald. Secretary-Treasurer, Julius Emspak.
✓ Electrical Workers of America, Int'l Bro. of 1200 15th Street NW., Washington 5, D. C.	AFL	President, Dan W. Tracy. Secretary-Treasurer, G. M. Bugniazet.
✓ Elevator Constructors, Int'l Union of 12 So. 12th Street, Philadelphia 7, Pa.	AFL	President, John C. MacDonald. Secretary-Treasurer, Frank Feeney, Jr.
✓ Engineers, Int'l Union of Operating 1003 K Street NW., Washington 1, D. C.	AFL	President, Wm. E. Maloney. Secretary-Treasurer, F. A. Fitzgerald.
Engineers, Draftsmen & Associates, Nat'l Council 300 Broadway, Rm. 1012, Camden, N. J.	IND.	President, Anthony W. Zeller. Asst. Secretary-Treasurer, Vera M. Yarosh.
Engravers & Sketchmakers, Inc., Friendly Society of 555 Washington Ave., Nutley, N. J.	IND.	President, Harold Castle. Secretary, John Allison.
✓ **Farm** Equipment & Metal Workers of America, United 188 W. Randolph St., Chicago 1, Ill.	CIO	President, Grant W. Oakes. Secretary-Treasurer, Gerald Fielde.
Farm Labor Union, Nat'l Graham Bldg., Rm. 204, 166 Monroe Ave., Memphis 1, Tenn.	AFL	President, H. L. Mitchell. Secretary-Treasurer, Dorothy Dowe.
Federal Employees, Nat'l Federation of 10 Independence Ave., S.W., Washington 4, D. C.	IND.	President, Luther Steward. Secretary-Treasurer, Gertrude McNally.

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Union	*Affiliation*	*Officers*
Fire Fighters, Int'l Ass'n of 901 Massachusetts Ave. NW., Washington 1, D. C.	AFL	President, John P. Redmond. Secretary-Treasurer, Geo. J. Richardson.
✓Firemen and Oilers, Int'l Bro. of 330 S. Wells Street, Chicago 6, Ill.	AFL	President, John F. McNamara. Secretary-Treasurer, Joseph P. Clark.
Fishermen & Allied Workers of America, Int'l Arcade Bldg., Rm. 4124, Seattle 1, Wash.	CIO	President, J. F. Jurich. Secretary-Treasurer, Jeff Kibre.
✓Food, Tobacco, Agricultural & Allied Workers Union of America, 1505 Race St., Rm. 418, Philadelphia 2, Pa.	CIO	President, Donald Henderson. Secretary-Treasurer, Harold J. Lane.
Foreman's Ass'n of America, Barlum Tower, Rm. 515, Detroit 26, Mich.	IND.	President, Robert H. Keys. Secretary-Treasurer, Carl Brown.
Foundry & Metal Employees, Int'l Bro. of 3407½ S. Jefferson Ave., St. Louis 18, Mo.	IND.	President, A. C. Moran. Secretary-Treasurer, H. D. Dannenberg.
Fur & Leather Workers' Union, Int'l 251 Fourth Ave., New York 10, N. Y.	CIO	President, Ben Gold. Secretary-Treasurer, Pietro Lucchi.
Furniture Workers of America, United 261 Fifth Ave., New York 16, N. Y.	CIO	President, Morris Pizer. Secretary-Treasurer, Max Perlow.
✓**Garment** Workers of America, United 45 Astor Place, New York 3, N. Y.	AFL	President, Jos. P. McCurdy. Secretary-Treasurer, E. M. Hogan.
Garment Workers' Union, Int'l Ladies' 1710 Broadway, New York 19, N. Y.	AFL	President and Secretary-Treasurer, David Dubinsky. Executive Secretary, Frederick F. Umhey.
Gas, Coke & Chemical Workers of America, United 930 F Street, NW., Rm. 514, Washington 4, D. C.	CIO	President, Martin Wagner. Secretary-Treasurer, Cecil Martin.
Glass Bottle Blowers Ass'n of the U. S. & Canada, 2 S. 12th Street, Philadelphia 7, Pa.	AFL	President, Lee W. Minton. Recording and Financial Secretary, Thomas B. Eames.
lass, Ceramic & Silica Sand Workers of America, Federation of 56 E. Town St., olumbus 15, Ohio.	CIO	President, Jos. Froesch. Secretary-Treasurer, Lewis McCracken.
lass Cutters' League of America, Window E. Long St., olumbus 15, Ohio.	AFL	President, August U. Debrucque. Secretary-Treasurer, Harry D. Nixon.

Union	*Affiliation*	*Officers*
Glass Workers Union of North America, American Flint Huron St. & Jefferson Ave., Toledo 4, Ohio.	AFL	President, Harry H. Cook. Secretary-Treasurer, Charles M. Scheff.
Glove Workers' Union of America, Int'l 5328 N. 39th Street, Milwaukee 9, Wis.	AFL	President, Thomas Durian. Secretary-Treasurer, Joseph Goodfellow, P. O. Box 94, Marinette, Wis.
Government Employees, American Federation of 900 F Street NW., Washington 4, D. C.	AFL	President, James B. Burns. Secretary, Bernice Heffner.
Granite Cutters' Int'l Ass'n of America, The 25 School Street, Quincy 69, Mass.	AFL	President, Lawrence Foley.
Handbag, Luggage, Belt & Novelty Workers' Union, Int'l 265 W. 14th Street, New York 11, N. Y.	AFL	President, Samuel Reinlib. Secretary-Treasurer. Frank Albano.
Hatters, Cap & Millinery Workers' Int'l Union, United 245 Fifth Ave., New York 16, N. Y.	AFL	President, Max Zaritsky. Secretary, Michael F. Greene.
Hod Carriers', Building & Common Laborers' Union of America, Int'l 821 15th Street NW., Washington 5, D. C.	AFL	President, Joseph V. Moreschi. Secretary-Treasurer, A. Persion.
Horse Shoers of the U. S. & Canada, Int'l Union of Journeymen 4202 La Salle Ave., Baltimore 6, Md.	AFL	President, Art T. Cragin. Secretary-Treasurer, John Keefer.
Hotel & Restaurant Employees' Int'l Alliance & Bartenders' Int'l League of America, 530 Walnut Street, Cincinnati 2, Ohio.	AFL	President, Hugo Ernst. Secretary-Treasurer, Ed. S. Miller.
Industrial Trades Union of America, 53 Federal St., Woonsocket, R. I.	IND.	President, Edwin Van Den Berghe. Secretary, Raoul Vandal.
Industrial Workers of the World, 2422 N. Halsted St., Chicago 14, Ill.	IND.	Secretary-Treasurer, Walter A. Unger.
Inlandboatmen's Union of the Pacific, National Bldg., Rm. 614, Seattle 4, Wash.	CIO	President, John M. Fox.
Jewelry Workers' Union, Int'l 551 5th Ave., Suite 825, New York 17, N. Y.	AFL	President, Joseph Morris. Secretary-Treasurer, Hyman Balatnik.
Lace Operatives of America, Amalgamated 545 W. Lehigh Ave., Philadelphia, Pa.	IND.	President, John Burns. Secretary-Treasurer, William Calvert.
Lathers, Int'l Union of Wood, Wire & Metal 2605 Detroit Ave., Cleveland 13, Ohio.	AFL	President, Wm. J. McSorley. Secretary-Treasurer. Terry Ford.

Union	*Affiliation*	*Officers*
Laundry Workers' Int'l Union, 115 N. Pennsylvania St., Indianapolis 4, Ind.	AFL	President, Sam J. Byers. Secretary-Treasurer, Chas. T. Lindgren.
Leather Workers Int'l Union, United Lafayette Bldg., Rm. 826, 5th & Chestnut Sts., Philadelphia 6, Pa.	AFL	President and Secretary-Treasurer, Bernard G. Quinn.
Letter Carriers, Nat'l Ass'n of 901 Massachusetts Ave. NW., Washington 1, D. C.	AFL	President, Wm. C. Doherty. Secretary, Jerome J. Keating.
Letter Carriers' Ass'n, Nat'l Rural 1329 E Street NW., Rm. 541, Washington, D. C.	IND.	President, B. A. Winguest. Secretary, Glenn W. Folkers, Mokena, Ill.
Life Insurance Agents, Int'l Union of Plankington Bldg., Rm. 3044, 161 W. Wisconsin Ave., Milwaukee 3, Wis.	IND.	President, Marvin C. Jansen. Secretary, Elmer H. Knorr.
Lithographers of America, Amalgamated 450 7th Avenue, New York 1, N. Y.	CIO	President, Wm. J. Riehl. Vice-President and Secretary-Treasurer, Oliver Mertz, 2012 W. 25th Street, Rm. 509, Cleveland 13, Ohio.
Locomotive Engineers, Bro. of Brotherhood of Locomotive Engineers Bldg., Rm. 1118, Cleveland 14, Ohio.	IND.	Grand Chief Engineer, A. Johnston. Secretary-Treasurer, H. F. Hempy.
Locomotive Firemen & Enginemen, Bro. of Keith Bldg., Rm. 318, Cleveland 15, Ohio.	IND.	President, D. B. Robertson. Secretary-Treasurer, W. E. Jones.
Longshoremen's Ass'n, Int'l 265 W. 14th Street, New York 11, N. Y.	AFL	President, Joseph P. Ryan. Secretary-Treasurer, John R. Owens.
Longshoremen's and Warehousemen's Union, Int'l 604 Montgomery St., San Francisco 11, Calif.	CIO	President, Harry Bridges. Secretary-Treasurer, Louis Goldblatt.
Machine Printers Beneficial Ass'n, 28 Harwood Street, Cranston, R. I.	IND.	Secretary, Eric W. Lindberg.
Machinists, Int'l Ass'n of Ninth St. and Mt. Vernon Place NW., Washington 1, D. C.	IND.	President, Harvey W. Brown. Secretary-Treasurer, Eric Peterson.
Mailers Union, Int'l 417 Cheviot Ave., Cincinnati 11, Ohio.	IND.	President, Walter J. Weissman. Secretary-Treasurer, Rodger Royce.
Maintenance of Way Employes, Bro. of Putnam Ave., etroit 2, Mich.	AFL	President, Thomas C. Carroll. Secretary-Treasurer, A. Shoemake.

Union	*Affiliation*	*Officers*
Marble, Slate & Stone Polishers, Rubbers & Sawyers, Tile & Marble Setters Helpers & Terrazzo Helpers, Int'l Ass'n of 815 15th Street NW., Rm. 306, Washington 5, D. C.	AFL	President, Wm. McCarthy.
Marine Cooks & Stewards, Nat'l Union of 86 Commercial St., San Francisco 11, Calif.	CIO	President, Hugh Bryson. Secretary, E. F. Burke.
Marine Engineers' Beneficial Ass'n, Nat'l 132 3rd St. S. E., Washington 3, D. C.	CIO	President, Samuel J. Hogan. Secretary-Treasurer, Wm. O. Holmes.
Marine Firemen, Oilers, Watertenders & Wipers Ass'n, Pacific Coast 58 Commercial St., San Francisco 11, Calif.	IND.	President and Executive Secretary, V. J. Malone.
Marine & Shipbuilding Workers of America, Industrial Union of 534 Cooper Street, Camden, N. J.	CIO	President, John Green. Secretary-Treasurer, Ross D. Blood.
Maritime Union of America, Nat'l 346 W. 17th Street, New York 11, N. Y.	CIO	President, Joseph Curran. Secretary, Ferdinand C. Smith.
Masters, Mates & Pilots of America, Nat'l Organization 15 Moore Street, New York 4, N. Y.	AFL	President, Capt. E. W. Higginbotham, P. O. Box 540, Mobile, Ala. Secretary-Treasurer, W. J. Van Buren.
✓ Meat Cutters & Butcher Workmen of North America, Amalgamated 201 N. Wells St., Suite 1214, Chicago 6, Ill.	AFL	President, E. W. Jimerson. Secretary-Treasurer, Patrick E. Gorman.
Mechanics Educational Society of America, Boulevard Bldg., Rm. 317, Detroit 2, Mich.	IND.	President, George White. Secretary, Matthew Smith.
Mechanics & Foremen of Navy Yards & Naval Stations, Nat'l Ass'n of Master 3265 Arcadia Place NW., Washington 15, D. C.	AFL	President, S. W. Brinson. Secretary, Ernest M. Seifert.
Messengers, The Nat'l Ass'n of Special Delivery 301 First St. SE., Washington 3, D. C.	AFL	President, George L. Warfel. Secretary-Treasurer, Roy Green.
Metal Engravers Union, Int'l 1133 Broadway, New York 10, N. Y.	IND.	President, Charles Hartwig. Secretary-Treasurer, Conrad Woelfel.
✓ [illegible] Metal Polishers, Buffers, Platers & Helpers Int'l Union, Ingalls Bldg., 4th Street, Cincinnati 2, Ohio.	AFL	President and Secretary-Treasurer, Ray Kelsay.
Metal Workers Union, Interstate 104 N. George St., Rome, N. Y.	IND.	President, James Kozma. Secretary-Treasurer, Frank O. Edwards.

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Union	*Affiliation*	*Officers*
Mine, Mill & Smelter Workers, Int'l Union of 222 W. Adams St., Suite 1299, Chicago 6, Ill.	CIO	President, Maurice E. Travis. Acting Secretary-Treasurer, John Clark.
Mine Workers of America, Progressive 506 S. 6th Street, Springfield, Ill.	Ind.	President, John McCann. Secretary-Treasurer, Earl Evans.
Mine Workers of America, United 15th and I Streets NW., Washington 5, D. C.	AFL	President, John L. Lewis. Secretary-Treasurer, Thomas Kennedy.
District 50, United Mine Workers of America 15th and I Streets NW., Washington 5, D. C.		President, John Kmetz. Secretary-Treasurer, Kathryn Lewis.
Molders & Foundry Workers Union of North America, Int'l 530 Walnut Street, Cincinnati 1, Ohio.	AFL	President, Harry Stevenson. Secretary, N. D. Smith.
Musicians, American Federation of 39 Division St., Newark 2, N. J.	AFL	President, James C. Petrillo. Secretary, Leo Cluesmann.
Newspaper Guild, American 63 Park Row, Rm. 905, New York 7, N. Y.	CIO	President, Milton Murray. Secretary-Treasurer, William W. Rodgers.
Newspaper & Mail Deliverers Union of N. Y. and Vicinity, 3 Park Row, New York 7, N. Y.	Ind.	President, Joseph Simons. Secretary-Treasurer, William J. Burke.
ffice Employes' Int'l Union, 221 G Street NW., ashington 5, D. C.	AFL	President, Paul Hutchings. Secretary-Treasurer, J. Howard Hicks.
ffice & Professional Workers of America, United 60 Broadway, ew York 23, N. Y.	CIO	President, Lewis Merrill. Secretary-Treasurer, John J. Stanley.
l Workers Int'l Union, dger Bldg., rt Worth 2, Texas.	CIO	President, O. A. Knight. Secretary-Treasurer, T. M. McCormick.
tical & Instrument Workers Organizing Committee, tle Guaranty Bldg., Rm. 207, Louis 1, Mo.	CIO	Chairman, Thomas E. Andert. Secretary, Earl Disselhorst.
ckinghouse Workers, Nat'l Bro. of E. Grand Ave., s Moines, Iowa.	Ind.*	President, Don Mahon. Secretary, Charles Roady.
kinghouse Workers of America, nited W. Wacker Drive, cago 6, Ill.	CIO	President, Ralph Helstein. Secretary-Treasurer, Lewis J. Clark.
ters, Decorators & Paperhangers America, Bro. of ters & Decorators Bldg. yette, Ind.	AFL	President, Lawrence P. Lindelof. Secretary-Treasurer, Lawrence M. Raftery.

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filiated with the Confederated Unions of America.

Union	*Affiliation*	*Officers*
✓ Paper Makers, Int'l Bro. of 30 Sheridan Ave., Albany 1, N. Y.	AFL	President, Matthew J. Burns. Secretary-Treasurer, Joseph Addy.
Paperworkers of America, United Public Square Bldg., Rm. 310, 33 Public Square, Cleveland 13, Ohio.	CIO	Chairman, Allan S. Haywood. Secretary-Treasurer, Harry Sayre.
✓ Pattern Makers' League of North America, 9th and Mt. Vernon Place, NW. Washington 1, D. C.	AFL	President, George Q. Lynch.
Paving Cutters' Union of the United States of America & Canada, Box 30, Rockport, Mass.	IND.	President, Albert M. Anderson.
✓ Photo-Engravers' Union of North America, Int'l 3605 Potomac St., St. Louis 16, Mo.	AFL	President, Edw. J. Volz. Secretary-Treasurer. Henry F. Schmal.
Plasterers' & Cement Finishers Int'l Ass'n of the U. S. & Canada, Operative Fidelity Bldg., Rm. 200, Cleveland 14, Ohio.	AFL	President, John E. Rooney. Secretary-Treasurer, Walter A. Redmond.
Plate Printers, Die Stampers & Engravers' Union of North America, Int'l 4119 Paulding Ave., New York 66, N. Y.	AFL	President, Alex Smith. Secretary-Treasurer, Walter J. Smith.
Playthings, Jewelry & Novelty Workers Int'l Union, 225 Lafayette St., Rm. 606, New York 12, N. Y.	CIO	President, A. H. Esposito. Secretary-Treasurer, Alex Bail.
✓ Plumbing & Pipe Fitting Industry of the U. S. & Canada, United Ass'n of Journeymen & Apprentices of the 9th and Mt. Vernon Place, NW. Washington 1, D. C.	AFL	President, Martin P. Durkin. Secretary-Treasurer, Edw. J. Hillock.
Pocketbook, Leather Goods and Novelty Workers of America, United 100 W. 32nd St., New York 1, N. Y.	IND.	President, Philip Lubliner. Secretary-Treasurer, Herman Goffer.
Post Office Clerks, Nat'l Federation of 1510 H Street NW., Washington 5, D. C.	AFL	President, Leo E. George. Secretary-Treasurer, William Otte.
Post Office Clerks, United Nat'l Ass'n of Colorado Bldg., Rm. 524, Washington 5, D. C.	IND.	President, William C. Ambrust. Secretary, Thomas P. Bussier.
Post Office Custodial Employees, Nat'l Ass'n of P. O. Box 745, Allentown, Pa.	IND.	President, Rex B. Atkin, P. O. Box 211, Salt Lake City, Utah. Secretary-Treasurer, John B. Gehman.

Union	*Affiliation*	*Officers*
Post Office Mechanics & Maintenance Employees, Nat'l Ass'n of 238 First St. SE., Washington 3, D. C.	Ind.	President, Arthur W. Brehme. Secretary-Treasurer, Jacob Nagel.
Post Office Motor Vehicle Employees, Nat'l Federation of 112 C Street NW., Washington 1, D. C.	Ind.	President, Everett G. Gibson. Secretary-Treasurer, Boyd Eaton.
Post Office & Railway Mail Handlers, Nat'l Ass'n of 160–10 119th Road, Jamaica 5, N. Y.	AFL	President, Harold McAvoy. Secretary, Anton J. Feggeler.
Postal Employees, Nat'l Alliance of 273 N Street NW., Washington 1, D. C.	Ind.	President, Ashby B. Carter. Secretary, Votie D. Dixon.
Postal Supervisors, The Nat'l Ass'n of P. O. Box 1225, Nashville 2, Tenn.	AFL	President, John A. McMahon. Secretary, J. H. Wakefield.
Postmasters of the U. S., Nat'l League of District 1110 F Street NW., Washington 4, D. C.	Ind.	President, L'Bertie Rushing. Secretary, E. A. Meeks.
Potters, Nat'l Bro. of Operative Box 752, East Liverpool, Ohio.	AFL	President, James M. Duffy. Secretary-Treasurer, Charles F. Jordan.
Printing Pressmen & Assistants' Union of North America, Int'l ressmen's Home, Tenn.	AFL	President, George L. Berry. Secretary-Treasurer, William H. McHugh.
ublic Workers of America, United 30 F Street NW., ashington 4, D. C.	CIO	President, Abram Flaxer. Secretary-Treasurer, Eleanor Nelson.
ulp, Sulphite & Paper Mill Workers of the U. S. & Canada, Int'l Bro. of . O. Drawer 30, ort Edward, N. Y.	AFL	President and Secretary, John P. Burke.
adio Directors Guild, 4 E. 52nd Street, Rm. 214, ew York 22, N. Y.	AFL	President, Earle McGill. Secretary, N. A. Burnett.
ilroad Shopcrafts of America, Bro. of h and Central, uisville 8, Ky.	Ind	President, R. D. Akard. Secretary-Treasurer, R. L. Doyle, 2646 Hampden Ave., Baltimore, Md.
ilroad Signalmen of America, Bro. of 9 N. Western Ave., icago 25, Ill.	AFL	President, Jesse Clark. Secretary-Treasurer, C. L. Bromley.
lroad Telegraphers, Order of 3 W. Pine Blvd., Louis 8, Mo.	AFL	President, George E. Leighty. Secretary-Treasurer, E. M. Mosier.

Union	*Affiliation*	*Officers*
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Railroad Workers of America, United 205 W. Wacker Drive, Chicago 6, Ill.	CIO	Nat'l Director, A. B. Martin. Secretary-Treasurer, Douglas B. Anderson.
Railroad Yardmasters of America. 537 S. Dearborn St., Chicago 5, Ill.	AFL	President, Milton G. Schoch. Secretary-Treasurer, David W. Dickeson
Railroad Yardmasters of North America, Inc., Lafayette Bldg., Rm. 809, Buffalo 3, N. Y.	IND.	President, James F. McGrath. Secretary-Treasurer, Charles M. Donnelly.
Railway Carmen of America, Bro. 107 W. Linwood Blvd., Kansas City 2, Mo.	AFL	President, Irvin Barney. Secretary-Treasurer, Thomas S. Howieson.
Railway Conductors of America, Order of O. R. C. Bldg., Cedar Rapids, Iowa.	IND.	President, H. W. Fraser. Secretary-Treasurer, G. H. Oram.
Railway Mail Ass'n, 901 Massachusetts Ave. NW., Washington 1, D. C.	AFL	President, Chester M. Harvey. Secretary-Treasurer, John J. Kennedy.
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Railway Supervisors Ass'n, Inc., The American 53 W. Jackson Blvd., Chicago 4, Ill.	IND.	President, J. P. Tahney. Corresponding Secretary, R. Durdik.
Railway Trainmen and Locomotive Firemen, Ass'n of Colored 408 Gainsboro Ave. NW., Roanoke, Va.	IND.	President, S. H. Clark. Secretary-Treasurer, R. L. Edwards.
Retail Clerks Int'l Ass'n, Lock Drawer No. 248, Lafayette, Ind.	AFL	President, V. A. Housewright. Secretary-Treasurer, James A. Suffridge.
Retail, Wholesale & Department Store Union, 100 W. 42nd Street, New York 18, N. Y.	CIO	President, Samuel Wolchok. Secretary-Treasurer, John V. Cooney.
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✓Seafarers' Int'l Union of North America, 105 Market St., Suite 201, San Francisco 5, Calif.	AFL	President, Harry Lundeberg. Secretary-Treasurer, John Hawk.
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✓ Stove Mounters' Int'l Union of North America, 2806 N. Grand Ave., St. Louis 7, Mo.	AFL	President, Joseph Lewis. Secretary-Treasurer, Edw. W. Kaiser.
✓ Street, Electric Railway & Motor Coach Employees of America, Amalgamated Ass'n of 1214 Griswold St., 11th Floor, Detroit 26, Mich.	AFL	President, A. L. Spradling. Secretary-Treasurer, O. J. Mischo.
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✓ **Teachers,** American Federation of 28 E. Jackson Blvd., Chicago 4, Ill.	AFL	President, Joseph F. Landis. Secretary-Treasurer, Irvin Kuenzli.
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Textile Workers of America, United International Bldg. 818 13th Street NW., Washington 5, D. C.	AFL	President, Anthony Valente. Secretary-Treasurer, Lloyd Klenert.
✓ Textile Workers Union of America, 15 Union Square, New York 3, N. Y.	CIO	President, Emil Rieve. Secretary-Treasurer, William Pollock.
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Train Dispatchers Ass'n, American 10 E. Huron St., Chicago 11, Ill.	IND.	President, O. H. Braese. Secretary-Treasurer, J. B. Springer.
Trainmen of America, Colored 407½ W. Mesquite St., Rm. No. 1, Kingsville, Tex.	IND.	President, Jordan Jefferson. Secretary, Abe S. Schannon.
Transport Service Employees of America, United 3452 S. State St., Chicago, Ill.	CIO	President, Willard S. Townsend. Secretary-Treasurer, John L. Yancey.
Transport Workers Union of America, 153 W. 64th Street, New York 23, N. Y.	CIO	President, Michael J. Quill. Secretary-Treasurer, Douglas MacMahon.
Typographical Union, Int'l 2820 N. Meridian, Indianapolis 6, Ind.	AFL	President, Woodruff Randolph. Secretary-Treasurer, Don Hurd.
Upholsterers' Int'l Union of North America, 1500 N. Broad Street, Philadelphia 21, Pa.	AFL	President, Sal B. Hoffman.
Utility Workers Union of America, Stewart Bldg., 402 6th Street NW., Washington, D. C.	CIO	President, Joseph A. Fisher. Secretary-Treasurer, William J. Pachler.
Wall Paper Craftsmen & Workers of North America, United 426 N. Beaver Street, York, Pa.	AFL	President, Edw. A. Jameson. Secretary-Treasurer, M. C. Firestone.
Watch Workers Union, The American 376 Boylston St., Suite 503–505, Boston, Mass.	IND.	President, Walter W. Cenerazzo. Secretary-Treasurer, William F. Hameister.
Welders of America, United Aircraft Chester Williams Bldg., Rm. 808, 215 W. Fifth St., Los Angeles, Calif.	IND.	President, G. A. Stewart. Secretary-Treasurer, Don T. Ketchum.
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Wood Carvers Ass'n of North America, Int'l 0 Clarkwood St., Mattapan 26, Mass.	IND.	Chairman, Peter Stevenson. Secretary, Emanuel Ufland.
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utomobile Workers	CIO	James Wishart
akery Workers	AFL	A. W. Myrup
oilermakers	AFL	Thomas L. Wands
rewery Workers	CIO	William J. Kromelbein*
uilding Service Employees	AFL	Anthony G. Weinlein
arpenters & Joiners	AFL	Paul H. Connelley
ement Workers	AFL	Anne S. Woll
hemical Workers	AFL	M. L. Preston
gar Makers	AFL	J. H. Korson
othing Workers	CIO	Gladys A. Dickason
ommunications Ass'n	CIO	Geraldine Shandros
ectrical Workers	CIO	Nathan Spero
ectrical Workers	AFL	Marion Hedges
gineers, Operating	AFL	Herbert Woods
rm Equipment Workers	CIO	Aaron Cantor
od & Allied Workers	CIO	J. M. Califf
r & Leather Workers	CIO	George Kleinman
rniture Workers	CIO	Sara M. Siegel
rment Workers, Ladies'	AFL	Lazare Teper
s & Chemical Workers	CIO	William Ross
ss & Silica Sand Workers	CIO	Leland Beard
ve Workers	AFL	Agnes Nestor
tters & Millinery Workers	AFL	Alfred Braunthal
el & Restaurant Employees	AFL	W. R. Wasson
ustrial Workers of the World	Ind.	Fred Thompson
ndry Workers	AFL	Herbert S. Shockney
omotive Firemen	IND.	Harry Arries
gshoremen & Warehousemen	CIO	Lincoln Fairley
chinists	IND.	Carl Huhndorff
ntenance of Way Employes	AFL	Frank Noakes

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etary-Treasurer serves as research director.

Organization	*Affiliation*	*Research Director*
Marine & Shipbuilding Workers	CIO	Rosalind Schulman
Maritime Union	CIO	Thomas Ray
Meat Cutters	AFL	David Dolnick
Metal Trades Dept.	AFL	Nathan Fine
Metal Workers	IND.	Frank O. Edwards*
Mine & Smelter Workers	CIO	Bernard Stern
Mine Workers	AFL	K. C. Adams
District 50		E. E. Kennedy and R. Kaplan
Newspaper Guild	CIO	Ralph Novak
Office Employes	AFL	Paul Hutchings**
Office & Professional Workers	CIO	John Stanley
Oil Workers	CIO	Elwood E. Phelps
Packinghouse Workers	IND.	Lawrence Beilfuss
Packinghouse Workers	CIO	Lyle Cooper
Paper Makers	AFL	Bart L. Tidland
Paperworkers	CIO	Nat Goldfinger
Playthings & Novelty Workers	CIO	Morris Stone
Plumbing & Pipe Fitting	AFL	George Brown
Pocketbook & Novelty Workers	IND.	Ossip Walinsky
Post Office Motor Vehicle Employes	IND.	Paul M. Castiglioni
Postal Employees	IND.	William C. Jason, Jr.
Printing Pressmen	AFL	H. A. Aarons
Public Workers	CIO	Josephine Metcalf
Pulp & Paper Mill Workers	AFL	George W. Brooks
Railroad Shopcrafts	IND.	Paul D. Reese
Railroad Telegraphers	AFL	Ray J. Westfall
Railroad Trainmen	IND.	A. F. Whitney**
Railroad Yardmasters of N. A.	IND.	Charles M. Donnelly*
Railway Clerks	AFL	Robert L. Davis
Railway Employes' Dept.	AFL	George Cucich
Retail Clerks	AFL	William W. Maguire
Retail & Wholesale	CIO	William Freedman
Rubber Workers	CIO	Everett Kassalow
Salaried Unions	IND.	A. A. Cutman
Shoe Workers	CIO	Nathan Saks
Shoeworkers, Lewiston & Auburn	IND.	James J. Carr
State & Municipal Employees	AFL	Joseph Mire
Steelworkers	CIO	Joseph Scanlon
Teamsters	AFL	Frank Tobin
Telegraphers, Commercial	AFL	Frank B. Powers
Telephone Workers	IND.	Sylvia Gottlieb
Textile Workers	AFL	Benjamin Haskel
Textile Workers	CIO	Solomon Barkin
Dyers		Ruth Schmittlinger
Hosiery Workers		William L. Rafsky
Transport Service Employees	CIO	Ernest Calloway
Transport Workers	CIO	M. H. Forge
Typographical Union	AFL	Larry Taylor
Upholsterers	AFL	Ruth J. Hoffman
Woodworkers	CIO	Ellery Foster

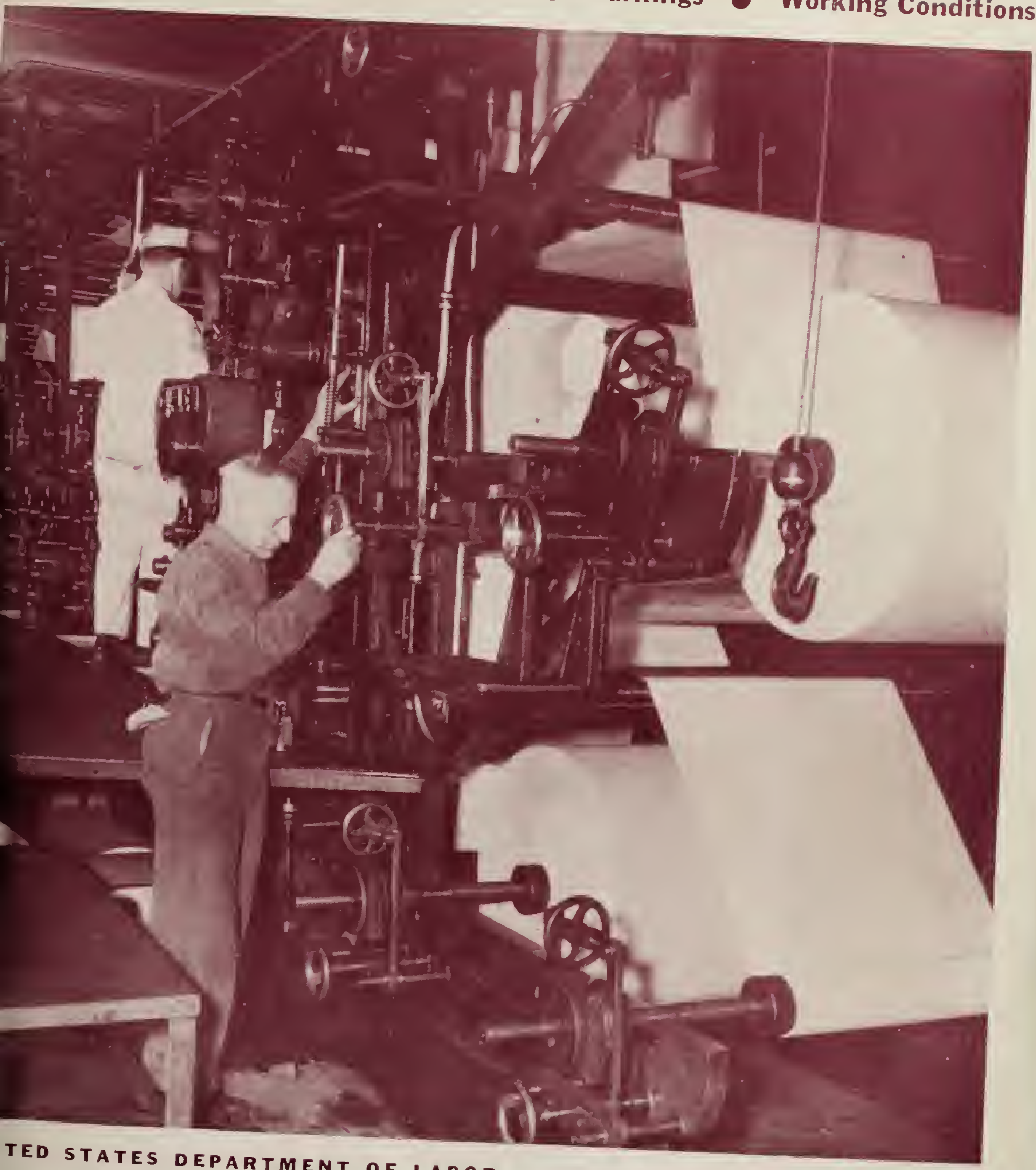
*Secretary-Treasurer serves as research director.

**President serves as research director.

EMPLOYMENT OUTLOOK IN

PRINTING OCCUPATIONS

Duties ● Qualifications ● Outlook ● Earnings ● Working Conditions



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OCCUPATIONAL OUTLOOK SERIES • BULLETIN NO. 902

View of web rotary press showing pressman checking the tension of the paper before starting the run. Journeyman in background is fitting stereotype plates on the rollers and regulating the flow of ink.

Cover picture:
Photograph by U. S. Department of Labor.

UNITED STATES DEPARTMENT OF LABOR
L. B. Schwellenbach, Secretary

BUREAU OF LABOR STATISTICS
Ewan Clague, *Commissioner*

✦

Employment Outlook in Printing Occupations

Bulletin No. 902

UNITED STATES
GOVERNMENT PRINTING OFFICE
WASHINGTON : 1947

For sale by the Superintendent of Documents, U. S. Government Printing Office
Washington 25, D. C. - Price 20 cents

LETTER OF TRANSMITTAL

United States Department of Labor,
Bureau of Labor Statistics,
Washington, D. C., June 1, 1947.

The Secretary of Labor:

I have the honor to transmit herewith the report on a study of employment outlook in printing occupations. This is one of a series of occupational studies, conducted in the Bureau's Occupational Outlook Division for use in vocational counseling of veterans, young people in school, and others interested in choosing a field of work.

The report was prepared by Samuel Vernoff, under the supervision of Helen Wood. Doris M. Graham performed the library research and assisted in the preparation of the report. Sections on earnings were prepared with the help of Donald H. Gerrish, of the Bureau's Wage Analysis Branch, and are based largely on data collected by that Branch. The Bureau wishes to acknowledge the generous assistance received from the Printing Industries of America (Fred J. Hartman, educational director), the Graphic Arts Association of Washington, D. C. (George I. Mallonee, executive secretary), other trade associations, and the Joint Lithographic Advisory Council; from officials of many unions; from members of the staffs of the Government Printing Office, Bureau of Engraving and Printing, U. S. Employment Service, and other Government agencies.

Ewan Clague, *Commissioner of Labor Statistics.*

Hon. L. B. Schwellenbach,

Secretary of Labor.

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EMPLOYMENT OUTLOOK IN PRINTING OCCUPATIONS

Introduction

Printing is an art, a great industry, and one of
ur chief means of communication. Developed in
ermany about five hundred years ago, printing
ade possible the extension of education. As
rinted books and pamphlets multiplied and news-
apers began to be published, they played a great
art in spreading ideas, influencing public opinion,
d aiding the people to obtain a voice in govern-
ent. Their contribution to the growth of democ-
cy was so fundamental that freedom of the press
s one of the basic rights incorporated in the first
endment to the United States Constitution.

Over 600,000 men and women made their living in the printing industries in 1946. More workers were employed in printing than in such large manufacturing industries as furniture, leather, and rubber or such important public utilities as telephone and electric-light companies. Printing is especially important as a field of employment for skilled men, affording opportunities in many different skilled occupations and, as a rule, paying better-than-average wages. Jobs are to be found in all parts of the country, in small towns as well as big cities. Many printing craftsmen are in business for themselves.

The Printing Industries

rinting plants supply us with a great variety
roducts—ranging from newspapers to greet-
ards, from books to advertising circulars, from
er money to labels.

he establishments engaged in newspaper print-
and publishing make up by far the largest
ting industry in terms of employment (see
t 1).[1] More than a third of the people work-
n the printing industries in 1939 were in news-
r shops. Furthermore, the dollar value of
produced in newspaper plants was much
er than for that of the products of any other
ing industry.

eral commercial or job printing is the second
st printing industry. There are many more
ercial shops than newspaper plants, but the
ge job shop is so small that commercial
ng as a whole has both fewer employees and
ller dollar value of output than newspaper
ng.

Periodicals and books are the next largest printing industries. Smaller industries are engaged mainly in producing lithographed items of various types, greeting cards, or gravure products, or in doing bookbinding and other bindery work. The so-called service industries for the printing trades do mainly typesetting, photoengraving, or other work for printing shops. In addition, many printing and bindery workers are employed by government agencies, libraries, and manufacturers and other firms doing some printing in connection with a business of another type. The largest printing plant in the world is the United States Government Printing Office in Washington, D. C.

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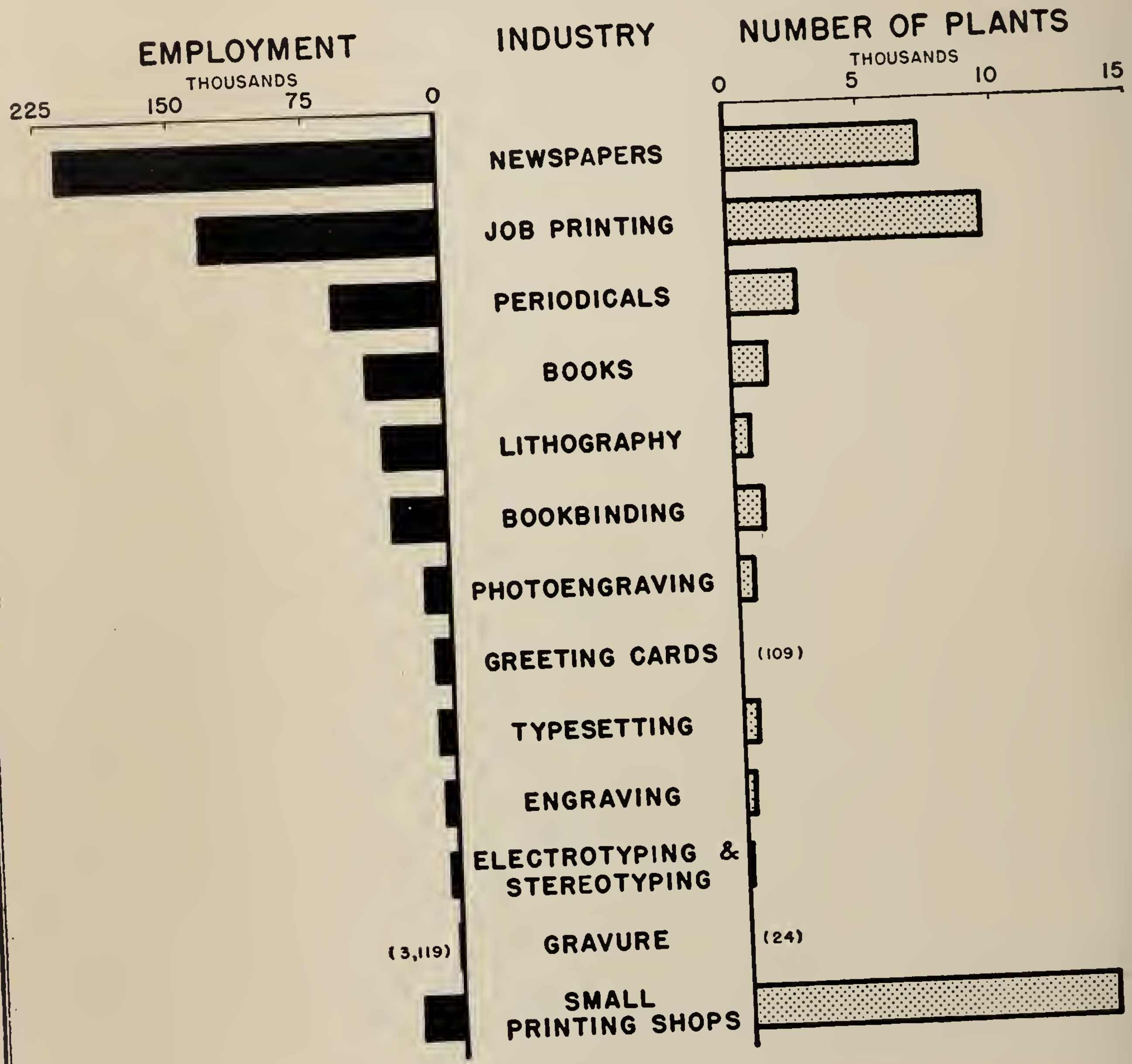
[1] The classification of printing plants in this bulletin is that used by the Census of Manufactures. It is discussed in the appendix, which also gives figures on the number of establishments, value of products, and number of proprietors and employees in each industry (see p. 30).

CHART 1

NEWSPAPER AND JOB SHOPS EMPLOY MOST PRINTING WORKERS

NUMBERS EMPLOYED AND NUMBERS OF PLANTS IN PRINTING AND ALLIED INDUSTRIES, 1939



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Source: CENSUS OF MANUFACTURES AND CENSUS OF BUSINESS
REFER TO APPENDIX FOR FIGURES AND EXPLANATIONS

great—about 39,000 in 1939, not counting shops outside the printing industries. Only one group of manufacturing industries (food processing) included more establishments than this. Some printing plants are million-dollar enterprises with hundreds of employees, but a great number of printing plants are very small. In 1939, there were about 14,000 shops (over a third of the total) with an output valued at less than $5,000 a year and often with only 1 worker, the owner himself.

Almost every small town has a printing shop of some kind—frequently a small newspaper plant which also handles any job printing needed in the community. However, a large part of the country's printing is done in 10 industrial cen-

geles, San Francisco, Detroit, Cleveland, St. Louis, Cincinnati, and Minneapolis-St. Paul. In 1939, about half of all employees in the printing and allied industries were in these centers. In job and periodical printing, and some of the smaller industries, the proportion of employees in the 10 major centers was even greater. The proportion was, however, much less (only 32 percent) in the newspaper industry, since there are a great many small local newspapers scattered throughout the country. In addition, some large plants are located in other centers, including Boston, Cambridge, Clinton, and Norwood, Mass.; Albany and Garden City, N. Y.; Rahway, N. J.; Richmond, Va.; Hammond, Ind.; and Kingsport, Tenn.

The Methods of Printing

The three main methods of printing are letterpress, lithography, and gravure.

In letterpress (or relief) printing, the letters nd designs to be reproduced are raised above the onprinting areas of the type or the press plate. Vhen the actual printing is done, ink is applied nly to the letters and designs, usually by means f an inking roller.

In lithography (or offset printing), the plate is nooth or nearly so, with both the image and non-nage areas on the same level, instead of on dif-erent levels as in letterpress and gravure work. ithography makes use of the principle that grease d water repel each other. The image areas of e plate are coated with a greasy substance to hich the greasy printing ink will adhere. On e press, the plate is moistened with water before ch inking, with the result that only the image eas take up the greasy ink from the inking roller.

In gravure (or intaglio) work, the relation be-een the printing and nonprinting areas of the te is opposite to that in letterpress. The letters l designs to be printed are cut or etched into the te and are below the nonprinting surface. Ink to be applied to the entire plate, but the sur-e is then wiped or scraped, leaving ink only he depressions. In printing, suction is created, ch lifts the ink out onto the paper.

etterpress is the oldest and by far the most mon printing process. Practically all newspapers, most books and magazines, and most commercial jobs are printed by this method. The work done by photoengraving shops (which make plates for use in relief printing of illustrations and other copy that cannot be set up in type) and by stereotyping and electrotyping shops (which produce metal duplicates of type forms and photoengravings, for use as press plates) is also part of letterpress printing.

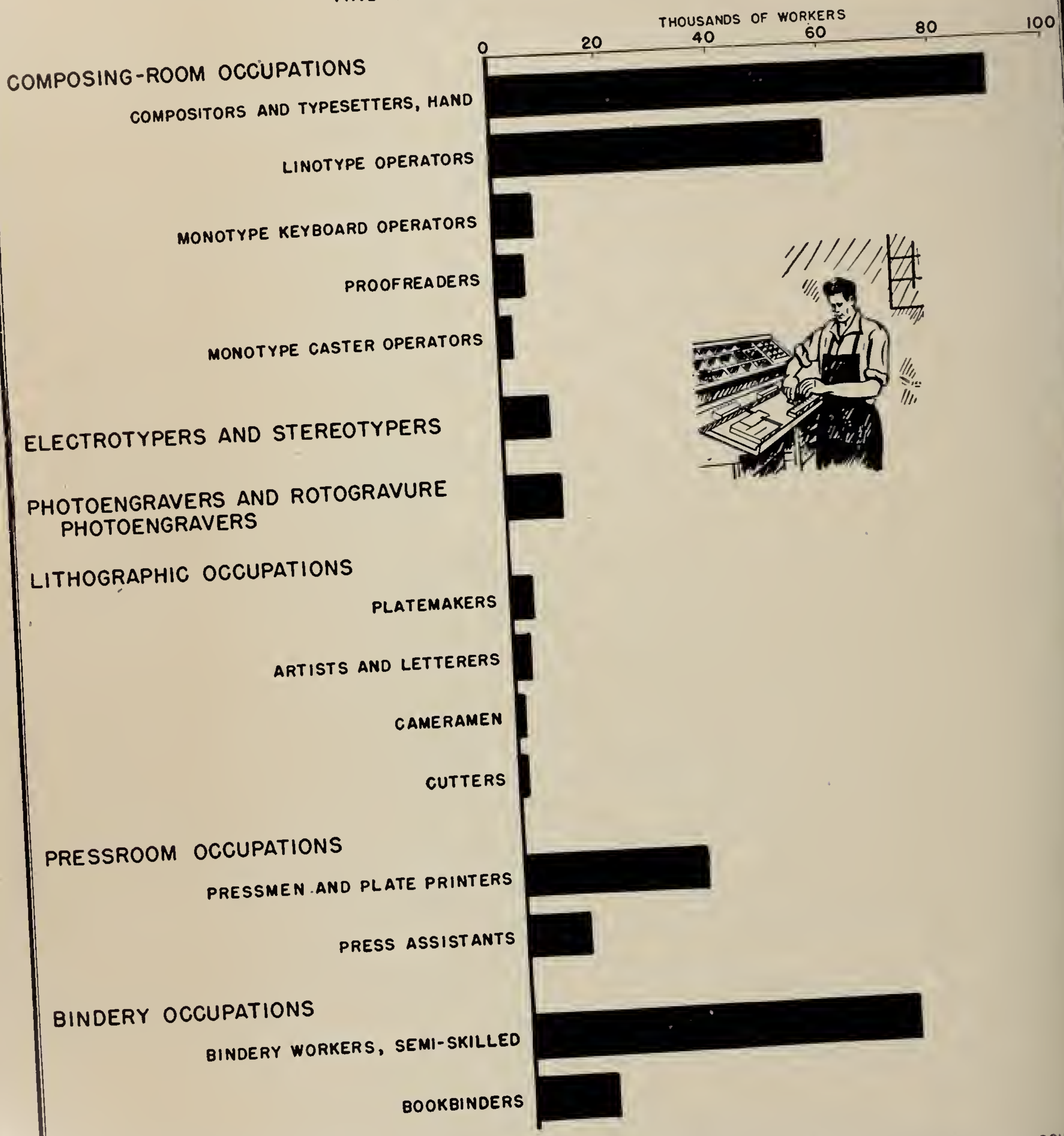
Lithography, though still much less common than letterpress work, is the most rapidly growing method of reproduction. Practically all items printed by the relief process are also produced by lithography—including, for example, books, calendars, maps, posters, labels, office forms, sheet music, and even newspapers. Almost all printing on metal and much of the printing on rough paper is done by this method.

Gravure printing, the least common process, is of two main types: rotogravure (in which press plates are made from pictures by a method based on photography) and hand or machine engraving. The beautiful picture supplements of some Sunday newspapers are the best known rotogravure products, but some magazine and other pictures are printed by this means. The process is used also in some printing on metal and metal foil. Hand or machine engraving is used in making engraved stationery, greeting cards, and similar products.

CHART 2

HAND COMPOSITORS AND LINOTYPE OPERATORS ARE LARGEST SKILLED TRADES

EMPLOYMENT IN THE IMPORTANT SKILLED AND SEMI-SKILLED PRINTING AND BINDERY OCCUPATIONS, 1940



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BASED ON 1940 CENSUS OF POPULATION AND OTHER SOURCES

The all-round printer, skilled in typesetting and also in operating a press, was the typical printing worker up to the closing years of the nineteenth century. Some craftsmen who are adept in both these kinds of work are still employed in small newspaper and job shops. In the printing industries as a whole, they are, however, greatly outnumbered by specialized craftsmen and semiskilled employees.

The largest group of skilled and semiskilled workers are in the composing room, the department responsible for typesetting. Other major groups are the printing pressmen and their assistants, photoengravers and rotogravure photoengravers, electrotypers and sterotypers, lithographic workers, and bookbinders and bindery vorkers. Chart 2 shows the number of people mployed in 1940 in each of the main occupations n these categories.

Besides the occupations shown in chart 2, there re many other small groups of skilled or semi- killed printing workers. In some plants, espe- ially in the newspaper industry, the composing- oom work force includes Ludlow operators, who in a typecasting machine known as the Ludlow ypograph. Big composing rooms nearly always nploy one or more "stonemen," who place the iges of type in the large type forms in which they ave the department. Another small group of orkers found in large plants are the mechanics io specialize in repairing and adjusting typesetting machines, printing presses, or bindery machines. Steel- and copper-plate engravers, on the other hand, work mainly in small engraving shops. They cut or etch lettering and designs in the plates, by hand or machine.

Most of the occupations indicated in the chart and the preceding paragraph are skilled jobs. The main exceptions are press assistants and bindery workers whose jobs are semiskilled, as are those of many monotype caster operators and some lithographic workers. Proofreaders in nonunion shops are sometimes classed as clerical employees.

In skilled occupations practically all the workers are men. However, many of the semiskilled workers, especially in binderies, are women. Negroes are rarely employed in skilled jobs, except in shops which print newspapers or other items for the Negro community. A greater number are employed in semiskilled occupations.

To complete the picture of the printing work force, the professional, administrative, clerical, and unskilled employees of printing plants should be mentioned. The chief professional workers are the reporting and editorial staffs of newspapers and other houses that do their own publishing. In addition, all sizable plants have executives, estimators, salesmen, stenographers and other clerks, and laborers of various types. These employees usually have duties much like those of comparable personnel in other industries.

Employment Prospects

There will be many thousands of job openings printing during the next few years, including uch larger number of training opportunities n usual.

t the end of World War II there were marked or shortages in almost all occupations. How- r, before the war (in 1940), about 1 out of ry 10 skilled and semiskilled printing workers unemployed. This situation quickly changed r Pearl Harbor, when many workers went into armed forces and into war industries. In ad- on, there were, of course, some retirements and hs. Replacements could not be obtained in cient numbers, because of the Nation-wide labor shortage. As would be expected, it was particularly hard to recruit young men for training.

Since the end of the war, employers have been rehiring former employees and have taken on a good many new trainees. The number of production workers employed has risen steadily (by about a fourth between September 1945 and December 1946 in the printing industries as a whole). There are still shortages of journeymen in many parts of the country, however. The outlook is for greater and greater activity and employment in all branches of printing, at least during the next few years, because of growing demands for printed products such as advertising materials and text-availability of new machinery and supplies, and other factors. Unusually large numbers of job openings owing to retirements and deaths may also be expected for a while, because of the postponement of retirements during and since the war and the fact that the average age of journeymen is therefore higher than before. For all these reasons, it will generally be easy for skilled workers to get jobs during the years immediately ahead. In addition, there should continue to be a good many training opportunities, although the numbers of apprentices who may be employed at any time are limited by the ratios of apprentices to journeymen established by union agreements. Veterans with related civilian or military training and experience will generally be given preference for apprentice positions. Some of them should be able to obtain advanced status as learners, instead of being hired as beginners.

Openings for newcomers will probably be fewer hiring may already have been reached. However, workers who now have jobs in the printing field or who obtain them "while the getting is good" are likely to be able to hold them indefinitely. Printing employment tends to be less affected by declines in general business activity than employment in manufacturing as a whole. Moreover, the long-run trend in employment is upward in most printing occupations.

In general, the largest number of job openings will be in the printing centers previously mentioned (p. 3). Opportunities will, however, be more scattered in some branches of printing than in others. They will, for example, be more widespread in newspaper than in job printing; but in lithography, they will be concentrated in the major centers to a greater extent than in either of these industries. In all branches of printing, competition for jobs is likely to be keenest in largest cities.

Earnings

Earnings tend to be higher in printing than in many other industries, owing to the large number of skilled workers employed, the strong influence of the printing unions, and other factors. In 1940, wage earners in book and job shops averaged 81 cents an hour; newspaper and periodical plants, $1.03. By comparison, the average for all manufacturing was only 66 cents an hour. In no other manufacturing industry for which information was available were average earnings as high as in newspaper and periodical plants. This was still true during 1946, when earnings averaged $1.21 an hour in book and job shops and $1.46 in newspapers and periodicals, compared with $1.08 in all manufacturing.

What an individual printing worker can expect to make varies greatly from one occupation to another, as well as from city to city, and in other ways. The best source of information on wages in different occupations are union wage scales. These scales are the minimum rates paid under collective-bargaining agreements and are usually uniform for each occupation in a given locality. They are, in general, representative of wage rates in skilled and semiskilled printing trades, which are all highly organized.[2]

In July 1946, union wage scales averaged about $1.58 an hour. For the skilled workers, rates were generally between $1.30 and $2.00 an hour; for the others, they were usually between 70 cents and $1.30. Since July 1946, wage scales have increased further in many large cities. Chart 3 shows the average wage rates for most of the major trades. Later sections of this bulletin give additional information on wages in these and other occupations. A detailed table on union wage rates in different cities is included in the appendix (p. 31).

The wage scales that have been cited are the basic rates received by employees on day shifts. In most printing plants, as in many other manufacturing establishments, workers are paid time and a half for overtime work not only above a standard number of hours a week but also above 8 hours a day. The standard workweek is usuall 37½ hours in newspaper plants. In other print ing shops, it is usually 40 hours. Work on Sun days and holidays is customarily paid for at time

---

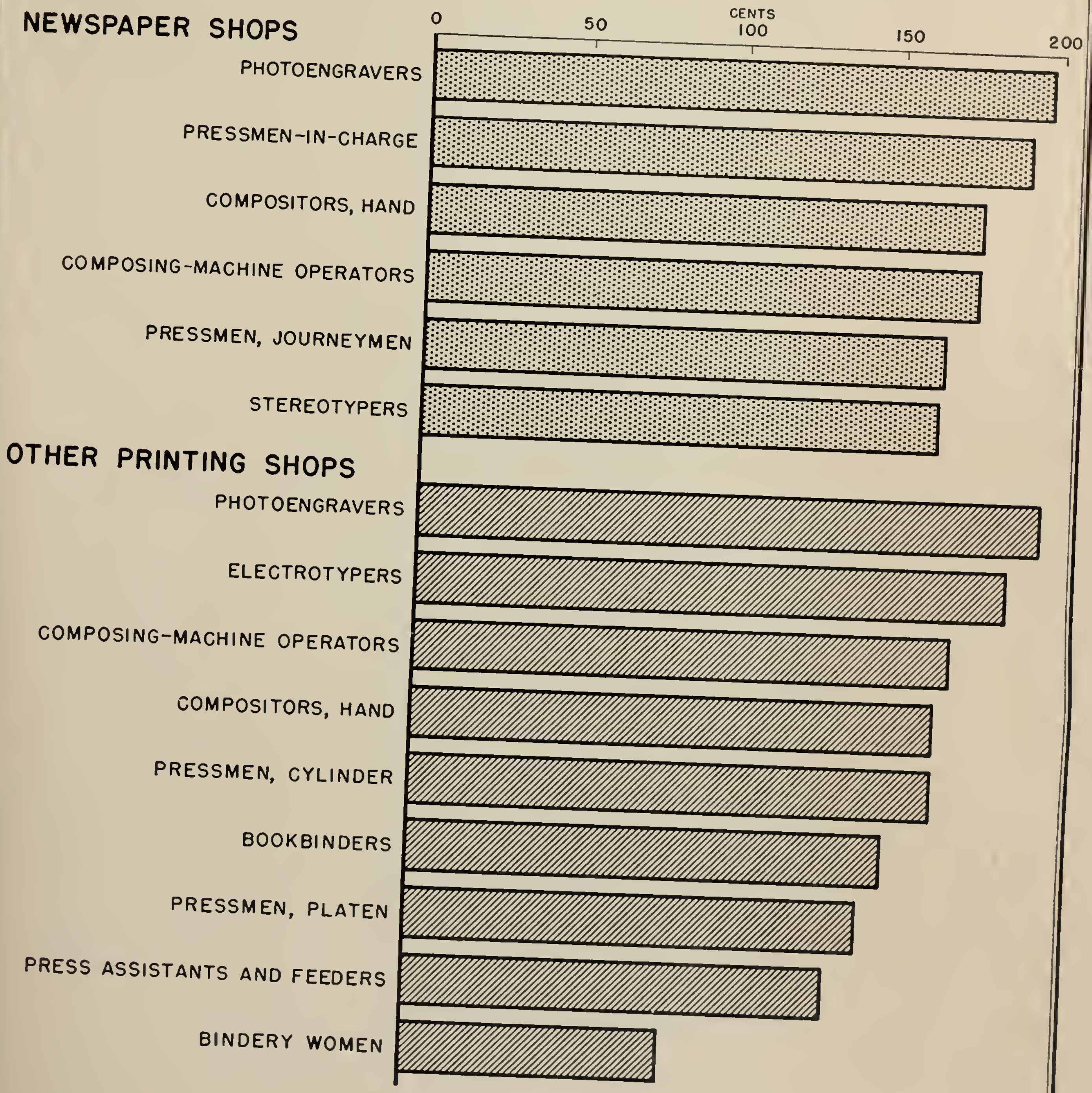
[2] Union wage scales are not available for unskilled job Moreover, they do not include premium pay for overtime or oth special payments or bonuses. As a result, they are not co parable with the average earnings figures given in the precedi paragraph, which include all types of wage payments and cov all wage earners.

CHART 3

WAGE RATES IN PRINTING TRADES

AVERAGE UNION RATES PER HOUR IN NEWSPAPER AND OTHER PRINTING PLANTS, FOR SELECTED OCCUPATIONS

JULY 1, 1946



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of printing. In newspaper plants, the standard workweek often includes Sundays and work has to go on as usual on holidays; however, time and a half or double time is paid for these days only when they are not part of the employee's regular shift. Night-shift workers in union shops generally receive about $5 extra for a 37½- or 40-hour week. There are many other types of provisions for overtime and special rates of pay.

How much workers earn during a year depends not only on their rates of pay but also on how are fortunate in having steadier employment and earnings than those in many other industries. Earnings tend to be especially steady in newspaper work.

Paid vacations are called for by most wage agreements. The majority of union workers receive 2 weeks' vacation with pay after 1 year of employment. In addition, the printing unions are noted for welfare provisions for their members: for example, pensions, sanitarium facilities, and educational programs.

Labor Organization

Workers seeking jobs in printing trades will find that the printing unions not only influence wages and working conditions but often have a strong voice in determining hiring policies. Many plants are covered by closed-shop agreements, under which all workers in specified trades have to belong to the appropriate union. Union members are also often employed in plants having no union contracts.

There are six major unions of printing workers. Five are craft unions affiliated with the American Federation of Labor—the International Typographical Union, International Printing Pressmen's and Assistants' Union of North America, International Photo-Engravers' Union of North America, International Stereotypers' and Electrotypers' Union, and the International Brotherhood of Bookbinders. The sixth, the Amalgamated Lithographers of America, organizes workers in all lithographic occupations. It is a member of the Congress of Industrial Organizations.

Most typesetters and other composing-room workers are represented by the International Typographical Union. In newspaper and job printing, either shop foremen who are themselves union men or the union shop chairmen usually do the hiring, disciplining, and firing of composing-room employees, in accordance with union rules. Pressroom workers, too, are usually covered by union agreements. Practically all the letterpress and rotogravure pressmen who are organized belong to the International Printing Pressmen and Assistants' Union. The large majority of lithographic and offset pressmen, as of other lithographic workers, are in the Amalgamated Lithographers of America.

Photoengravers are almost completely organized by the International Photo-Engravers' Union of North America. The proportion of stereotypers and electrotypers unionized by the International Stereotypers' and Electrotypers' Union is likewise extremely high.

Although employees in binderies are not so strongly organized as the groups discussed in the last two paragraphs, many skilled bookbinders and other bindery workers are represented by the International Brotherhood of Bookbinders. Th proportion of workers belonging to this union i higher among journeymen than among less-skille employees.

How To Enter Printing Occupations

Apprenticeship is the accepted way of entering skilled printing occupations. With very rare exceptions, it is the only means by which one may qualify as a journeyman in a union shop.

Printing apprenticeships usually last from 4 to 6 years, depending on the occupation and whether the shop is union or nonunion. The training program covers all phases of the particular trade an almost always includes classes in related technic subjects as well as training on the job. When a apprentice starts out, he is usually paid 30 or percent of the wage rate for journeymen. Ho ever, his pay is increased once or twice a year, unt in the final year or half-year of training, he

Men who have had some experience in the trade, in either civilian life or in the armed forces, can often obtain credit for this. They will then start out at a wage above the beginning apprentice rate, and the length of time before they become journeymen will be reduced. Veterans who qualify under the GI bill of rights may also receive allowances from the Federal Government during part or all of the training period.

To be eligible for apprenticeship, applicants are generally required to be 18 (though sometimes only 17) years of age and not over 30. A physical examination is usually given to find out whether the applicant is free from communicable diseases, has eyesight adequate for the particular occupaion, and is in good enough physical condition to lo the work which will be involved in his job. Exceptional physical strength is rarely required. Moreover, printing is, on the whole, a relatively good field of employment for handicapped people. A considerable number of workers with speech or earing defects—even some who are totally deaf—re employed, particularly as linotypists and comositors. Men who have lost 1 or both legs or do ot have the use of all 10 fingers have proved satisctory in some composing-room occupations. In eneral, success in a job depends on the individual's ility to do the work and to adjust himself to ecific working conditions. Therefore, handipped people should not consider themselves aumatically disqualified for employment in the dustry but should seek competent professional vice.

Education is another factor which employers nsider in selecting apprentices. High-school aduation is usually required and always prered. A thorough knowledge of spelling, punction, and grammar is essential for most trades.

desirable. If a person had printing courses in high school (thousands of junior and senior high schools offer such courses as a part of their industrial arts programs), this will also be greatly in his favor. In addition, courses in art, such as drawing, design, color, and lettering, are helpful for many kinds of printing work.

Information on opportunities for apprenticeship or other types of printing employment in a particular locality may be obtained from several different sources. Applicants may go to the nearest office of their State employment service, affiliated with the U. S. Employment Service, or to any printing plants in the neighborhood (the addresses can be obtained from the classified section of the local telephone directory). Local unions and local employer associations can be of great assistance. If none are listed in the telephone directory, an applicant may write to the national headquarters of these organizations (the addresses are given in the appendix, p. 33) and ask them to refer the letters to their nearest branches. Editors of hometown newspapers can also give valuable information and advice. Veterans may find out about opportunities for on-the-job training and other questions at veterans' information centers or offices of the Veterans Administration or from veterans' representatives in offices of their State employment service.

The employment outlook in many important skilled and semiskilled occupations is discussed in the following sections of this bulletin, which also presents information on the nature of the work, qualifications for employment, and earnings in each trade.[3]

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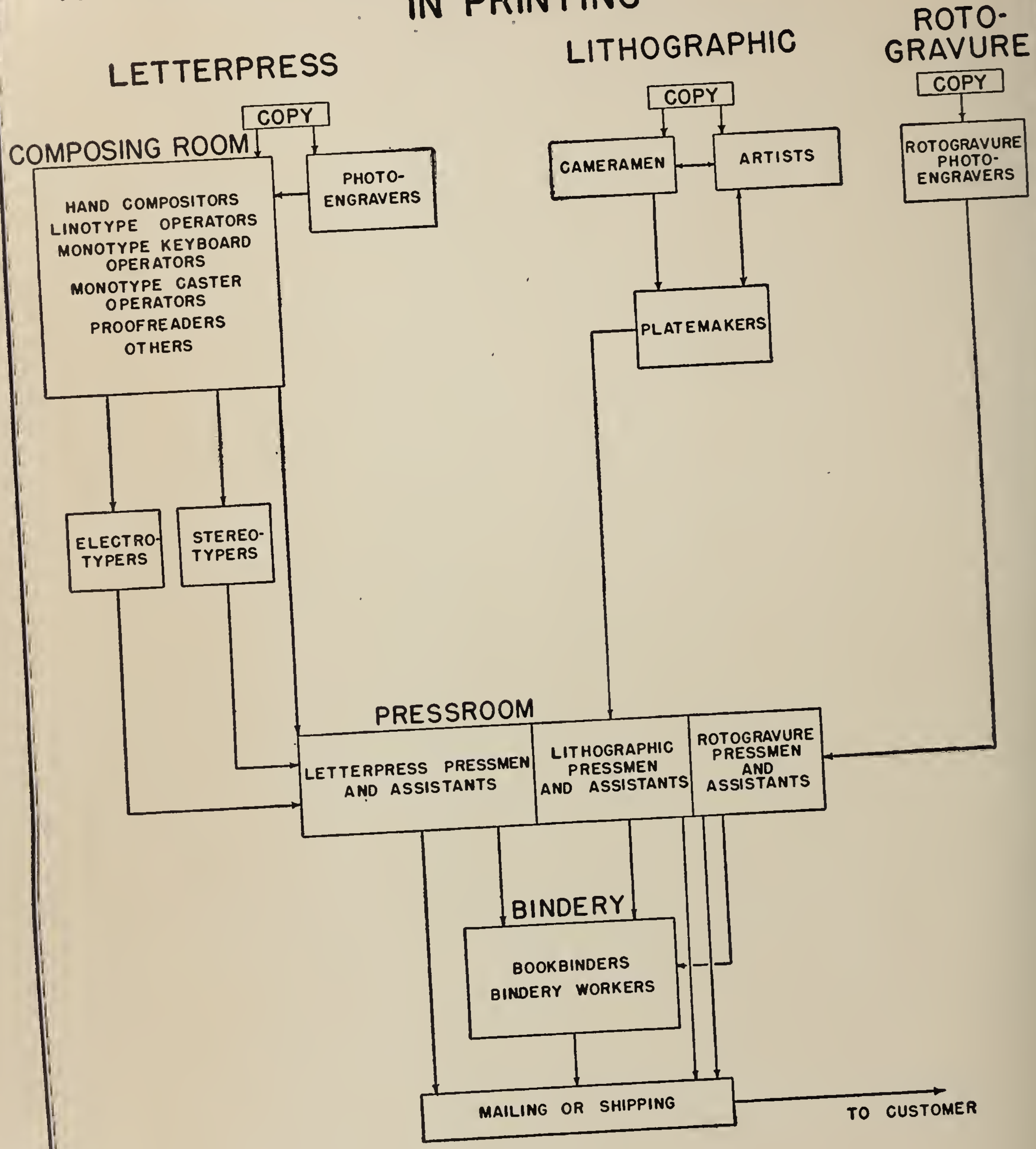
[3] A list of books and pamphlets, which contain additional information on printing occupations and are available in many public libraries, is given in the appendix (p. 34).

CHART 4

A GENERAL PICTURE OF THE FLOW OF WORK IN PRINTING



UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS

Composing-Room Occupations

Copy to be printed by the letterpress process starts its trip through a printing plant in the composing room, as shown in chart 4. There the type s set and assembled in type forms, ready for the pressroom—or for electrotyping or stereotyping, f printing is to be done from press plates instead of directly from the type forms.

Hand Compositors and Typesetters

The oldest and largest composing-room occupa- ion is that of hand compositor or typesetter. About 90,000 of these journeymen printers were mployed in 1940. In some small shops, all the ype is still set by hand. This involves setting ach line of type in a “composing stick”—letter y letter and line by line (as shown in the accom- anying picture)—and, when the stick is full, iding the completed lines onto a shallow metal ay or “galley.” In many shops, all “straight atter” (such as you are now reading) is set by achine, but hand compositors are still needed to t some of the type required for headlines, titles, d other special work, and to assemble the ma- ine- and hand-set type. Taking proofs of type at has been set (that is, printing a few copies on proof press), checking the proofs against the iginal copy, and correcting errors in typesetting e among the other duties sometimes performed compositors, particularly in small shops. These rkers may be responsible also for page make-up rranging type and any needed engravings into ges) and for locking the completed pages into rms. In large plants, however, page make-up usually done by special “make-up men,” chosen m among the compositors, and the type forms generally locked up by “stonemen.”

ll the major branches of printing—newspaper, , book, and periodical—employ large numbers hand compositors. Smaller numbers work in er kinds of printing shops or in service shops ng typesetting on contract for printing estab- ments. A good many men in the occupation e their own small job or service shops.

Qualifications for Employment

A 6-year apprenticeship is usually required for employment as a journeyman compositor or typesetter. In union shops, apprenticeship is always of this length, except in the case of some veterans with military experience related to printing and apprentices for whom shop foremen recommend shorter training periods in recognition of their outstanding abilities. The apprenticeship includes a considerable amount of classroom and correspondence study. Printed manuals of instruction have been prepared by the International Typographical Union and the Printing Industry of America; these are used not only in apprenticeship programs but also in vocational schools.

Besides having the educational qualifications needed for all skilled printing occupations (p. 9), a compositor should be good in arithmetic, so that he can calculate spacing of type on pages. A knowledge of English is especially important in this occupation, since the worker should be able to catch errors in copy before setting type. Imagination and artistic ability in planning page lay-outs are assets which may help him to advance to lay-out work or make a success in business for himself.

For a job in this trade, the worker should be in good enough physical condition to enable him to be on his feet 8 hours a day and move around considerably. He should also be able to use hands, arms, and eyes constantly.

Employment Prospects

Employment opportunities for journeymen compositors are expected to be good in most parts of the country during the next few years. In some areas, however, an oversupply of craftsmen developed after VJ-day, and experienced men are still available for employment in a few localities. For inexperienced men, there will be large numbers of openings as trainees for several years. After that, training opportunities will become

Courtesy of U. S. Government Printing Office, Washington, D. C.

Hand compositor setting type in a composing stick.

much fewer. Contrary to the upward trend in most printing occupations, employment in this field will no doubt tend to decrease (as it was doing before the war) owing to continued advances in machine typesetting and to other factors. The decline will be slow and will probably not involve many lay-offs. Men in the occupation, including those who enter during the current period of expansion, should have a good chance of holding their jobs indefinitely, especially if they have machine (linotype or monotype) as well as hand skills.

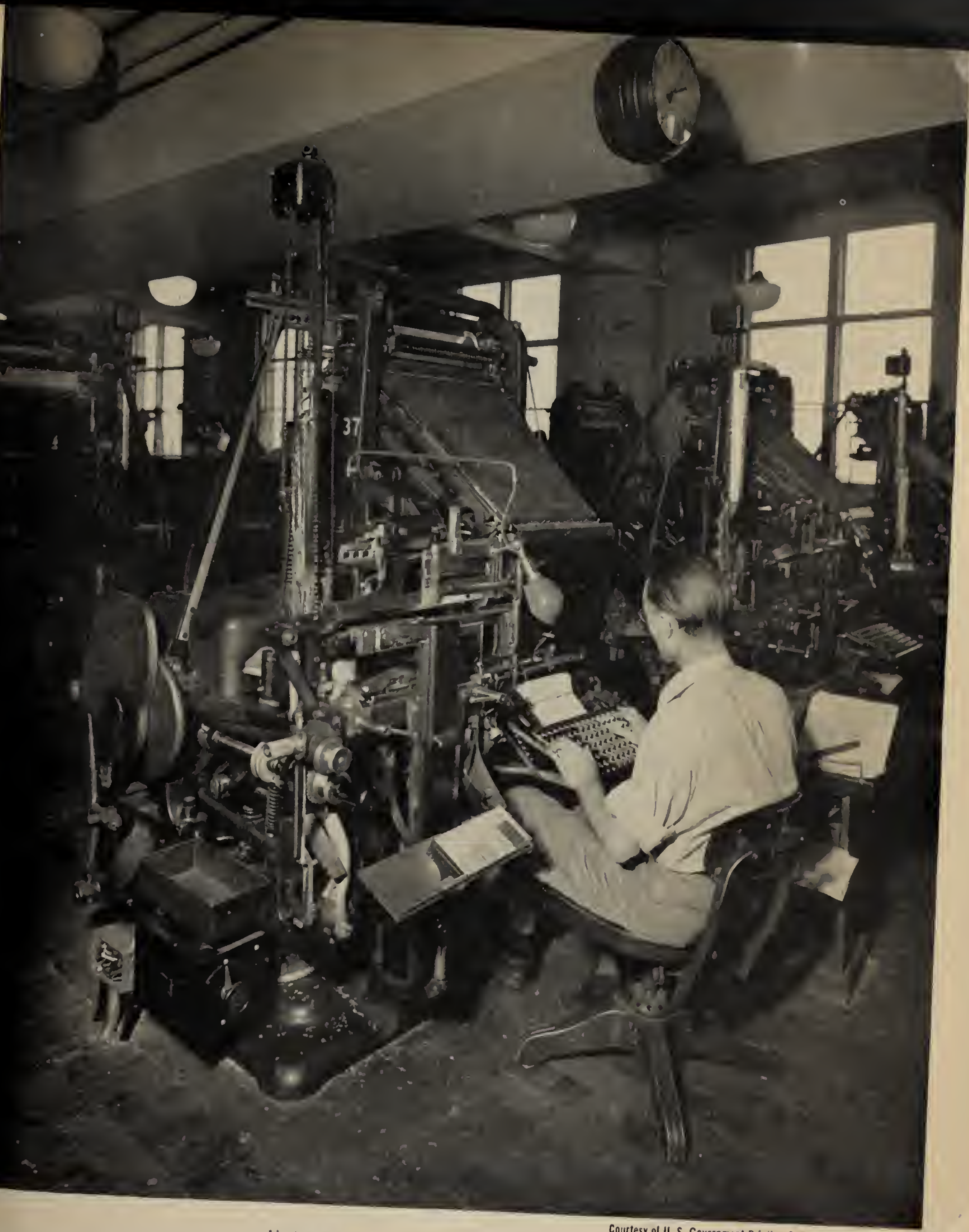
For years there have been so many small general printing shops that competition for business has been keen in most parts of the country and earnings have often been very inadequate. Some veterans and others wishing to go into business for themselves may, however, find opportunities during the next few years, as machinery and paper become more readily available. Generally, those with good all-round civilian experience will have the best chance of success. Men with composing-room skills plus supervisory and managerial abilities will also find some immediate openings in salaried positions with large and well-established firms and, in general, good opportunity for advancement to such positions.

Hand compositors are among the better-paid printing trades workers. Union wage rates in this trade averaged $1.85 an hour in newspaper shops and $1.65 an hour in other shops in July 1946. Both these averages were well above the average union scale for all printing trades ($1.58 an hour). Wage scales for compositors in newspaper plants ranged from $1.16 in Binghamton, N. Y., to $2.08 in Chicago, Ill. In other shops, wage scales ranged from $1.01 an hour in Portland, Maine, to $1.86 in Seattle, Wash.

Linotype Operators

In the late 1880's, a new machine, which was to revolutionize the composing room and the printing industries generally, came into use. This machine, the now famous linotype, sets type very much more rapidly than is possible by hand (as does the "intertype," a similar machine invented some years later). Reading from copy clipped t the machine's copyboard, the linotype or intertyp operator selects the letters and other character to be printed by operating a keyboard which ha about 90 keys. After he completes each line, h works a lever, and the machine then casts the line of type automatically in solid strips known a slugs. Other duties performed by the operator i clude removing type from the machine, puttin new pigs (blocks) of type metal into the meltin pot, and making adjustments. In shops having considerable number of linotype machines, ho ever, a machinist is usually employed who mak all but the minor adjustments directly connect with machine operation.

As linotype and intertype machines have co into wider and wider use, the number of operat needed has increased, until they are now the seco largest group of composing-room workers. I 1940, about 60,000 of them were employed. T largest numbers of such workers are in newspa and job shops, but some are employed in book a periodical houses and in service shops doing m chine typesetting for printing firms. Some li type operators have their own service shops.



Courtesy of U. S. Government Printing Office, Washington, D. C.

Linotype operator at the keyboard of a linotype machine.

Like hand compositors and typesetters, these machine operators are skilled journeymen. The apprenticeship requirements for their occupation are usually the same as for hand compositors, except that in the last 6 months of training the linotypist apprentice specializes and receives training in machine work. Qualifications needed by apprentices are much the same for machine as for hand typesetting. However, there is less need for artistic ability and more for mechanical aptitude, to help the linotypist understand the mechanism of his machine and make adjustments.

Employment Prospects

The employment outlook for skilled linotype (and intertype) operators during the next few years is very good in the country as a whole, although there may be an oversupply of workers in a few local areas, as in the case of hand compositors. There will also be a great many training opportunities in the next couple of years, and fewer openings for newcomers thereafter. The long-range outlook is, however, more favorable than for hand compositors. Employment of linotype operators has so far tended to rise. This upward trend is expected to continue for an indefinite number of years, although eventually technological and other factors may lead to a stable or even a declining trend in employment.

Earnings

Linotype operators tend to have much the same rates of pay as hand compositors. In July 1946, the average union scale for linotypists in newspaper shops was $1.85 an hour; in others, $1.69. Wage rates in newspaper plants ranged from $1.15 in York, Pa., to $2.08 in Chicago. Of the other shops, those in Portland, Maine, had the lowest scale, $1.01; those in Detroit, the highest, $1.85.

Monotype Keyboard Operators

Photograph by U. S. Department of Labor.

Journeyman operating monotype keyboard.

Another step forward in typesetting was the invention of the monotype keyboard and monotype casting machines. With these machines, it is possible to cast individual letters and other type characters automatically (instead of solid lines, as in linotyping) and to assemble the type automatically in long shallow trays known as galleys. The monotype has a keyboard similar to that of a typewriter, but with some 200 keys. Unlike the linotype, which does the whole typesetting job, the monotype keyboard machine only perforates a narrow roll of paper for use later in the separate casting machine.

The workers who operate the keyboard and make the many different adjustments needed ar called monotype keyboard operators (sometime simply monotype operators). They are a rathe small occupational group; only about 6,000 wer employed in 1940. Most of them work for boo or periodical houses; some few, for job and servic shops.

In general, qualifications for employment ar the same as for linotype operators.

Employment Prospects

In the country as a whole, qualified journeyme should find it easy to get jobs in this occupati for the next 2 or 3 years. In addition, employe will, for a few years, need many more traine than usual. The actual number of training oppo tunities will not be large, however, because t occupation is so small.

Openings are likely to become fewer after t next few years, as in other composing-room occ pations. Employment will probably tend to r indefinitely, however.

Earnings

Wage rates for monotype keyboard operat are generally the same as those for linot operators.

Photograph by U. S. Department of Labor.

Monotype caster operator adjusting position of newly cast type as it comes out of the machine.

Monotype Caster Operators

Vorkers in this occupation operate the mono-
pe casting machines previously referred to,
ich cast and assemble type automatically,
ded by the perforations in the rolls of paper
pared by the monotype keyboard operators.
e caster operators not only adjust and tend the
hines but usually are required to know the
hanism in order to make repairs. In shops
ing several casting machines, the operator
supervise unskilled workers who tend the
hines.

p to the present time, only one caster operator
been employed to about every three keyboard
ators, taking the printing industries as a
le. The occupation is therefore very small, employing only about 2,000 workers in 1940. The types of plants using caster operators are of course the same as for keyboard operators—chiefly book and periodical houses and, to some extent, job and service shops.

Qualifications for Employment

Most newcomers to this occupation learn to operate the machine at a monotype school. Training is then rounded out on the job. This experience is especially needed for the most skilled and best paying jobs in the occupation, which require an understanding of the mechanism of the caster and ability to make adjustments and repairs. Persons entering the occupation should be physically strong and in good health.

This is another occupation in which employment opportunities for experienced workers should be good, especially during the next few years. Employment is expected to rise at an even faster rate than among keyboard operators. There will be many more openings for newcomers than in the past. There is room, however, for only a limited number of new workers in this small occupation, and competition for the openings is likely to be keen.

Earnings

Most monotype caster operators have about the same wage rates as linotypists (p. 14). Those without responsibility for adjustments or repairs earn less.

Proofreaders

To guard against errors in the final printed product, it is customary to make proofs of type set-ups and read these carefully against the original copy. In small shops, journeyman typesetters and advanced apprentices may do the proofreading, which is considered very responsible work. In most large plants, however, particularly in the newspaper, book, and periodical industries, there are special proofreaders. Altogether, about 5,000 such workers were employed in 1940, including a good many women.

The work is done in one of two ways. Either the proofreader puts the proof and the copy side by side and reads one against the other, a line at a time, by himself, or he has the material read to him by a copyholder while he follows the proof. Where there are errors, he notes the corrections needed, using standard proofreaders' marks.

Workers usually enter the occupation from another composing-room job or a front-office job with the same company. Skilled compositors and composing-machine operators who are no longer able to do typesetting at the speeds required may take positions as proofreaders. Those who do so are allowed to keep their journeyman status, at least in union shops.

Photograph by U. S. Department of Labor.

Proofreaders following copy as copyholders read to them.

Knowledge of grammar, spelling, and punctuation is very important to help the proofreader find and correct errors. The work requires good hearing and good eyesight.

Employment Prospects

Increased printing activity is expected to mean rising employment of proofreaders in the next few years and also in the long run. Though most of the jobs will be filled by workers already in the printing industries, there will be a few openings for veterans and others with experience related to proofreading. Persons completely new to the fiel will have little if any chance for jobs.

Earnings

In union shops, proofreaders generally have th same wage scales as hand compositors (p. 12). I nonunion shops, however, the wage rates for proo readers, particularly women, are likely to be lowe In January 1942, for example, straight-tin hourly earnings were typically 95 cents to $1. for men but only 50 to 80 cents for women, takin union and nonunion shops together. Since th time, there have been sizable wage increases in th as in other printing occupations.

Electrotypers and Stereotypers

From the composing room, type forms often go to the electrotyping or stereotyping department (or to an independent service shop doing such work for printing firms). Electrotyping and stereotyping are two different processes, which have the same purpose—making metal press plates from the type forms. One reason why it may be necessary to use such plates, instead of printing lirectly from the forms, is that a number of dupli- ate plates may be needed (any number can be urned out by either electrotyping or stereotyp- ng). When a large edition of a book or magazine s printed, several plates must be used one after he other, to prevent the printing surfaces from ecoming too worn to make clear impressions. By eans of duplicate plates, printers can also use veral presses on the same job at the same time d thus finish a big run quickly. This is especially portant in daily newspaper plants, which have rush many thousands of papers onto the streets th news that is no more than an hour or two l. Furthermore, the rotary presses used in many plants require curved plates (which can be de by either process), and type forms are always

n electrotyping, a wax mold of the type form sually made, though lead or some other ma- al may be used instead. To make a wax mold, electrotyper first lays the type form on the of a power molding press. He then places on of the press a metal sheet coated with wax applies the pressure, thus obtaining an im- sion of the type form in the wax. The next r steps are to give the mold a thin coating opper by pouring copper-sulphate solution it (sometimes nickel is used instead) and to nd it in a battery tank filled with the same ion. When the current is turned on, a shell pper is deposited on top of the copper coat- When stripped from the mold, backed with , carefully finished, and mounted, this shell es a plate ready for use in the pressroom.

stereotyping process is much simpler, quick- d less expensive than electrotyping, but it ot yield as fine a plate. Stereotypers make of papier mâché (a strong material com- of paper pulp), instead of wax or lead. work involves placing a damp papier mâché pad on top of the type form and running both through a rolling machine. After the paper mold has been dried, it is used in casting a composition-lead plate, which needs only trimming to be ready for the pressroom.

Journeymen electrotypers and stereotypers must know how to handle all the tasks involved in their respective processes, although in practice they are often assigned to only one phase of the work.

Neither occupation is a large one. In 1940, only about 7,500 or 8,000 journeymen were employed in both trades. Electrotypers work mainly in large book and periodical plants or shops (often owned and run by one or two journeymen) which service the book and periodical industries. Stereotypers work mainly in newspaper plants or shops servicing newspaper publishers. Some large commercial shops and other kinds of printing plants also use a few men in these occupations.

Qualifications for Employment

To qualify for either type of work, a 5- or 6-year apprenticeship is usually required. The training is quite different for each trade; rarely do journeymen change from one occupation to the other.

Young men who wish to become electrotyper or stereotyper apprentices need the same educa-

Electrotyper placing wax mold on top of type form which is on bed of power molding press.

Photograph by U. S. Department of Labor.

ing trades (p. 9). In addition, mechanical training and courses in chemistry and metallurgy are useful.

In work rooms where electrotyping or stereotyping is done, there are frequently fumes and dust and the temperature and humidity are often extremely high. Moreover, the work involves lifting of very heavy plates and type forms. People entering the occupations should be strong enough and in good enough health to work under these conditions.

Employment Prospects

Journeyman electrotypers and stereotypers, like most other groups of skilled printing craftsmen, will generally find it easy to get jobs in the immediate future and will have a good chance of holding their jobs indefinitely. Some men with all-round experience and managerial abilities will be able to go into business for themselves, with fair chances of success. There will also be more training opportunities than usual at least for a year or two. Openings for both journeymen and trainees will, at best, total no more than a few hundred a year, however—including vacancies due to turnover and also the new jobs which are expected to arise in the immediate future and over the long run.

Jobs and business opportunities for electrotypers and stereotypers are available in fewer localities than for most other groups of printing workers. They will seldom be found outside large industrial areas and will be mainly in or around New York, Chicago, Philadelphia, Detroit, and Cincinnati.

Earnings

Wage rates for electrotypers tended to be higher than those for any other occupation except photoengravers. The average union scale for electrotypers was $1.87 an hour in July 1946.

Photograph by U. S. Department of Labor.

Stereotyper holding mold which he has just removed from newly cast lead plate. He is about to pull the plate from the machine (an automatic tubular vacuum casting machine). Hot lead plate shows white in picture.

Stereotypers (in newspaper printing) had considerably lower pay, the average rate being $1.7 an hour.

The pay of electrotypers and stereotypers varie rather widely from one city to another. The lowest union rate for electrotypers in July 1946 wa $1.15 an hour in Nashville, Tenn.; the highe $2.10 in New York City, Chicago, and Newar Rates for stereotypers ranged from $1.15 an ho in Little Rock, Ark., to $2.00 in San Francisc Calif. Stereotyper rates also varied considerab from one branch of printing to another; the co paratively few men in periodical printing tend to have the highest pay.

Photoengravers and Rotogravure Photoengravers

Photoengravers enter into the printing process when copy to be reproduced by letterpress includes pictures or designs. As has already been mentioned, the photoengraving department supplies the composing room with any needed plates of illustrations and other material that cannot be set up in type. On these plates, the printing surfaces stand out in relief above the nonprinting spaces, as do the letters on the accompanying type.

Rotogravure photoengravers also make plates for use in reproducing pictures, but these are gravure plates with the image etched below the surface. The printing has to be done on special rotogravure presses, and often the entire process, from preparation of the plates through printing, is car- ied out in separate plants specializing in this kind of work.

Photoengravers

Photoengravers are skilled journeymen, able to andle all the operations involved in their process. ometimes, the entire job of producing a plate is one by one man. More often, however, especially large shops, the work is divided among a num- er of photoengravers, who may then be known by ich titles as photographer, printer, etcher, fin- her, router, blocker, or prover, according to the rticular phase of the work handled.

The photographer starts the process by photo- aphing the material to be reproduced, using the cessary screens or color filters, and develops the gative. Making a print from the negative on a etal plate coated with sensitized solution is the of the printer. Since the coating over the age areas of the plate is hardened by exposure light during the printing process or by further emical treatment, these areas are protected inst the acid into which the plate is put by etcher. The background areas are, however, ned away by this acid, leaving the image standout in relief. After that, there are still a few e operations to be carried out—including fin- ng (careful inspection and touching up with d tools), routing (cutting away metal from the printing parts of the plate to prevent them touching the inking roller during printing), blocking (mounting the engraving on a wooden block to make it the right height), and proving (printing a sample copy on a proof press).

Somewhat less than 10,000 men were employed as photoengravers in 1940, including both all-round men and specialists. The largest number work in service shops whose main business is making photoengravings for use by others; many journeymen have their own shops. Newspaper plants, book and periodical houses, and the United States Government Printing Office and Bureau of Engraving and Printing also employ considerable numbers of photoengravers.

Qualifications for Employment

A 6-year apprenticeship is generally required to become a journeyman. The training covers all phases of the process and includes a large amount (864 hours) of classroom instruction.

Since photoengravers' duties involve constant, close work with their eyes, good eyesight is essential in this occupation. Because of the work with acids and other chemicals which give off fumes, the occupation is not a good one for people with respiratory disabilities. Many employers require physical examinations for prospective photoengravers, testing both eyes and lungs. Among the types of school training which are helpful, in addition to those needed for all printing trades (p. 9), are courses in chemistry and metallurgy.

Employment Prospects

Employment opportunities for qualified journeymen are expected to be fairly good in this small occupation in the immediate future. Some men with all-round experience and business abilities should find favorable opportunities to open their own shops. There will not be many openings for apprentices during the next year or two, however—probably no more than a hundred or so in the entire country.

In the long run, employment is likely to level off, and openings for both journeymen and apprentices will probably be few.

Photograph by U. S. Department of Labor.

Photoengraver (etcher) using magnifying glass to inspect depth of "bite" in plate which he has just removed from acid bath.

Earnings

Photoengravers have, on the whole, higher wage rates than any other group of printing craftsmen studied, with the exception of rotogravure men. In July 1946, the average union scale for photoengravers in newspaper plants was $2.06 an hour; in other shops, $1.97. Although rates were highest in the New York City area (about $2.25 an hour), other metropolitan areas also had high pay scales. The lowest scale for union photoengravers in any of the cities where a survey was made was $1.35.

Rotogravure Photoengravers

Rotogravure work is a relatively new process, which was being used increasingly before the war. So far, however, it has never employed more than a few hundred journeymen in the entire countr

These men are a very highly skilled group. Li regular photoengravers, they are required to kn all phases of their process, although they usual specialize in one of them. The operations wh they handle are much like those involved in pho engraving, except that a positive (instead of negative) is used in making the plate and it the image (rather than the background) ar which are etched away.

A few large newspaper and commercial pla have departments which reproduce pictures this method. However, rotogravure men are ployed mainly in independent rotogravure pla Most of them work for half a dozen big fi which handle a large proportion of all rotogra work.

Photoengraver (router) cutting away metal from nonprinting areas of a plate. Photograph by U. S. Department of Labor.

Qualifications for Employment

t is possible to enter the occupation either by
-year apprenticeship in a rotogravure shop or
transferring from photoengraving. Photoen-
vers are usually required to complete a pro-
onary training period before being classified
skilled rotogravure men. The qualifications
led by apprentices are the same for rotogra-
e work as for photoengraving.

Employment Prospects

here will be little room for newcomers in this
pation during the next year or so. During the
the amount of rotogravure printing was much
ced, and a large proportion of the journeymen
apprentices either went into the armed services or transferred to photoengraving. The volume of rotogravure work is now rapidly returning to prewar levels, and there is frequent need for additional workers. However, these openings are being filled in most instances by former workers returning to the trade. Since the occupation is expected to go on expanding for an indefinite period, there should be some opportunities for newcomers after another year or two—but only a very few each year, because the total number of men employed is so small.

Earnings

As already indicated, rotogravure men are among the highest paid printing craftsmen. In general, their wage scales are above even the high rates for photoengravers doing letterpress work (p. 20).

Lithographic Occupations

Any kind of printing job that can be done by letterpress or gravure can be done also by lithography (or offset printing). Which method is used, however, depends on many practical considerations. Lithography has special advantages when the copy to be reproduced includes photographs, drawings, or paintings and particularly when these are in color. In present-day lithographic work, the plates are usually made by a photographic process, and the method is often referred to as photolithography. There are a few types of work—posters, for example—in which some of the plates are still made by hand.

The largest group of lithographic workers is made up of platemakers; other major occupational groups are cameramen, artists and letterers, pressmen, and press assistants. This section deals with the first three of these groups and with an occupation not yet mentioned, that of cutter. Information on lithographic pressmen is given in the section on pressroom occupations (p. 25).

Nature of the Work

Cameramen

The cameramen who photograph the copy to be printed are highly skilled workers. They do several different kinds of photography—in black and white or in color; of drawings or photographs: on glass plates or negative paper or film. The work includes not only taking the pictures and developing the negatives, but also related duties. Almost always, cameramen specialize in only one type of photography.

Artists and Letterers

After negatives have been made and developed they frequently have to be retouched, to lighten o intensify certain parts. This is done by hand, wit chemicals and dyes, and is one of the many highl skilled operations handled by craftsmen in the ar department. Artists may have to correct color

Artists preparing copy for reproduction by lithography.

Courtesy of U. S. Government Printing Office, Washington, D. C.

or other pictures on stone or metal plates or on special paper, on the comparatively rare occasions when hand methods are used in place of photolithography. Lettering is usually done by hand, lthough sometimes by machine.

To be journeymen, artists have to be adept either n one or more of the various retouching methods or in hand drawing with lithographic crayon. ike cameramen, they are customarily assigned to nly one phase of the work and may then be known, or example, as dot etchers (who do a highly pecialized type of retouching), retouchers, crayon rtists, or letterers, depending on their particular ob.

Platemakers

In photolithography, negatives and positives ade by cameramen and corrected by artists are ansferred onto press plates by workers in the atemaking or chemical department. The worker

coating in a vacuum frame or photocomposing machine; puts a photographic negative (or, sometimes a positive) on top of it; and makes an exposure under an arc lamp. The plate is then developed and chemically treated, so as to make the nonimage areas repellant to grease when damp but to leave the image areas receptive to it. The foregoing indicates only a few of the main steps in this highly complicated and technical process. Platemakers in small shops often perform all the different operations. Those in large shops, however, are likely to be more specialized; they may, for example, operate only a vacuum frame or a photocomposing machine.

Besides platemakers using these photomechanical methods, there are some who do hand transferring—although this process has been largely displaced by photomechanical platemaking. The hand-transfer platemaker places special transfer paper on a design and runs both through a transfer

Platemakers coating and developing lithographic plates.

Courtesy of U. S. Government Printing Office, Washington, D. C.

which now has on it the image to be reproduced, places it on the press plate, and presses the design into the grain of the plate. Finally, he treats the plate in various ways. He may also have other duties to perform.

Cutters

For persons who wish jobs in lithography but who are unable to qualify for work in the other occupations discussed, one of the most interesting possibilities is a position as paper trimmer or cutter. The work is similar in many ways to that done by cutters in other branches of printing and in some industries outside the printing group. These workers may use cutting machines not only to cut paper to the sizes needed for the press, but also to cut the large press sheets after printing, in order to separate the different items which were printed together. The cuts must be carefully planned and accurately carried out. Cutters are also responsible for adjusting the knives, clamps, and other devices on their cutting machines and for the upkeep of the machines.

Numbers Employed and Places of Employment

Since lithography is used to only a limited extent compared with letterpress printing, all the occupations that have been discussed are small. About 5,000 platemakers were employed in 1946. Pressmen totaled about 3,300 or 3,400, and their assistants around 4,000. Artists and letterers numbered approximately 3,000; cameramen, about 1,200, and cutters, roughly 1,000.

Most workers in these occupations are employed in plants specializing in lithography. However, a good many work in job shops or other letterpress plants which have lithographic departments, or for firms in other industries which do printing of their own by the lithographic process.

Qualifications for Employment

To become an all-round, skilled cameraman, artist, or platemaker generally requires a 4- or 5-year apprenticeship covering all phases of the given department's work. For less-skilled jobs

shorter periods of training are needed. Besides on-the-job training, many plants give supplementary training courses. Training programs are offered also in organized trade schools and other places.

The educational and physical qualifications needed for lithographic occupations are much the same as for printing occupations in general (p. 9). Men with physical handicaps of many types can qualify for jobs.

Employment Prospects

Qualified craftsmen should have little trouble getting jobs in lithographic occupations during the years immediately ahead. The labor shortages which developed during the war have been relieved only in part since VJ-day. Moreover, this is the fastest growing printing process. Employment opportunities will probably be very good als for men with training and experience in semiskilled lithographic occupations. In addition, employers will, for some time, need more traine than usual, but the actual number of openings fo newcomers will not be large in any occupation i any one year.

A few men will find favorable opportunities open their own shops. The chances are likely be best in localities which do not already have well-established lithographic business.

The long-run outlook is for continued rapid ris in employment in all major lithographic occup tions. Although by far the largest numbers f job openings—probably half of the total—will e in three cities (New York, Chicago, and San Fra cisco) during the next few years, opportunities w l become more and more widespread as time goes n.

Earnings

Skilled cameramen, artists, and platema rs were generally paid more than $1 an hour— quently much more—in the last years before he war. Cutters usually made between 80 cents nd $1 an hour. By the fall of 1946, wage rates increased on the average by at least 25 percen in these occupations. Since that time, wages ve risen still higher.

Pressroom Occupations

Type forms from composing rooms, press plates rom electrotyping and stereotyping departments, otogravure plates, and lithographic plates all go o a pressroom, when the time comes for the actual rinting to be done. In small shops, this depart- ent may consist of only one or two small presses a back room or a corner of the shop. In big ants, however, pressrooms are large, with many orkers and, frequently, huge presses. Often ese machines are so heavy and create so much bration that the department has to be located on e ground floor or in the basement.

Pressmen

Skilled pressmen, the key workers in the de- rtment, are the third largest group of printing craftsmen. In 1940, about 33,000 of them were employed. Only hand compositors and linotype operators were more numerous.

Pressmen's basic duties are to "make-ready" and then tend the presses while in operation. The object of the make-ready, which is one of the most delicate and difficult parts of the work, is to ensure printing impressions that are distinct and even and neither too dark nor too light. This is accomplished by such means as placing pieces of paper of exactly the right thicknesses underneath low areas of the press plate or type form to level it, and attaching pieces of tissue paper to the surface of the cylinder or flat platen which makes the impression. Pressmen also have to make many other adjustments—for example, those controlling

Pressman using paper to level plate. Press is a small flatbed cylinder press for letterpress printing.

Photograph by U. S. Department of Labor.

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margins and the flow of ink to the inking roller. In some shops, they are responsible not only for tending the presses but for oiling and cleaning them and making at least minor repairs. In many cases they have assistants whose work they supervise.

Within this broad outline, pressmen's work varies greatly from one type of shop to another, because of the great differences in the kinds and sizes of presses used. Small commercial shops, many of which are owned and run by pressmen themselves in partnership with compositors, generally have small and relatively simple platen (or job) presses that are often fed paper by hand. At the other extreme are the big newspaper plants with their tremendous web-rotary presses. These giant presses are fed paper in big rolls (or webs). They print the paper on both sides by means of a series of cylinders; cut the pages apart, and assemble, and fold them; and finally count the finished newspaper sections, which emerge from the press ready for the mailing room. To do all this automatically requires many different mechanisms, all of which must have frequent attention while a run is being made. Presses of this kind are therefore operated by crews of journeymen and less-skilled workers, under the direction of a pressman-in-charge.

Another type of press on which men specialize is that used in offset printing. An offset press has three cylinders, the first carrying the curved plate; the second, a rubber blanket; and the third, the paper on which an impression is to be made. The plate does not print directly onto the paper but instead transfers the impression to the rubber blanket around the second cylinder which then offsets the image onto the paper. Another special feature is the dampening rollers which pass over the plate before each inking, to prevent the greasy ink from adhering to the nonprinting areas of the plate. Both these features create extra complications for the pressman. Experts emphasize also that, in printing by this method, "kiss" pressure only is needed (much less pressure than is involved in relief and gravure printing), and that delicate and skillful adjustments by the pressman are required to attain exactly the right pressure.

Pressmen may specialize also in operating direct lithographic presses, which make impressions on paper directly from lithographic plates instead of using the offset principle. There are, in addition, other types of presses including the rotogravure press, a rotary press with a "doctor" blade which scrapes the surplus ink off the surface of the plate.

Qualifications for Employment

To become a skilled pressman requires 3 to years of apprenticeship. Usually, men receiv training on only one type of press, and opinio differs as to how readily journeymen can becom skilled on other types of presses. The length the apprenticeship and the content of the trainin largely depend on the kind of press involved. F work on an offset press, for example, the appren ticeship period is almost always 5 years.

Apprentices are generally chosen from amon the press assistants and others already employ by the company. They must have completed least the eighth grade in school; some employe require high-school graduation. Since they w often have to blend their own inks, a knowledge f color is necessary. Courses in art are theref very helpful.

Physical strength and endurance are necess for work on some kinds of presses, where the pres man has to lift heavy type forms and press pl and be on his feet all day. Another quality nee is mechanical aptitude, to assist the worker in making adjustments and repairs to the presse

Employment Prospects

In this as in most other printing occupations, employers will need all qualified journeymen likely to be available during the next few years. In addition, there will be many apprenticeship opportunities, especially as new machinery becomes available. Proportionately speaking, the greatest increases in employment will be in lithographic work. Nevertheless, openings in this branch of the occupation will be few, because the total number of lithographic pressmen employed is small (about 3,300 or 3,400 in 1946). In the long run employment of pressmen will probably have an upward trend, as it had before the war.

Earnings

Wage rates for pressmen depend on the make and style of press operated, as well as the type of printing plant and other factors. Rates were highest in the newspaper industry, where pres

journeymen, $1.76 in July 1946. Outside news-
paper plants, the average union scale for cylinder
pressmen was $1.65 an hour; for platen pressmen,
;1.42. Of the pressmen for whom information
vas available, all but platen pressmen tended to
ave rates well above the average ($1.58) for all
rinting trades.

Press Assistants

The duties of press assistants range from merely
eding sheets of paper into hand-fed presses to
lping pressmen make ready and operate large
d complicated rotary presses. Workers whose
in responsibility is feeding are often referred
simply as feeders.

The nonjourneymen on web-rotary crews in
wspaper plants are commonly known as flyboys.
ey pick up the newspapers as they come out of
press and load them onto hand trucks; they
o wheel the trucks out of the pressroom and do
er work.

n 1940 the total number of press assistants em-
yed was roughly 8 or 9 thousand, not counting
oys in newspaper plants. The ratio of assist-
s to pressmen varies greatly from one establish-
t to another, depending on the size of the
t, the type of press used, and other factors.
y shops are too small to have any pressroom
ers.

ally to journeyman is possible for many though not all press assistants. Those who aspire to such promotions need the same general qualifications as are needed by apprentice pressmen (p. 26).

Employment Prospects

Several hundred job openings for press assistants may be expected each year for the next few years. After that, openings will probably become much fewer. Before the war, the printing industries tended not to hire as many press assistants as they lost owing to turn-over. It is likely that this tendency will appear again after the current need for labor has been met and that employment in the occupation will resume its long-range downward trend. However, lay-offs will probably be made only in exceptional circumstances.

Earnings

In July 1946, press assistants in union shops outside the newspaper industry had an average wage rate of $1.32 an hour. Those who were merely press feeders had somewhat lower pay than the ones whose main job was to assist journeymen in the make-ready and in operating the presses. Helpers in newspaper pressrooms made less than press assistants in other printing shops, although the reverse was true for skilled pressmen.

Bindery Occupations

ny products are finished when they leave the
room. This is true of a wide variety of items
iced by job shops—business forms, printed
nery, labels, advertising flyers, and so forth.
papers, except the few that are bound for
ies, never see a bindery department. Never-
s, binderies play a part in the manufacture
ny products besides books. Whenever a
ine or pamphlet or even a small calendar
ed or stapled together, this is considered a
y operation.

Bookbinders

ing a book out of the big, flat sheets of paper
me into the bindery from the pressroom is
he most complicated type of bindery work.
st step is to fold the printed sheets, each of
which contains many pages, so that these pages will be in the right order. When so folded into sections of 16 or 32 pages, the sheets are known as signatures. The next steps are to insert any illustrations that have been printed separately, to assemble the signatures in proper order, and to sew them together. The resulting book bodies are shaped in various ways, usually with power presses and trimming machines, and fabric strips are glued to the backs to reinforce them. Sometimes, the edges of the pages are gilded or colored. Covers are glued or pasted onto the book bodies, after which the books undergo a variety of finishing operations and, frequently, are wrapped in paper jackets.

Skilled bookbinders seldom handle all these different tasks, although many journeymen have had training in all of them. Especially in large shops, a few operations, most often to the operation of complicated machines.

The majority of journeymen are employed in shops whose main business is bookbinding. However, a good many work in the bindery rooms of large book, periodical, and commercial printing plants. Some are employed in libraries, where the work is done mainly by hand and also differs in other respects from that performed elsewhere. Rough estimates suggest that, altogether, about 15 or 20 thousand men had journeyman jobs in 1940, making this the fourth largest group of printing craftsmen.

Qualifications for Employment

Completion of a 4-year apprenticeship is usually required of men seeking to qualify as skilled bookbinders. The apprenticeship programs may vary considerably between the different types of shops. Where large quantities of books are bound on a mass-production basis, emphasis is on the most modern machine methods. Where fine hand binding is done, the training is mainly in hand methods, including artistic designing and decorations of leather covers.

Bookbinder putting gold lettering on back of book with hand tool.

Photograph by U. S. Department of Labor.

Both journeyman and apprentice openings will be more numerous during the next few years than they were for many years before the war. The occupation was greatly overcrowded in the last prewar years; thousands of skilled workers were unemployed or had been forced to take jobs paying less than a journeyman's wage. During the war, a labor shortage developed in this occupation, as in printing crafts generally, and there are still many openings. The shortage is unlikely to last more than a few years longer, however. It is expected that eventually the number of opportunities will be small and that employment in the occupation will resume its long-run downward trend.

Earnings

Union rates for journeyman bookbinders averaged $1.50 an hour in July 1946. For over two-thirds of these skilled workers, wage scales were between $1.30 and $1.60 per hour. In general, pay scales in the occupation were below the average ($1.58) for all printing trades.

Bindery Workers

In many binderies, especially large ones, a great part of the work is done by employees trained in only one operation or in a small group of related tasks. These semiskilled workers are mostly women, though a few are men. The women handle a variety of hand or light-machine operations—such as hand folding, pasting-in of inserts, assembling signatures by hand, machine sewing, and gluing fabric reinforcement on signatures, and feeding machines. The men are usually assigned to more intricate machine jobs; they may operate assembling, trimming, stamping, and many other types of machines.

The bindery workers are by far the largest group of semiskilled workers in the printing and allied industries. Roughly 70 or 80 thousand of them were employed in 1940. Large numbers are used both in independent binderies and in the bindery departments of big printing plants. For inexperienced men and women entering the occupation, a training period, which may be as long as 1 or 2 years, is frequently required. In union shops, there are always formal training programs.

Photograph by U. S. Department of Labor.

Bindery workers "casing-in" small booklets (putting covers on pages). Girl at far right is running cover through machine which puts glue on inside. Girl in the center is inserting pages in cover. Man is straightening pages and folding booklets.

Employment Prospects

or several years, experienced workers will ably have little difficulty in getting jobs in occupation. There will also be hundreds of ings for inexperienced workers each year. r the next few years, opportunities are likely come fewer and there may not be enough jobs ll persons seeking work. But the long-run l of employment is upward, as in most printccupations. Workers who now have jobs or enter the field during the current expansion ployment will have a good chance of keeping positions indefinitely.

Earnings

Women bindery workers have the lowest wage rates of any group of production workers in the printing and allied industries. In July 1946, the average union scale for these women was 81 cents an hour, with 9 out of 10 having rates between 70 cents and $1.00. These union scales were probably representative of all wage rates for women in the occupation although, unlike printing workers, many bindery employees, especially women, are not covered by union agreements.

Men doing semiskilled machine work were generally paid somewhat more than the usual top rate for women. The few doing hand operations had rates similar to those for women workers.

APPENDIXES

1. Number of Establishments, Value of Products, and Number of Persons Employed in Printing, Publishing, and Allied Industries, 1939 [1]

Industry [2]	Number of establishments	Value of products (millions of dollars)	Number employed	
			Proprietors	Employees
Total	38, 762	$2, 614	32, 322	561, 8
Plants reporting value of product more than $5,000	24, 878	2, 578	18, 147	552, 5
Newspapers	7, 309	910	6, 014	207, 4
General commercial (job) printing	9, 595	515	8, 216	126, 0
Periodicals	2, 558	469	782	61, 9
Books	1, 396	237	576	42, 5
Lithography [3]	749	154	278	34, 7
Greeting cards, not hand painted	109	39	70	9, 9
Gravure, rotogravure, and photogravure [4]	24	19	5	3, 1
Service shops:				
Photoengraving	694	56	384	13,
Machine and hand typesetting	641	25	538	8,
Engraving (steel, copperplate, and wood) [5]	436	22	329	6,
Electrotyping and stereotyping	234	29	62	6, 3
Bookbinding and related industries	1, 133	103	893	31, 2
Plants reporting value of product less than $5,000	13, 884	36	14, 175	9, 6
Printing and publishing	13, 570	35	13, 835	9, 16
Bookbinding	314	1	340	0

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[1] Census of Manufactures, vol. II, pt. I, 1939; and Census of Business, vol. III, Service Establishments, 1939.

[2] The industry in which an establishment was classified by the Bureau of the Census was determined by its chief product or products (measu dollar value of output during 1939), except in the case of newspaper printing. Plants which had done any work of this type during 1939 were classed newspaper industry, even if they had also done commercial or other work having a greater value. See the U. S. Department of Commerce, Bureau the Census, *Industry Classifications for the Census of Manufactures, 1939*, pp. 1 and 46–48.

[3] This industry is made up of establishments primarily engaged in preparing lithograph plates and in printing from such plates. The greater the work is done to individual order, but in some cases lithographed calendars, commercial forms, maps, illustrated cards, posters, and other items are for sale. Lithographing of books and pamphlets for publishers is classified in the book printing industry. A great many plants, classified in other pr industries or outside the printing group, do some lithographic work; the Joint Lithographic Advisory Council estimates that at least 2,000 separate lishments had lithographic equipment in 1939 and that, by 1946, the number had increased to about 2,600.

[4] Most establishments in this industry are rotogravure plants, which make plates of pictures by a photo-mechanical process and also print from these Some few do other types of gravure printing.

[5] These shops service the printing industries with plates engraved by hand or machine and sometimes also print from the plates they make.

Union Wage Scales in Major Newspaper Printing Trades in Selected Cities, July 1, 1946[1]

City and State	Hand compositors	Composing-machine operators	Stereotypers	Photo-engravers	Journeyman pressmen	Pressmen-in-charge
lanta, Ga	$1.63	$1.63	$1.63	$1.79	$1.63	$1.78
ltimore, Md	1.67	1.67	1.48	1.86	1.52	1.61
nghamton, N. Y	1.40	1.40	1.40	-----	1.40	-----
rmingham, Ala	1.55	1.55	1.48-1.50	1.70	1.44	1.53
ston, Mass	1.73	1.73	1.73	1.87	1.89-2.04	2.04-2.12
ffalo, N. Y	1.65	1.65	1.56	1.92	1.46-1.56	1.59-1.70
tte, Mont	1.52	1.52	1.50	-----	1.47	1.59
arleston, S. C	1.45	1.45	-----	-----	-----	-----
arleston, W. Va	1.38	1.38	1.45	-----	1.40	1.63
arlotte, N. C	1.32	1.32	1.28	-----	1.23	-----
cago, Ill	2.08	2.08	1.63	2.15	1.70	1.87
cinnati, Ohio	1.87	1.87	1.73	2.00	1.68	1.78
veland, Ohio	1.90	1.90	1.75	2.13	1.68-1.99	1.84-2.19
umbus, Ohio	1.70	1.70	1.65	2.03	1.59	1.92
las, Tex	1.66	1.66	1.58	-----	1.34	1.40
venport, Iowa	(2)	(2)	(2)	(2)	(2)	(2)
ton, Ohio	1.57	1.57	1.48	1.77	1.48	1.57
ver, Colo	1.65	1.65	1.43-1.49	1.64	1.43	1.53
Moines, Iowa	1.59	1.59	1.56	1.64	1.56	2.56
roit, Mich	1.99	1.99	1.90	2.12	1.84-1.97	1.97-2.17
uth, Minn	1.44	1.44	1.29	1.53	1.29	1.36
aso, Tex	1.52	1.52	1.36	-----	1.36	1.39
Pa	1.50	1.50	1.33	-----	1.25	1.40
d Rapids, Mich	1.58	1.58	1.58	1.75	1.45	-----
ton, Tex	1.62	1.62	1.38	1.72	1.35	1.42
napolis, Ind	1.87	1.87	1.85	1.69	1.48	1.62
on, Miss	1.35	1.35	-----	-----	-----	-----
onville, Fla	1.65	1.65	1.65	1.65	1.65	1.78
as City, Mo	1.60	1.60	1.45-1.50	1.75	1.36	1.42
Rock, Ark	1.37	1.37	1.13	-----	1.29	1.39
ngeles, Calif	1.73	1.73	1.61	1.82	1.61	1.89
ville, Ky	1.65	1.65	1.50	1.70	1.50	1.63
son, Wis	1.45	1.45	1.45	-----	1.45	1.53
hester, N. H	1.34	1.34	1.34	1.35	1.34	1.45
his, Tenn	1.52	1.52	1.34	1.74	1.50	1.61
ukee, Wis	1.81	1.81	1.52	2.00	1.67	1.83
apolis, Minn	1.82	1.82	1.61	1.83	1.61	1.73
e, Ala	1.55	1.55	1.29	-----	1.27	-----
e, Ill	(2)	(2)	(2)	(2)	(2)	(2)
ille, Tenn	1.37	1.37	1.36	1.50	1.26	1.34
k, N. J	1.75	1.75	1.58	-----	1.65	1.84
Haven, Conn	1.34	1.34	1.45	-----	1.35	1.48
rleans, La	1.35	1.35	1.35	1.40	1.30	1.41
ork, N. Y	2.07	2.07	1.84	2.25	1.79	1.98
k, Va	1.41	1.41	1.25	1.48	1.25	1.38
ma City, Okla	1.53	1.53	1.41	1.73	1.50	1.63
, Nebr	1.51	1.51	1.51	1.57	1.50	1.62
Ill	1.45	1.45	1.39	1.63	1.45	1.58
lphia, Pa	1.54	1.54	1.49	1.79	1.43	1.57
, Ariz	1.42	1.42	1.42	-----	1.42	-----
rgh, Pa	1.87	1.87	1.72	2.04	1.60	1.66
d, Maine	1.30-1.38	1.30-1.39	1.38	1.57	1.20-1.38	-----
d, Oreg	1.72	1.72	1.67	1.58	1.60	1.70
nce, R. I	1.67	1.67	1.65	1.86	1.68	1.76
, Pa	1.46	1.46	1.46	-----	1.46	1.59
nd, Va	1.40	1.40	1.34	1.54	1.34	1.59
er, N. Y	1.55	1.55	1.60	1.92	1.55	1.68
and (Ill.) district [2]	1.47	1.47	1.55	1.50	1.54	1.70
s, Mo	1.84	1.84	1.78	2.00	1.78	1.89
, Minn	1.76	1.76	1.54	1.73	1.52	1.64
e City, Utah	1.48	1.48	1.38	1.60	1.46	1.59
nio, Tex	1.47	1.47	1.30	1.75	1.30	1.46
cisco, Calif	1.87	1.87	1.75	1.91	1.76	1.94
, Pa	1.67	1.67	1.59	1.83	1.55	1.60
Wash	1.86	1.86	1.73	1.98	1.73	1.87
nd, Ind	1.46	1.46	1.39	-----	-----	-----
Wash	1.63	1.63	1.57	-----	1.52	1.65
d, Mass	-----	-----	1.50	1.78	1.38	1.50
Fla	1.43	1.43	1.43	1.45	1.13-1.44	1.57
Ohio	1.77	1.77	1.71	1.76	1.54	1.69
on, D. C	1.83	1.83	1.56	2.00	1.58	1.71
Kans	1.32	1.32	1.21	1.58	1.06	1.13
, Mass	1.47	1.47	1.45	1.50	1.32	1.45
	1.15	1.15	1.06	-----	-----	-----
wn, Ohio	1.59	1.59	1.63	-----	1.39	1.51

Bureau of Labor Statistics, Wage Analysis Branch: *Union Wage Scales, Newspaper Printing Trades, 1946* (mimeographed report). These scales
nimum rates paid under collective bargaining agreements and are, in most cases, uniform for each occupation in a given locality; where they are not
he lowest and highest rates are shown. Where no rate is given, there was no union wage scale for the occupation in the particular city.
Island district includes Rock Island and Moline, Ill., and Davenport, Iowa.

III. Union Wage Scales in Major Book and Job Printing Trades in Selected Cities, July 1, 1946 [1]

City and State	Hand compositors	Composing-machine operators	Electrotypers	Photo-engravers	Cylinder pressmen	Platen pressmen	Press assistants and feeders	Bookbinders	Bindery women
Atlanta, Ga	$1.53	$1.53	$1.54	$1.79-$1.80	$1.20-$1.45	$1.45	$0.80-$1.04	$1.44	$0.7
Baltimore, Md	1.50	1.50	1.30	1.77-1.97	1.35-1.73	1.24	.89-1.21	1.32	.53- .6
Binghamton, N. Y	1.37-1.38	1.38	----	----	1.00-1.25	1.00-1.25	.60-.89	.97-1.40	.70- .7
Birmingham, Ala	1.55	1.55	1.56	1.75	1.20-1.63	1.06	.85	1.25	.6
Boston, Mass	1.43	1.43-1.47	1.40	1.87	1-39-1.51	1.25-1.32	.79-1.30	1.39	.7
Buffalo, N. Y	1.48	1.55	1.50	1.67	1.46-1.61	1.33	1.00-1.28	1.30	.7
Butte, Mont	1.44	1.44	----	----	1.38	1.25	.57-.83	1.38	.
Charleston, S. C	1.44	1.44	----	----	----	----	----	----	----
Charleston, W. Va	1.50	1.50	----	----	1.50	----	----	1.50	.
Charlotte, N. C	1.30	1.30	----	1.50	1.25	1.05	----	.90	.
Chicago, Ill	1.82	1.82	2.10	2.07	1.71-2.23	1.79	1.12-1.76	1.56-1.88	.87- .
Cincinnati, Ohio	1.59	1.59	1.63	1.80	1.19-1.73	1.16-1.26	.84-1.31	1.30	.
Cleveland, Ohio	1.62	1.66	1.75	1.84-2.18	1.33-1.71	----	1.03-1.35	1.47	.71- .
Columbus, Ohio	1.60	1.60	1.60	1.50-1.76	1.60	1.60	1.32	1.60	.
Dallas, Tex	1.40	1.50	1.38	1.75	1.16-1.38	1.19	.90-1.00	1.35	
Davenport, Iowa	(2)	(2)	(2)	(2)	(2)	----	(2)	----	----
Dayton, Ohio	1.80	1.80	1.70	1.80	1.46-1.93	1.30-1.53	.90-1.28	1.45-1.50	.78- .
Denver, Colo	1.44	1.44	1.45	1 58	1.44	1.33	.68-1.18	1.33	.
Des Moines, Iowa	1.41	1.41	1.57	1.64	1.33-1.47	1.25	.92-1.16	1.32	.
Detroit, Mich	1.83-1.85	1.83-1.85	1.80	1.93	1.70-1.78	1.47	1.10-1.42	1.10-1.65	.83- .
Duluth, Minn	1.20	----	----	1.50	1.05	.78	.45	----	----
El Paso, Tex	1.52	1.52	----	----	1.36	1.36	----	----	----
Erie, Pa	1.34	1.34	----	----	1.30	1.20	----	----	----
Grand Rapids, Mich	1.35	1.35	1.60	----	1.10	.90	.90	1.00	
Houston, Tex	1.50	1.50	1.50	1.75	1.35	1.10-1.18	1.05-1.11	1.35	
Indianapolis, Ind	1.46	1.46	1.60	1.69	1.44	1.31-1.44	.74-1.32	1.44	
Jackson, Miss	1.25	1.25	----	----	----	----	----	----	----
Jacksonville, Fla	1.50	1.50	----	1.38	1.30	1.30	.65-.90	1.25	
Kansas City, Mo	1.50	----	1.50	1.69	1.50	1.38-1.45	.93-1.30	1.38	
Little Rock, Ark	1.25	1.25	----	----	1.19	1.19	.60-.83	1.09	
Los Angeles, Calif	1.60	1.60	1.93	2.07	1.52	1.42	1.10-1.33	1.52	
Louisville, Ky	1.38	1.38	----	1.57	1.18-1.79	1.03-1.18	.72-1.29	1.15-1.16	.66-
Madison, Wis	1.30	1.30	----	1.74	----	----	----	----	----
Manchester, N. H	1.05	1.05	----	1.35	1.10	.90	----	----	----
Memphis, Tenn	1.35	1.35	1.18	1.44	1.10	1.10	.60-.83	1.10	
Milwaukee, Wis	1.50	1.50	1.61	1.74	1.45-1.55	1.33	.83-1.24	1.35	
Minneapolis, Minn	1.50	1.50	1.65	1.50	1.05-1.61	1.15-1.38	.67-1.18	1.11-1.38	.60-
Mobile, Ala	1.31	1.31	----	----	1.30	1.30	.65	----	----
Moline, Ill	(2)	(2)	(2)	(2)	(2)	----	(2)	----	----
Nashville, Tenn	1.25-1.38	----	1.15	1.50	1.11-1.25	.88-.94	.63-1.00	1.15-1.18	.60-
Newark, N. J	1.77	1.78	2.10	2.14	1.30-1.75	1.46-1.64	.98-1.48	1.28-1.60	
New Haven, Conn	1.18	1.18	1.46	1.38	1.23-1.45	----	.90-1.15	1.25	
New Orleans, La	1.35	1.35	1.72	1.50	1.35	1.05	.63-1.03	1.35	
New York, N. Y	1.83	1.83	2.10	2.23	1.83-2.14	1.60-1.76	1.13-1.60	.69-1.91	.75-
Norfolk, Va	1.40	1.40	----	1.50	----	----	----	----	----
Oklahoma City, Okla	1.50	1.50	1.41	1.63	----	1.00-1.08	.75-.85	1.30	
Omaha, Nebr	1.47	1.47	1.51	1.50	1.30	1.30	1.10	----	----
Peoria, Ill	1.35	1.35	1.58	1.50	1.30	1.18	.90-1.13	----	----
Philadelphia, Pa	1.60	1.60	1.95	1.92	1.50-1.84	1.46	1.10-1.37	1.30-1.35	.70-
Phoenix, Ariz	1.39	1.39	----	----	1.39	1.24	.98-1.13	----	----
Pittsburgh, Pa	1.60	1.60	1.50	1.94	1.60-2.03	1.51	.94-1.42	1.31	
Portland, Maine	1.01	1.01	----	----	.99	.89	.80	----	----
Portland, Oreg	1.56	1.56	1.72	1.70	1.56	1.50	1.06-1.25	1.56	
Providence, R. I	1.25	1.25	1.40	1.60	1.10-1.45	1.10-1.20	.90-1.00	----	----
Reading, Pa	1.30	1.35	----	----	1.19	1.14-1.25	1.04-1.25	----	----
Richmond, Va	1.30	1.30	1.41	1.63	1.04-1.69	1.10	.64-1.38	1.23-1.40	.58
Rochester, N. Y	1.38-1.45	1.38-1.45	----	1.92	1.28-1.54	1.20-1.38	.92-1.15	1.33-1.38	.70
Rock Island (Ill.) district [2]	1.32	----	1.44	1.63	1.33	----	1.09-1.27	----	----
St. Louis, Mo	1.49	1.52	1.50	1.68	1.28-1.63	1.23-1.33	.79-1.39	1.41	
St. Paul, Minn	1.50	1.50	1.65	1.50	1.21-1.68	1.04-1.50	.67-1.20	1.11-1.38	.60 .74
Salt Lake City, Utah	1.50	1.50	1.38	----	1.50	1.50	1.25	----	----
San Antonio, Tex	1.15	1.15	----	1.75	1.00	.75	.40-.60	1.25	
San Francisco, Calif	1.66	1.66	1.58	1.93	1.66-1.81	1.59	1.04-1.30	1.66	
Scranton, Pa	1.43	1.43	1.43	1.71	1.37-1.47	1.10	.87-1.14	1.31-1.36	1.
Seattle, Wash	1.86	----	2.00	2.13	1.86	1.71	1.23-1.47	1.86	
South Bend, Ind	1.36	1.36	1.50	1.63	1.36-1.50	1.20-1.26	1.07	1.45	
Spokane, Wash	1.50	----	----	----	1.50	1.50	1.12-1.15	1.50	
Springfield, Mass	1.30	1.30	1.42	1.58-1.62	1.21	----	.87	1.30	.7
Tampa, Fla	1.32	1.32	----	----	----	1.20	----	----	----
Toledo, Ohio	1.50-1.51	1.50-1.51	1.43	1.68	1.45	1.32-1.37	1.17	1.35	
Washington, D. C	1.53	1.53	1.90	1.89	1.43-1.97	1.21-1.35	.88-1.38	1.25	
Wichita, Kans	1.33	1.33	----	1.58	1.27	1.06	.82-1.00	1.24	
Worcester, Mass	1.10	1.10	1.40	1.63	----	----	----	----	----
York, Pa	1.20	1.20	1.29	----	1.27-1.32	1.15	1.00	1.15	
Youngstown, Ohio	1.45	1.45	----	1.68	1.28	1.24	.64	1.28	

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[1] U. S. Bureau of Labor Statistics, Wage Analysis Branch: Union Wage Scales, Book and Job Printing Trades 1946 (mimeographed report). Thes are the minimum rates paid under collective bargaining agreements and are, in most cases, uniform for each occupation in a given locality. Where no given, there was no union wage scale for the occupation in the particular city. In this table, book and job printing includes all branches of printin newspaper.

[2] Rock Island district includes Rock Island and Moline, Ill., and Davenport, Iowa.

IV. Addresses of Labor Organizations and Trade Associations

nalgamated Lithographers of America (CIO), 50 Seventh Avenue, New York, N. Y.

nerican Newspaper Publishers Association, 370 Lexington Avenue, New York City 17, N. Y.

erican Photo-Engravers Association, 166 West an Buren Street, Chicago 4, Ill.

k Manufacturers Institute, 25 West Forty-ird Street, New York City, N. Y.

ploying Bookbinders of America, 28 West orty-fourth Street, New York City, N. Y.

ploying Printers Association of America, 53 est Jackson Boulevard, Chicago 4, Ill.

rnational Allied Printing Trades Association FL), 307 AFL Building, Washington 1, D. C.

rnational Association of Electrotypers and ereotypers, Inc., 350 East Twenty-second reet, Chicago, Ill.

rnational Brotherhood of Bookbinders FL), 901 Massachusetts Avenue, Washing- 1, D. C.

rnational Photo-Engravers' Union of North erica (AFL), 292 Madison Avenue, New k City 17, N. Y.

International Printing Pressmen's and Assistants' Union of North America (AFL), Pressmen's Home, Tenn.

International Stereotypers' and Electrotypers' Union (AFL), 475 Fifth Avenue, New York, N. Y.

International Typographical Union (AFL), PO Box 728, Indianapolis 6, Ind.

Joint Lithographic Advisory Council, 70 Pine Street, New York, N. Y. Benjamin M. Robinson, Sec.

Library Binding Institute, 501 Fifth Avenue, New York City, N. Y.

Lithographers National Association, Inc., 420 Lexington Avenue, New York City 17, N. Y.

Lithographic Technical Foundation, Inc., 131 East Thirty-ninth Street, New York City 17, N. Y.

National Association of Photo-Lithographers, 1776 Broadway, New York City 19, N. Y.

National Publishers Association, 232 Madison Avenue, New York City 16, N. Y.

Printing Industry of America, Inc., 719 Fifteenth Street, NW, Washington 5, D. C.

V. Suggested Readings

American Photo-Engraver, International Photo-Engravers' Union of North America, St. Louis, Missouri. Published monthly.

American Pressman, International Printing Pressmen and Assistants' Union of North America, Pressmen's Home, Tennessee. Published monthly.

The Printing Trades and Their Workers, by Florence E. Clark, International Textbook Company, Scranton, Pennsylvania, 1939.

Dictionary of Printing Terms, Porte Publishing Co., Salt Lake City, Utah, 1941.

Dictionary of Occupational Titles, U. S. Department of Labor, and the U.S. Employment Service, Government Printing Office, Washington, D. C., 1939.

Earnings and Hours in Book and Job Printing, January 1942, U. S. Department of Labor, Bureau of Labor Statistics, Division of Wage Analysis, Government Printing Office, 1943.

Graphic Arts Education, by Fred J. Hartman, "A Compendium of Mechanical Workers in Printing and Allied Trades," Summer Issue, 1944.

International Bookbinder, International Brotherhood of Bookbinders, AFL Building, Washington, D. C. Published bimonthly.

Is There a Job for Me in Lithography? Joint Lithographic Advisory Council, January 1945.

Job Possibilities in the Printing, Publishing and Allied Graphic Arts Industries with particular emphasis on the Book Manufacturing Industry, Book Manufacturer's Institute, Inc., New York City, 1945.

Lithographers' Journal, Amalgamated Lithographers of America, 450 Seventh Avenue, New York City, N. Y.

The Printing Trades, by Jacob Loft, Farrar and Rinehart, Inc., 1944.

Marketing Opportunities, Lithographers National Association, Inc., New York City, vol. 4, number 5.

Modern Lithography, The Photo-Lithographer, Inc., New York City. Published monthly.

Occupational Data for Counselors, U.S. Department of Labor, in cooperation with Federal Security Agency, U.S. Office of Education, Government Printing Office, Washington, D. C., 1945.

Handbook of Labor Unions, by Florence Peterson, American Council on Public Affairs, Washington, D. C., 1944, pp. 53, 191, 278, 298, 357, and 393.

Printing, Walden, Sons and Mott, Inc., 41 Park Row, New York City. Published monthly.

The Lithographer's Manual, by Walter E. Soderstrom, Waltewin Publishing Company, New York City, 1940.

Union Wages and Hours in the Printing Trades, U. S. Department of Labor, Bureau of Labor Statistics. Published annually.

VI. Occupational Outlook Publications of the Bureau of Labor Statistics

Studies of employment trends and opportunities in the various occupations and professions are made by the Occupational Outlook Service of the Bureau of Labor Statistics.

Reports are prepared for use in the vocational guidance of veterans, young people in schools, and others considering the choice of an occupation. Schools concerned with vocational training and employers and trade-unions interested in on-the-job training have also found the reports helpful in planning programs in line with prospective employment opportunities.

Occupational outlook reports are issued as bulletins of the Bureau of Labor Statistics: sometimes they are also published in the Monthly Labor Review (subscription per year, $3.50; single copy 30 cents). Both the Monthly Labor Review and the bulletins may be purchased from the Superintendent of Documents, Washington 25, D. C.

Two types of reports are issued:

Occupational outlook bulletins describe the long-run outlook for employment in each occupation and give information on earnings, working conditions, and the training required.

Special bulletins are issued from time to time on such subjects as the general employment outlook, trends in the various States, and occupational mobility.

Occupational Outlook Bulletins

Employment Opportunities for Diesel-Engine Mechanics

Bulletin No. 813 (1945), price 5 cents. (Monthly Labor Review, February 1945).

Employment Opportunities in Aviation Occupations, Part I—Postwar Employment Outlook

Bulletin No. 837–1 (1945), price 10 cents. (Monthly Labor Review, April and June 1945).

Employment Opportunities in Aviation Occupations, Part II—Duties, Qualifications, Earnings, and Working Conditions

Bulletin 837–2 (1947), price 20 cents. Sections on hours of work and earnings in Monthly Labor Review, August 1946.

Employment Outlook for Automobile Mechanics

Bulletin No. 842 (1945), price 10 cents. (Monthly Labor Review, February 1946).

Employment Opportunities for Welders

Bulletin No. 844 (1945), price 10 cents. (Monthly Labor Review, September 1945).

Postwar Outlook for Physicians

Bulletin No. 863 (1946), price 10 cents. (Monthly Labor Review, December 1945).

Employment Outlook in Foundry Occupations
Bulletin No. 880 (1946), price 15 cents. (Monthly Labor Review, December 1945, and April 1946).

Postwar Employment Prospects for Women in the Hosiery Industry
Bulletin No. 835 (1945), price 5 cents. (Monthly Labor Review, May 1945).

Employment Outlook for Business Machine Servicemen
Bulletin No. 892 (1947), price 15 cents.

Employment Outlook in Machine Shop Occupations
Bulletin No. 895 (1947), price 20 cents.

Employment Outlook in Hotel Occupations
Bulletin No. 905 (1947). In press.

Special Bulletins

Occupational Data for Counselors, A Handbook of Census Information Selected for Use in Guidance
Bulletin No. 817 (1945), price 10 cents. (Prepared jointly with the Occupational Information and Guidance Service, U. S. Office of Education).

Factors Affecting Earnings in Chemistry and Chemical Engineering
Bulletin No. 881 (1946), price 10 cents. (Monthly Labor Review, June 1946).

State and Regional Variations in Prospective Labor Supply
Bulletin No. 893 (1947), price 15 cents.

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UNITED STATES DEPARTMENT OF LABOR
L. B. Schwellenbach, *Secretary*

BUREAU OF LABOR STATISTICS
Ewan Clague, *Commissioner*

Union Wages and Hours of Local Transit Operating Employees
July 1, 1946

Bulletin No. 903

For sale by the Superintendent of Documents, U. S. Government Printing Office
Washington 25, D. C. - Price 10 cents

Letter of Transmittal

United States Department of Labor,
Bureau of Labor Statistics,
Washington, D. C., May 19, 1947.

The Secretary of Labor:

I have the honor to transmit herewith the annual report on union wage rates of local transit operating employees, as of July 1, 1946.

This report was prepared in the Bureau's Wage Analysis Branch by Herbert M. Abowitz, under the direction of Donald H. Gerrish.

Ewan Clague,
Commissioner

Hon. L. B. Schwellenbach,
Secretary of Labor.

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Bulletin No. 903 of the
United States Bureau of Labor Statistics

Union Wages and Hours of Local Transit Operating Employees, July 1, 1946

Summary

Basic wage rates of union streetcar and bus operators averaged $1.10 an hour for 72 cities on July 1, 1946, an increase of 17.2 percent over July 1, 1945. The increase reflects the inclusion of many wartime bonus arrangements as part of the basic rate structure along with the postwar negotiated increases. Ninety-seven percent of the union members received rate increases. Two-fifths of those benefiting advanced by 15 to 20 percent. Shortening of time intervals between automatic wage increases benefited 6 percent of the workers. The highest rates were reported in Detroit where operators of one-man cars had a rate of $1.32 an hour after 1 year of service, with 10 cents additional for owl runs.

Overtime payments after a specified number of hours of work and the 40-hour straight-time week are becoming increasingly prevalent. All of the workers studied were covered by agreements providing paid vacations, and 57 percent received 2 weeks' vacation after 1 year of service.

Scope of Study

This survey, first conducted in 1921, is part of the Bureau of Labor Statistics program of making Nation-wide annual studies of union vage scales and related matters in various trades.[1] Union scales erein reported for the various classifications covering organized treetcar, bus, and subway operating employees working on local city ransit services were those in effect on July 1, 1946. A union scale nay be defined as the minimum rates or maximum number of hours of vork at straight-time agreed upon by the employer and the union for a articular trade in a given locality. Scales negotiated subsequent to the survey date were reexamined wherever possible to insure inclusion of wage changes retroactive to July 1, 1946.

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[1] The data upon which this report is based were collected by field representatives of the Bureau from icials of the local trade unions in 75 principal cities of the United States. Wherever adequate membership eak-down at the various rate levels was unobtainable at the union office, the data were secured from mpany officials.

Operators of municipally owned intracity transit systems were included in the survey if unions acted as bargaining agents for the employees. Trackmen and maintenance workers were excluded. Of the 75 cities surveyed, 72 reported effective union agreements covering 102,164 local transit operating employees.

Trend of Hourly Wage Rates [2]

The index of hourly wage rates for union streetcar and bus operators stood at 143.1 on July 1, 1946, an increase of 17.2 percent from the preceding study (July 1, 1945). During war years many agreements in this industry provided for payment of bonuses, ranging from 2 to 7 cents an hour in different cities in addition to the basic hourly rate. During the past year most of the collective bargaining agreements in the industry made the average bonus payments a part of the basic wage structure, and provided additional increases over and above previous rates plus bonus. The bonuses were not included in previous studies as they were not a part of the rate structure although they were actually being paid. The 17.2-percent increase mentioned above, therefore, actually includes, in addition to negotiated rate increases, the bonus payments effective in war years but not recorded in the Bureau's earlier studies. Wage rates in this industry hav shown gradual improvement since 1934. The most pronounce changes occurred in 1942 when a 7.3-percent increase from the preceding year was recorded.

TABLE 1.—*Indexes of hourly wage rates of local transit operating employees, 1929–46*

[1939=100]

Year	Index	Year	Index	Year	Index
1929	91.6	1935	91.4	1941	104
1930	92.5	1936	92.1	1942	112
1931	92.5	1937	96.4	1943	119
1932	90.6	1938	99.2	1944	120
1933	(1)	1939	100.0	1945	12
1934	88.0	1940	101.1	1946	14

[1] Not available.

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[2] In computing the index series (1939=100), the annual percentage change from year to year is derived fr aggregates of union quotations for identical classifications in 2 successive years. The membership weig in both of the aggregates used for each year to year comparison are those reported for the second year. obtain the index for the current year, the total of the current aggregates is divided by the previous ye aggregates and the ratio thus obtained is multiplied by the previous year's index number. The inde are computed on this basis in order to minimize the effect of changes in union membership which mi obscure the real changes in wages. The index series, rather than the actual averages of rates in this and p vious reports, should be used to determine the trend of hourly wage rates. Changes in coverage and s in union membership distort a direct comparison of average rates in two periods.

Increases in average basic scales between July 1, 1945, and July 1, 1946, and incorporation of bonuses in these scales were mainly responsible for the upward movement in rates. Nevertheless, approximately 6 percent of the total membership concentrated in seven widely scattered cities benefited by rate adjustments brought about by the reduction of time intervals between automatic wage increases under contracts providing for graduated scales.

Hourly Wage Rates, July 1, 1946

Organized streetcar and bus operators in 72 cities averaged $1.10 an hour on July 1, 1946. Fifty-five percent of the workers received between $1 and $1.15, and of these a majority had hourly rates ranging from $1.10 to $1.15. Less than 7 percent of the workers had hourly rates below the July 1, 1945, national average of 94.4 cents. Rates of at least $1 an hour were reported by 8 of every 10 members n contrast to 2 out of 10 revealed in the preceding survey. Twenty-hree percent of the workers reported scales of at least $1.20, but of hese a majority did not receive as much as $1.25.

As previously indicated, the comparisons between 1945 and 1946 re necessarily limited to the basic rate structures in effect on the urvey dates, and do not include additions to basic scales, such as he various wartime bonus arrangements existing in 30 covered cities st year. These increments, varying from pay period to pay period, rved to increase operators' hourly earnings. Bonus plans approved y the War Labor Board could not exceed 7 cents per hour. However, ans in operation before the War Labor Board's order were not fected. In one city (Binghamton, N. Y.), the bonus plan provided n additional 17 cents to the operators' hourly rate. This bonus, plus additional 6 cents per hour, was incorporated into the basic rate ucture by the time of the current survey.

Streetcar and bus operators were usually paid on a graduated scale sed on the employee's length of service with the company. The riod between rate changes varied considerably among different ies ranging from 1½ months for some classifications in Philadelphia as long as 1 year in several cities. Most agreements stipulated entrance, an intermediate, and a maximum rate.[3] Most frequently, latter applied after completion of 1 or 2 years' service, though me agreements had such provisions ranging from 6 months (Jack-, Miss.) to 4 years (New York City) and as many as seven progres-n steps from entrance rate through the maximum rate. There

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his so-called "maximum rate" is actually the minimum union scale after a specified period of employ-with the company, and is not a maximum rate in the sense that the company may not pay more.

was great variance in the differences between entrance and maximum rates among cities and among companies operating within a city. Although the differentials were generally 5, 8, or 10 cents, differences of from 2 to as much as 27 cents an hour were reported.

Rates for operators and conductors on two-man cars, reported by 20 cities, were lower than those effective for operators of one-man vehicles in those cities. Although the maximum rate was generally about 10 cents an hour higher for the one-man car and bus operators, differences of 5 and 7 cents were also frequent.

Entrance rates for one-man vehicle operators ranged from 68 cents an hour in Nashville, Tenn., to $1.24 in Chicago, while for operators and conductors on two-man cars entrance rates ranged from 79 cents in Omaha, Nebr., to $1.12 in Detroit, Mich. In those cities where two-man vehicles are utilized no wage differential exists between the rate applying to conductors and motormen. In many instances the conductor may be a low seniority man and consequently fall within the lower bracket of the same scale progression. Generally the two classifications are interchangeable.

Maximum rates for one-man vehicle operators varied from 80 cents in Madison, Wis., Wichita, Kans., and York, Pa., to $1.32 in Detroit, Mich., where an additional 10 cents an hour was paid for work on owl runs. For two-man vehicle operators, the maximum hourly rate ranged from 86 cents in Omaha, Nebr., to $1.22 in Detroit (10 cents additional for owl runs).

TABLE 2.—*Percentage distribution of union operating employees in the local transi industry by hourly wage rates, July 1, 1946*

Hourly wage rates	Percent of union members by occupation			
	All workers	Operators of 1-man cars and busses	Motormen and conductors of 2-man surface cars	Elevated and subwa operators
Under 80 cents	0.6	1.1	(1)	----------
80 and under 85 cents	.9	1.4	0.2	----------
85 and under 90 cents	1.7	1.9	1.9	----------
90 and under 95 cents	3.6	5.2	1.5	
95 cents and under $1.00	9.5	7.8	12.8	
$1.00 and under $1.05	13.1	16.8	6.7	
$1.05 and under $1.10	13.3	18.5	4.4	
$1.10 and under $1.15	28.8	13.8	58.1	
$1.15 and under $1.20	5.2	3.3	7.5	
$1.20 and under $1.25	12.2	16.8	6.3	
$1.25 and under $1.30	5.2	7.5	----------	
$1.30 and under $1.35	3.7	5.8	.6	
$1.35 and over	2.2	.1	----------	

[1] Less than 0.05 of 1 percent.

Changes in Wage Rates Between 1945 and 1946

Almost all (97 percent) of the organized local transit workers received increases in basic rates after July 1, 1945. Two-fifths of the members reported increases of 15 to 20 percent, and almost a third benefited by gains of 20 to 30 percent. Although the July 1, 1945, study revealed but 2 percent of the members as having secured improvement in basic rates to the extent of 10 percent or more, considerably over 90 percent of the members had registered gains at or above this level by July 1, 1946.

Among about 55 percent of the one-man car operators, increases for half of them ranged from 10 to 15 percent and for the others from 15 to 20 percent. Most of the remaining operators in this category benefited by rates ranging from 20 to 30 percent higher than n the previous year. Nearly 6 of every 10 motormen and conductors n two-man vehicles reported gains of 15 to 20 percent, while threeuarters of those engaged in subway and elevated operations had aises of 15 to 25 percent. All of the remaining members in the atter group reported basic wage gains of at least 25 percent. It ust be remembered that these increases include in many cases the ddition of previously effective bonus payments to the basic rate ructure.

ABLE 3.—*Extent of changes in wage rates for local transit operating employees and percent of members affected by increases between July 1, 1945, and July 1, 1946*

Trade	Percent of members having—		Percent of members having increase of—							
	No change	Increase	Less than 5 percent	5 and under 10 percent	10 and under 15 percent	15 and under 20 percent	20 and under 25 percent	25 and under 30 percent	30 and under 35 percent	35 percent and over
local transit operating employees	3.1	96.9	0.9	2.8	23.1	39.6	16.6	12.6	1.3	(1)
rators of 1-man cars and busses	4.3	95.7	1.7	4.2	27.0	28.4	19.9	13.8	.7	(1)
ormen and conductors of 2-man rface cars	2.0	98.0	------	1.4	24.0	58.1	5.1	6.7	2.6	0.1
ated and subway lines	------	100.0	------	------	------	40.9	34.3	24.2	.4	.2

ess than 0.05 of 1 percent.

Post Survey Rate Changes

ate increases in the local transit industry have become effective e July 1, 1946, in at least 12 cities, according to limited available rmation. Basic rate advances of at least 20 cents an hour were rted for bus operators in Chicago and New York. Members in hita effected a reduction in the time interval between rate progressions and benefited by 20 cents an hour if employed 18 months. Increases of 11, 12, and 13 cents, respectively, were reported for Staten Island bus operators, Columbus streetcar operators, and Salt Lake City bus operators. Among the cities for whom higher scales were reported for operators of one-man vehicles were Scranton (8 cents) and Rock Island and Spokane (5 cents). Smaller increases were reported in several other cities.

Weekly Hours and Overtime Rates [4]

The payment of overtime rates after a specified number of hours, regardless of the length of the run, is becoming increasingly prevalent. Previous Bureau of Labor Statistics reports revealed that one-third of the union members tabulated in 1944 worked under agreements providing for a limit on straight-time hours. The following year this proportion increased to three-quarters, and by July 1, 1946, almost 9 of every 10 union workers were covered by such hour limitations.

A run may be defined as a definite number of trips over a given route. Many runs are "swing runs," operated during the morning and afternoon rush hours, with a layoff of 4 or 5 hours in the middle of each day. Straight-time hours on swing runs are usually limited to specific periods spread over a wide time interval, with overtime pay at time-and-a-half required after a span of 12 or 13 hours a day Unions have for many years steadfastly worked to keep swing runs a a minimum, and this has been accomplished by contract stipulation requiring a large percentage of straight runs guaranteeing 40 or 4 hours' pay per week. Because an operator's take-home pay is dependent on the run, most union agreements provide for periodic selection o runs, usually every 3 or 6 months, on a seniority basis. Swing run and trippers are generally operated by low-seniority or "extra" mer

TABLE 4.—*Distribution of union local transit operating employees by weekly hours, July 1, 1946*

Occupation	Percentage of workers with straight-time weekly hours of—								
	40	Over 40 and under 44	44	45	48	Over 48 and under 51	51	Over 51	Lim ec only len, of r
All occupations	31.6	4.0	22.0	0.2	27.0	0.3	2.3	1.1	5
Operators of 1-man cars and busses	27.5	4.8	19.0	.3	25.9	.6	3.9	1.9	1
Motormen and conductors of 2-man surface cars	43.3	1.8	34.1	------	14.3	------	------	.2	3
Elevated and subway lines	18.2	6.3	2.6	------	72.4	------	------	------	5

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[4] Weekly hours considered here refer to the maximum number of hours a week permitted by union a ments before overtime rates become effective. The actual number of hours worked in any 1 week ma greater or less than the weekly hours discussed.

Although the Fair Labor Standards Act specifically exempted the street-railway industry from its penalty overtime provisions, because of the nature of local transit operations, overtime pay after 40 hours is receiving increasing acceptance. Whereas in 1944 but few members received overtime after 40 hours, the current study revealed over 30 percent of the membership covered by such contract provisions.

Straight-time hour limitations varied from 40 to 57 hours a week. About three-fifths of the members had a straight-time workweek of 4 hours or less and most of the remaining members with straight-ime hour limitations received overtime after 48 hours a week. During the study interval approximately 1 of every 10 members received reduction in the straight-time workweek. Should opportunity for vertime work exist these workers would be entitled to premium payent after the performance of fewer hours than formerly. Though w members working on two-man cars received hour reductions, over percent of the subway and elevated workers and about 12 percent the operators of one-man vehicles were so affected.

Virtually all of the workers engaged in local transit operations were vered by contracts providing for the payment of time and a half for rk performed either beyond the specified straight-time hours or on e completion of a definite run.

Vacations

ll the agreements in the 72 cities included in the survey provided paid vacations. Well over a majority of the members received a eeks' vacation after 1 year and almost a third received at least eek's vacation after 1 year. About one-eleventh of the members e covered by contracts providing other than standard vacation ses, such as 1 week after 1,280 hours' service and 2 weeks after 0 hours' service in Los Angeles, or 1 week's vacation for service ing from 160 to 192 working days and 2 weeks after 192 working in Worcester.

l the agreements containing other than customary vacation es provided for at least 1 week of vacation after 1 year and several ed additional days for a specified number of subsequent years vice.

Rates Paid in Each City

e union rates per hour in effect on July 1, 1946, and July 1, 1945, y, are shown in table 5.

TABLE 5.—*Union wage rates of local transit operating employees, July 1, 1946, and July 1, 1945, by cities*

City and classification	Rates of wages per hour		Hours per week	
	July 1, 1946	July 1, 1945	July 1, 1946	July 1, 1945
Atlanta, Ga.				
2-man cars and feeder busses:				
First 6 months	$0.930	$0.720		
7–12 months	.980	.770		
After 1 year	1.010	.800		
1-man cars and busses:				
First 6 months	.990	.790		
7–12 months	1.040	.840		
After 1 year	1.070	.870		
Baltimore, Md.				
2-man cars				
First 3 months	.980		44	
4–12 months	1.010		44	
After 1 year	1.030		44	
1-man cars and busses:				
First 3 months	1.030		44	
4–12 months	1.050		44	
After 1 year	1.080		44	
Binghamton, N. Y.				
Busses:				
First 3 months	.895	.665		
4–12 months	.945	.715		
After 1 year	.975	.745		
Birmingham, Ala.				
2-man cars:				
First 6 months	.945	.745		
7–12 months	.965	.765		
After 1 year	.995	.795		
1-man cars and busses:				
First 6 months	1.020	.820		
7–12 months	1.040	.840		
After 1 year	1.070	.870		
Boston, Mass.				
2-man cars:				
First 3 months	.900	.665	42	44
4–12 months	1.000	.755	42	44
After 1 year	1.150	.915	42	4
1-man cars and busses:				
First 3 months	1.000	.765	42	4
4–12 months	1.100	.855	42	4
After 1 year	1.250	1.015	42	4
Rapid Transit Lines:				
Guards:				
First 3 months	.900	.665	42	4
4–12 months	1.000	.755	42	4
After 1 year	1.150	.915	42	4
Motormen	1.200	.965	42	4
Buffalo, N. Y.				
Busses:				
First 3 months	.930	.930		
4–12 months	.960	.960		
After 1 year	.980	.980		
Butte, Mont.				
Busses	1.000	.920	48	
Charleston, S. C.				
Busses:				
First 3 months	.860	.760	54	
4–12 months	.880	.780	54	
After 1 year	.900	.800	54	
Charlotte, N. C.				
Busses:				
First 3 months	.700	.600	57	
4–6 months	.750	.650	57	
7–12 months	.800	.700	57	
13–15 months	.850	.750	57	
After 15 months	.900	.800	57	

Table 5.—*Union wage rates of local transit operating employees, July 1, 1946, and July 1, 1945, by cities*—Continued

City and classification	Rates of wages per hour		Hours per week	
	July 1, 1946	July 1, 1945	July 1, 1946	July 1, 1945
Chicago, Ill.				
2-man cars:				
First 3 months	$1.090	$0.910	40	40
4-12 months	1.120	.940	40	40
After 1 year	1.140	.960	40	40
Night cars	1.160	.980	40	40
1-man cars and busses:				
Day	1.240	1.040	40	40
Night	1.260	1.060	40	40
Elevated Railways:				
Motormen:				
First 3 months	1.097	.917	40	44
4-12 months	1.106	.926	40	44
After 1 year	1.151	.971	40	44
Conductors	1.106	.926	40	44
Guards (regular)	1.088	.908	40	44
Guards (extra):				
First 3 months	1.060	.880	40	44
4-12 months	1.070	.890	40	44
After 1 year	1.079	.899	40	44
Cincinnati, Ohio				
-man cars:				
First 3 months	1.000	.840	40	40
4-12 months	1.030	.870	40	40
After 1 year	1.050	.890	40	40
-man cars and busses:				
First 3 months	1.070	.910	40	40
4-12 months	1.100	.940	40	40
After 1 year	1.120	.960	40	40
Cleveland, Ohio				
man cars:				
First 3 months	1.080	.945	44	44
4-12 months	1.110	.975	44	44
After 1 year	1.130	.995	44	44
usses:				
First 3 months	1.140	1.015	44	44
4-12 months	1.180	1.045	44	44
After 1 year	1.200	1.065	44	44
Columbus, Ohio				
ıan cars, busses, and coaches:				
First 3 months	.900	.810	48	54
4-12 months	.930	.840	48	54
After 1 year	.950	.860	48	54
Dallas, Tex.				
an cars and busses:				
First year	.920	.770	54	54
After 1 year	.950	.800	54	54
Dayton, Ohio				
Railway Co.:				
1-man cars and busses:				
First 3 months	.910	.800	51	51
4-12 months	.930	.830	51	51
After 1 year	.950	.850	51	51
les' Transit Co.:				
-man cars and busses:				
First 3 months	.910	.820	51	51
4-12 months	.930	.840	51	51
After 1 year	.950	.860	51	51
Denver, Colo.				
ı cars:				
irst 3 months	.940	.840	51	51
-12 months	.950	.850	51	51
-18 months	.960	.860	51	51
-24 months	.970	.870	51	51
fter 2 years	.980	.880	51	5

Table 5.—*Union wage rates of local transit operating employees, July 1, 1946, and July 1, 1945, by cities*—Continued

City and classification	Rates of wages per hour		Hours per week	
	July 1, 1946	July 1, 1945	July 1, 1946	July 1, 1945
Denver, Colo.—Continued				
1-man cars, busses, and trolley coaches:				
First 3 months	$0.990	$0.890	51	51
4–12 months	1.000	.900	51	51
13–18 months	1.010	.910	51	51
19–24 months	1.020	.920	51	51
After 2 years	1.030	.930	51	51
Des Moines, Iowa				
1-man cars and busses:				
First 3 months	.965	.735	----	----
4–9 months	.995	.765	----	----
After 9 months	1.040	.810	----	----
Detroit, Mich.				
2-man cars:				
First 6 months	1.120	.950	44	44
7–12 months	1.160	.990	44	44
After 1 year	1.220	1.050	44	44
Night cars	1.320	1.150	44	44
1-man cars and busses:				
First 6 months	1.220	1.050	44	44
7–12 months	1.260	1.090	44	44
After 1 year	1.320	1.150	44	44
Night busses	1.420	1.250	44	44
Duluth, Minn.				
Busses:				
First year	.840	.790	40	40
Second year	.900	.850	40	40
El Paso, Tex.				
1-man cars and busses:				
First 3 months	.750	.650	50	50
4–9 months	.800	.700	50	50
10–12 months	.850	.750	50	50
After 1 year	.900	.800	50	50
Erie, Pa.				
Busses:				
First 6 months	1.010	.800	40	----
7–12 months	1.080	.870	40	----
After 1 year	1.110	.900	40	----
Grand Rapids, Mich.				
Busses	.950	.875	48	51
Indianapolis, Ind.				
1-man cars and busses:				
First year	.980	.830	40	44
1–2 years	1.000	.850	40	44
After 2 years	1.050	.900	40	44
Jackson, Miss.				
Busses:				
First 6 months	.900	.730	----	----
After 6 months	.950	.780	----	----
Jacksonville, Fla.				
Busses:				
First 6 months	.900	.810	----	----
7–12 months	.950	.830	----	----
After 1 year	1.000	.850	----	----
Kansas City, Mo.				
1-man cars and busses:				
First 3 months	.945	.845	51	----
4–12 months	.963	.863	51	----
13–24 months	.975	.875	51	----
After 2 years	1.000	.900	51	----

TABLE 5.—*Union wage rates of local transit operating employees, July 1, 1946, and July 1, 1945, by cities*—Continued

City and classification	Rates of wages per hour		Hours per week	
	July 1, 1946	July 1, 1945	July 1, 1946	July 1, 1945
Little Rock, Ark.				
1-man cars and busses:				
First 6 months	$0.800	$0.700	----------	----------
7–12 months	.850	.750	----------	----------
13–18 months	.900	.780	----------	----------
After 18 months	.950	.800	----------	----------
Los Angeles, Calif.				
Los Angeles Transit Lines:				
2-man cars:				
First 6 months	1.020	.810	44	44
After 6 months	1.110	.850	44	44
1-man cars and busses:				
First 6 months	1.140	.910	44	44
After 6 months	1.230	.950	44	44
Pacific Electric Co.:				
2-man cars:				
First 6 months	1.075	.890	----------	----------
After 6 months	1.115	.930	----------	----------
Single track:				
First 6 months	1.125	.940	----------	----------
After 6 months	1.165	.980	----------	----------
1-man cars and busses:				
First 6 months	1.175	.990	----------	----------
After 6 months	1.215	1.030	----------	----------
Louisville, Ky.				
-man cars and busses:				
First 3 months	.880	.710	48	48
4–6 months	.960	.790	48	48
7–12 months	1.010	.840	48	48
After 1 year	1.030	.860	48	48
Madison, Wis.				
usses:				
First 6 months	.730	.730	40	40
7–12 months	.760	.760	40	40
13–18 months	.780	.780	40	40
After 18 months	.800	.800	40	40
Manchester, N. H.				
usses:				
First 3 months	.970	.815	40	45
4–12 months	1.030	.875	40	45
After 1 year	1.100	.935	40	45
Memphis, Tenn.				
ian cars and busses:				
First year	.950	.770	48	----------
Second year	1.000	.820	48	----------
After 2 years	1.050	.870	48	----------
Milwaukee, Wis.				
an cars:				
First year	.950	.859	40	40
Second year	.970	.880	40	40
After 2 years	1.000	.901	40	40
an cars and busses:				
First year	1.010	.912	40	40
Second year	1.030	.933	40	40
After 2 years	1.050	.954	40	40
Minneapolis, Minn.				
n cars:				
First year	.860	.790	40	40
Second year	.890	.820	40	40
After 2 years	.920	.850	40	40
n cars and busses:				
irst year	.950	.880	40	40
econd year	.980	.910	40	40
fter 2 years	1.020	.950	40	40

TABLE 5.—*Union wage rates of local transit operating employees, July 1, 1946, and July 1, 1945, by cities*—Continued

City and classification	Rates of wages per hour		Hours per week	
	July 1, 1946	July 1, 1945	July 1, 1946	July 1, 1945
Mobile, Ala.				
Busses:				
First 6 months	$0.930	$0.800	----------	----------
After 6 months	.980	.850	----------	----------
Nashville, Tenn.				
Busses:				
First 3 months	.680	.650	----------	----------
4–12 months	.730	.700	----------	----------
13–18 months	.760	.730	----------	----------
19–24 months	.800	.770	----------	----------
After 2 years	.830	.800	----------	----------
Newark, N. J.				
1-man cars and busses:				
First 3 months	1.095	.910	48	48
4–12 months	1.115	.930	48	48
After 1 year	1.135	.950	48	48
Ironbound Transit Co.:				
Busses:				
First 6 months	.750	.700	----------	----------
7–12 months	.800	.750	----------	----------
After 1 year	.850	.800	----------	----------
New Haven, Conn.				
1-man cars and busses:				
First 3 months	.990	.970	48	48
4–12 months	1.020	1.000	48	48
After 1 year	1.060	1.040	48	48
New Orleans, La.				
2-man cars:				
First 6 months	.950	.720	48	48
7–12 months	.980	.750	48	48
After 1 year	1.010	.780	48	48
Busses:				
First 6 months	1.020	.770	48	48
7–12 months	1.050	.820	48	48
After 1 year	1.080	.870	48	48
New York, N. Y.				
Subways:				
Road motormen:				
First year	1.300	1.100	48	48
After 1 year	1.350	1.150	48	48
Yard motormen:				
First year	1.150	.950	48	4
1–2 years	1.200	1.000	48	4
After 2 years	1.250	1.050	48	4
Conductors:				
First position:				
First year	1.050	.850	48	4
After 1 year	1.100	.900	48	4
Second position	1.000	.800	48	4
Platform:				
First year	.950	.750	48	4
After 1 year	.980	.780	48	4
Surface cars:				
Third Avenue Transit System:				
First 6 months	.790	.700	48	4
7–12 months	.840	.750	48	4
13–18 months	.890	----------	48	----------
19–24 months	.940	----------	48	----------
After 2 years	1.040	----------	48	----------
Brooklyn-Queens Transit Lines:				
First 6 months	1.000	.800	48	
7–18 months	1.100	.900	48	
19–30 months	1.150	.950	48	
After 30 months	1.200	1.000	48	
Busses:				
Avenue B & East Broadway Transit Co.:				
First 6 months	.800	.720	48	
7–12 months	.880	.770	48	
13–24 months	.940	.800	48	
After 2 years	1.040	.870	48	

TABLE 5.—*Union wage rates of local transit operating employees, July 1, 1946, and July 1, 1945, by cities*—Continued

City and classification	Rates of wages per hour		Hours per week	
	July 1, 1946	July 1, 1945	July 1, 1946	July 1, 1945
New York, N. Y.—Continued				
Busses—Continued				
Brooklyn Bus Division:				
First 6 months	$1.000	$0.800	48	48
7–18 months	1.100	.900	48	48
19–30 months	1.150	.950	48	48
After 30 months	1.200	1.000	48	48
Comprehensive & East Side Omnibus Corp.:				
First 6 months	.800	------------	44	------------
7–12 months	.880	------------	44	------------
Second year	.940	------------	44	------------
After 2 years	1.040	------------	44	------------
Fifth Avenue Coach:[1]				
Drivers:				
First year	.890	.890	48	48
Second year	.900	.900	48	48
Third year	.930	.930	48	48
Fourth year	.940	.940	48	48
After 4 years	.950	.950	48	48
Conductors:				
First year	.820	.820	48	48
Second year	.830	.830	48	48
Third year	.860	.860	48	48
4–7 years	.870	.870	48	48
After 7 years	.880	.880	48	48
Green Lines:				
First 6 months	.860	.720	48	48
7-12 months	.990	.760	48	48
13–24 months	.960	.820	48	48
25–30 months	1.030	.890	48	48
After 30 months	1.090	.950	48	48
Jamaica Busses, Inc.:				
First year	.720	.720	48	48
Second year	.800	.800	48	48
Third year	.870	.870	48	48
After 3 years	.950	.950	48	48
Manhattan and Queens Lines:				
First 6 months	.860	.720	48	48
7–12 months	.900	.760	48	48
13–24 months	.960	.820	48	48
25–30 months	1.030	.890	48	48
After 30 months	1.090	.950	48	48
New York Omnibus Co.:				
First 6 months	.790	.790	44	44
7–12 months	.890	.890	44	44
13–24 months	.940	.940	44	44
After 24 months	1.040	------------	44	------------
North Shore Bus Co.:				
First 6 months	.870	.720	48	48
7–12 months	.910	.760	48	48
13–24 months	.980	.830	48	48
25–30 months	1.060	.910	48	48
After 30 months	1.100	.950	48	48
Queens-Nassau Transit Lines:				
First year	.880	.720	48	48
Second year	1.130	------------	48	------------
Schenck Transport Co.:				
First 6 months	.800	.710	48	48
7–12 months	.850	.710	48	48
13–24 months	.900	.820	48	48
25–30 months	.950	.820	48	48
After 30 months	1.070	.920	48	48
Staten Island Coach Co.:				
First 3 months	.840	.750	48	48
4–6 months	.870	.780	48	48
7–9 months	.900	.810	48	48
10–12 months	.930	.840	48	48
13–18 months	.969	.870	48	48
19–24 months	1.000	.910	48	48
After 2 years	1.040	.950	48	48
teinway Omnibus & Greensboro Bridge Railway:				
First year	.880	.720	48	48
After 1 year	1.130	------------	48	------------

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TABLE 5.—*Union wage rates of local transit operating employees, July 1, 1946, and July 1, 1945, by cities*—Continued

City and classification	Rates of wages per hour		Hours per week	
	July 1, 1946	July 1, 1945	July 1, 1946	July 1, 1945
New York, N. Y.—Continued				
Busses—Continued				
Third Avenue Railway Transit System:				
First 6 months	$0 790	$0.700	48	48
7–12 months	.840	.750	48	48
12–18 months	.890	------	48	------
18–24 months	.940	------	48	------
After 2 years	1.040	------	48	------
Tri-Boro Coach Corp.:				
First year	.870	.720	48	48
Second year	.940	.790	48	48
Third year	1.020	.870	48	48
After 3 years	1.100	.950	48	48
Norfolk, Va.				
1-man cars and busses:				
First 3 months	.820	.700	------	------
4–12 months	.870	.750	------	------
After 1 year	.920	.800	------	------
Oklahoma City, Okla.				
1-man cars and busses:				
First 6 months	.720	.720	------	------
7–12 months	.750	.750	------	------
13–24 months	.790	.790	------	------
After 2 years	.850	.850	------	------
Omaha, Nebr.				
2-man cars:				
First 6 months	.790	.680	54	54
7–12 months	.820	.710	54	54
After 1 year	.860	.750	54	54
1-man cars and busses:				
First 6 months	.840	.730	54	54
7–12 months	.870	.760	54	54
After 1 year	.910	.800	54	54
Peoria, Ill.				
1-man cars and busses:				
First 9 months	1.015	------	44	------
10–18 months	1.035	------	44	------
After 18 months	1.055	------	44	------
Philadelphia, Pa.				
Subway, elevated and high-speed lines:				
Operators:				
First 1½ months	.970	------	44	------
1½–3 months	.995	------	44	------
3–4½ months	1.020	------	44	------
4½–6 months	1.045	------	44	------
After 6 months	1.070	------	44	------
Conductors:				
First 1½ months	.890	------	44	------
1½–3 months	.915	------	44	------
3–4½ months	.940	------	44	------
4½–6 months	.965	------	44	------
After 6 months	.990	------	44	------
2-man cars:				
First 1½ months	.890	------	44	------
1½–3 months	.915	------	44	------
3–4½ months	.940	------	44	------
4½–6 months	.965	------	44	------
After 6 months	.990	------	44	------
1-man cars and busses:				
First 1½ months	.970	------	44	------
1½–3 months	.995	------	44	------
3–4½ months	1.020	------	44	------
4½–6 months	1.045	------	44	------
After 6 months	1.070	------	44	------

TABLE 5.—*Union wage rates of local transit operating employees, July 1, 1946, and July 1, 1945, by cities*—Continued

City and classification	Rates of wages per hour		Hours per week	
	July 1, 1946	July 1, 1945	July 1, 1946	July 1, 1945
Phoenix, Ariz.				
1-man cars and busses:				
First 6 months	$1.000	----------	48	----------
7–12 months	1.100	----------	48	----------
13–18 months	1.150	----------	48	----------
After 18 months	1.200	----------	48	----------
Pittsburgh, Pa.				
1-man cars:				
First 3 months	1.155	$0.955	40	40
4–12 months	1.245	1.045	40	40
After 12 months	1.300	1.100	40	40
Busses:				
First 3 months	1.150	.950	40	44
4–12 months	1.260	1.060	40	44
After 12 months	1.300	1.100	40	44
Portland, Maine				
Busses:				
First year	1.050	.920	48	48
After 1 year	1.080	.950	48	48
Portland, Oreg.				
1-man cars and busses:				
First 3 months	1.170	1.000	40	48
4–6 months	1.195	1.025	40	48
7–12 months	1.220	1.050	40	48
After 1 year	1.250	1.080	40	48
Providence, R. I.				
-man cars and busses:				
First 3 months	1.050	.920	42½	----------
4–12 months	1.080	.950	42½	----------
After 12 months	1.100	.970	42½	----------
Reading, Pa.				
man cars	.820	.700	40	40
man cars and busses	.920	.800	40	40
Richmond, Va.				
man cars and busses:				
First 3 months	.820	.700	----------	----------
4–12 months	.870	.750	----------	----------
After 1 year	.920	.800	----------	----------
Rochester, N. Y.				
nan subway cars	1.070	.870	----------	----------
isses:				
First 3 months	1.060	.860	----------	----------
4–12 months	1.080	.880	----------	----------
After 1 year	1.100	.900	----------	----------
Rock Island (Ill.) district [2]				
sses:				
First 6 months	.960	.890	----------	----------
7–12 months	.980	.910	----------	----------
After 1 year	1.000	.930	----------	----------
St. Louis, Mo.				
an cars: [1]				
First 4 months	.830	----------	48	----------
5–8 months	.880	----------	48	----------
9–12 months	.930	----------	48	----------
After 1 year	.980	----------	48	----------
an cars and busses: [1]				
First 4 months	.900	.800	48	48
5–8 months	.950	.850	48	48
-12 months	1.000	.900	48	48
After 12 months	1.050	.950	48	48

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ncludes Davenport, Iowa, and Moline and Rock Island, Ill.

TABLE 5.—*Union wage rates of local transit operating employees, July 1, 1946, and July 1, 1945, by cities*—Continued

City and classification	Rates of wages per hour		Hours per week	
	July 1, 1946	July 1, 1945	July 1, 1946	July 1, 1945
St. Louis, Mo.—Continued				
St. Louis County Bus Co.:				
Busses:				
First 6 months	$0.925	$0.825	----------	----------
7-12 months	.950	.850	----------	----------
13-18 months	.975	.875	----------	----------
After 18 months	1.000	.900	----------	----------
St. Paul, Minn.				
(See Minneapolis, Minn.)				
Salt Lake City, Utah				
Busses:				
First 6 months	.920	.820	49½	48
After 6 months	1.000	.900	49½	48
San Antonio, Tex.				
Busses	1.100	.860	40	40
San Francisco, Calif.				
Municipal Railway:				
2-man cars:				
First 6 months	1.000	.900	48	48
7-12 months	1.050	.925	48	48
After 1 year	1.100	----------	48	----------
Busses:				
First 6 months	1.050	.950	48	48
7-12 months	1.100	.975	48	48
After 1 year	1.150	----------	48	----------
California Cable Railroad:				
Gripmen and conductors:				
First 6 months	1.000	.900	48	48
7-12 months	1.050	.925	48	48
After 1 year	1.100	----------	48	----------
Scranton, Pa.				
1-man cars and busses:				
First 3 months	.840	.740	----------	----------
4-12 months	.890	.790	----------	----------
After 1 year	.920	.820	----------	----------
Seattle, Wash.				
Busses:				
First 6 months	1.210	1.100	----------	----------
After 6 months	1.260	1.150	----------	----------
Regular operators	1.260	1.154	----------	----------
South Bend, Ind.				
Busses:				
First 6 months	.950	.850	40	40
7-12 months	.975	.875	40	40
After 1 year	1.000	.900	40	40
Spokane, Wash.				
Busses	1.100	----------	45	----------
Springfield, Mass.				
Busses:				
First 3 months	1.110	.870	44	48
4-12 months	1.165	.925	44	48
After 1 year	1.210	.970	44	48
Tampa, Fla.				
1-man cars:				
First 6 months	.800	.700	44	4
7-12 months	.800	.750	44	4
After 1 year	.880	.800	44	4
Busses:				
First 6 months	.800	.720	----------	----------
After 6 months	.880	.800	----------	----------

TABLE 5.—*Union wage rates of local transit operating employees, July 1, 1946, and July 1, 1945, by cities*—Continued

City and classification	Rates of wages per hour		Hours per week	
	July 1, 1946	July 1, 1945	July 1, 1946	July 1, 1945
Toledo, Ohio				
1-man cars and busses:				
First 6 months	$1.070	$0.880	--------	--------
7–12 months	1.090	.900	--------	--------
After 1 year	1.120	.930	--------	--------
Washington, D. C.				
2-man cars:				
First 3 months	1.020	.770	40	40
4–12 months	1.060	.810	40	40
After 1 year	1.100	.850	40	40
1-man cars and busses:				
First 3 months	1.120	.870	40	40
4–12 months	1.160	.910	40	40
After 1 year	1.200	.950	40	40
Wichita, Kans.				
Busses:				
First 6 months	.700	.700	--------	--------
7–12 months	.765	.765	--------	--------
After 1 year	.800	.800	--------	--------
Worcester, Mass.				
man cars and busses:				
First 3 months	1.000	.870	40	48
4–12 months	1.050	.920	40	48
After 1 year	1.100	.970	40	48
York, Pa.				
usses:				
First 6 months	.720	.720	40	40
7–12 months	.760	.760	40	40
After 1 year	.800	.800	40	40
Youngstown, Ohio				
sses:				
First year	1.060	.900	44	--------
After 1 year	1.110	.950	44	--------

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UNITED STATES DEPARTMENT OF LABOR
L. B. Schwellenbach, *Secretary*
BUREAU OF LABOR STATISTICS
Ewan Clague, *Commissioner*

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Developments in Consumers' Cooperative Movement in 1946

Bulletin No. 904

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Letter of Transmittal

United States Department of Labor,
Bureau of Labor Statistics,
Washington, D. C., June 24, 1947.

The Secretary of Labor:

I have the honor to transmit herewith a report on developments in the consumers' cooperative movement in 1946, prepared by Florence E. Parker of the Bureau's Labor Economics Staff.

Ewan Clague, *Commissioner.*

Hon. L. B. Schwellenbach,
Secretary of Labor.

Bulletin No. 904 of the
United States Bureau of Labor Statistics
[Reprinted from the MONTHLY LABOR REVIEW, March 1947, with additional data]

Developments in the Consumers' Cooperative Movement in 1946

Summary

TO COOPERATORS in the United States, the outstanding event of 1946 was the biennial Cooperative Congress, which made far-reaching changes in the structure of the organized cooperative movement in this country. The year was also notable for the substantial progress in the fields of cooperative housing and medical care; for the unusually large number of new branches opened or new departments added by established associations; and for the organization of national federations of cooperative housing associations, of cooperative medical-care associations, and of students' cooperatives, as well as of an international association to carry on trade in petroleum products among the cooperative movements of the various countries of the world.

There was continuance and expansion of previous efforts toward closer relationships with other groups, such as labor, churches, and farmers. Particularly successful have been the moves in the direction of labor, which are now paying dividends in the active support of cooperatives by unions and their members in many places.

Developments Among the Local Associations

As usual, many new distributive cooperatives were started during the year, and an unusually large number of associations opened new branches or added new departments. Electrical-appliance departments were among the most popular. According to report, some 2,300 local associations were dealing in electrical appliances by early 1947, but only 23 percent were carrying a full line. Other new departures included departments for building supplies, lumber yards, coal yards, a carpenter shop, general stores, gasoline stations, cold-storage lockers, dry-cleaning service, watch-repair service, a dry goods store, and a hardware store. One local association bought a sawmill, another an ice-cream plant, and a third a small petroleum refinery for heavy fuels. One association became an agency for the sale of small airplanes. In Connecticut a cooperative store association opened what was said to be the first cooperative gasoline station in that State.

Urban associations.—The year 1946 saw some advance in the spread of cooperation in urban areas. In Chicago, six existing associations had by August 1946 voted to become branches of the city-wide Chicago Consumers' Cooperative, formed in 1945. Each thereby became a "district assembly" of the association. Two others were reported as in process of formation. The first supermarket of the new association was opened in November 1946, and early in January 1947 the leasing of a site for a second was announced. The association's membership in September was stated to have passed 1,800.

Other cities were reported to be interested in the Chicago procedures, one of which is a $5 nonreturnable membership fee, used to defray the expense of a paid staff of organizers. "Another is the city-wide enlistment of members, with the gradual development of natural centers for intensive organizational work. The latter feature permits people who are sufficiently interested in co-ops to invest and participate before there is immediate prospect of a store in their neighborhood and create a common pool of capital for use throughout the city." [1]

In the Twin Cities, membership meetings approved a proposed merger of Cooperative Services (Minneapolis) and Co-ops, Inc. (St. Paul), under the name Twin Cities Cooperative Services. The Minneapolis group operates several automobile service stations and a feed, coal, and lumber yard; a food store was sold to the St. Paul association early in 1946. The latter was already operating five grocery stores and had just purchased a bakery to supply its stores. In Cheyenne, Wyo., the gas cooperative opened a supermarket in the spring of 1946. The two Berkeley, Calif., cooperatives (one operating a grocery store and the other a gasoline station and hardware and appliance store) merged to form the Berkeley Cooperative Center, with a combined membership of about 1,400.

In New York City, Consumers Cooperative Services, operating seven cafeterias and four grocery stores, reported the largest volume of business in its 26-year history in 1945–46 ($1,373,424) and an increase in membership from 5,536 to 7,130. Its plans call for an eventual chain of 20 stores within a 10-mile radius of its warehouse.

Greenbelt Consumers Services, in Greenbelt, Md. (within the metropolitan area of Washington, D. C., where many of its members are employed), had a business of $1,162,851 in 1945 and an increase to $1,428,586 in 1946. Membership also rose from 1,820 to nearly 2,000 in the first 6 months of 1946. The association is raising money for a new cooperative shopping center, to house a food market, restaurant, soda fountain, bakery, bowling alley, game room, and nursery. The association already operates all the other businesses in town (theater, barber shop, beauty parlor, and drug store). It also operates a bus service throughout the town. In the period 1940–45 the sum of $79,294 was returned to the patrons in savings.

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[1] Co-op News (Chicago), November 20, 1946.

The need for intensified effort in organizing urban areas for cooperation was emphasized in a sectional meeting of the Cooperative Congress. Most of the speakers advocated organizing drives, financed either by nonreturnable membership fees or from the resources of an established local association or regional. Stress was laid upon the necessity of adequate capitalization before opening a new store or association, thus enabling the enterprise to operate efficiently and with a considerable volume, as well as to buy to advantage, thereby permitting it to be competitive with the chains. All the speakers favored a city-wide cooperative chain for large urban centers, and one speaker even favored centralized management of local associations by the regional wholesale, on the ground that it would coordinate cooperative efforts within the region, enable local needs to be reflected easily and quickly at the regional level, and provide better opportunities for employee advancement.

SPECIAL TYPES OF COOPERATIVES

Housing Associations

Progress of local associations.—Reports received by the Bureau of abor Statistics show that housing cooperatives are being formed all ver the country. Especially active are veterans for whom the housing ituation is very difficult but who have had priority above others in he building field and have the advantage of Government loans and uaranties. In some places veteran groups are undertaking the development of outlying tracts, including the installation of utilities, treets, etc.; in others, the association contemplates taking over xisting buildings for remodeling. One group is sponsoring a homeead development in Alaska. In the District of Columbia a veterans' ooperative was the successful bidder for Naylor Gardens—a 475-unit evelopment built by the Government during the war.

Types of dwellings planned range all the way from apartments, rough single-family dwellings on city lots, to subsistence homesteads ith land ranging up to several acres. In one case a students' coopative composed of veterans is erecting prefabricated houses on land ned by the university.

Numerous housing developments on the cooperative plan are being onsored by labor groups. In Washington, D. C., printing-trades rkers are planning an apartment-house project. In South Bend, Ind., members of a local of the UAW-CIO took the initiative in a housing cooperative to build single-family units. Employees of the Omaha district of the Corps of Engineers are reported to have initiated a contemplated suburban community of 600 homes; so detailed were their plans that they even included space for a helicopter landing field. Racine, Wis., is the scene of a housing project in which members of AFL and CIO unions, as well as the local consumers' cooperative, are participating.

In most cases a single project is planned, with membership limited to the prospective residents in the project. However, an identical type of open-membership technique has been adopted by two housing associations, one in New Haven, Conn., and the other in Washington, D. C., entirely independently of each other. In both cases a general open-membership cooperative acts as sponsoring and initiating agency for specific housing projects. Individuals desiring to reside in developments sponsored by the parent association must first join the latter. Ownership and control of the project eventually are turned over to a second association, composed entirely of residents of the project. Such an arrangement affords membership to many persons who do not themselves need living accommodations but are desirous of helping to further the cooperative housing plan, while at the same time it insures final control by the tenant-members of the conditions under which they live.

Numerous mutual housing associations are reported, formed to take over completed developments. In all cases that have thus far come to the attention of the Bureau, these intend to operate on the Rochdale principle of retention of title by the association, with the member receiving a lease to the dwelling he occupies. Of the permanent housing projects built under the defense housing program by the Federal Government, with funds supplied under the Lanham Act, eight were earmarked for "mutual ownership" after the war. These included three in New Jersey, one in Pennsylvania, one in Ohio, one in Indiana, and two in Texas.

Under the plan worked out, if the residents of the project desire to purchase the dwellings, they are required to form a nonprofit mutual home ownership corporation. The corporation is then given a 2-year lease, with option to buy at the end of that time (if it has demonstrated its ability to operate the property efficiently). At the end of December 1946, two corporations—one in South Bend, Ind., and the other in Dayton, Ohio—had served their 2-year probationary period and exercised their option. Appraisal of the property had been made and negotiations for purchase were in progress. The other six projects were being run by ownership corporations, but as their 2-year leases had not yet expired, no further step could yet be taken.

Federally built projects financed by other funds have also been put up for sale by the Defense Homes Corporation of the Federal Housing Agency. The Naylor Gardens project, already mentioned, was one of these. In August 1946 it was reported that a mutual housing association, formed for the purpose of bidding in the village of Greenbelt, Md., had obtained 200 members toward the 472 (25 percent of the total 1,887 dwellings) required in order to bid; by the end of the year more than half of the residents had indicated their desire for ownership. In Detroit it was reported that a move was on foot to form a mutual housing association to purchase Norwayne Homes there, with 50 percent of the tenants in favor of purchase.

In the Twin Cities of St. Paul and Minneapolis, an unusual housing development is under way. A complete village of 1,200 acres on the shore of a lake has been planned and is being built through the efforts of three cooperators, of whom one owned part of the necessary land, one was an architect, and the third was a contractor. In this project the resident-members come into a going concern, buying their lots and subscribing for shares. Each house will be financed individually, by the member. The village is to be developed section by section, as the lots are taken. The three developers each have one vote and hold all of the preferred stock. They will retain control until the project is under way, then surrender their votes "one at a time—to each group of 500 home owners as the village grows." In other words, not until 1,500 residents have moved in will the members have complete control of the project. Speculation is to be prevented by association control over the sale price, which is to be arrived at by an appraisal board of three (one representing the owners and one the association, and the third a neutral outsider).

The one cooperative project, as far as this Bureau's knowledge goes, to be undertaken thus far under an urban redevelopment law is the East River Cooperative Apartments in lower Manhattan, N. Y. This project is sponsored by a group of citizens, including the leader of the successful Amalgamated apartments in the same city. It will provide 796 apartments in 12-story buildings that will occupy only 25 percent of the land area of 4 city blocks. As the purpose of the act under which the project is being carried on is to promote slum clearance, the project will have the advantage of land obtained at condemnation rates and a 25-year tax exemption on the buildings. By mid-November 70 percent of the apartments had been applied for. The maximum cost of the project has been set at $7,000,000 and rentals may not exceed $15 per room.

Cooperative principles.—Only a few of the housing associations, except those in which dwellings are of the multiple-unit type, seem to be adopting all-the-way cooperative procedure. In several cases the planned function of the cooperative will be merely that of acquiring the site and contracting for the construction of the dwellings. Title will be given to individual members as they pay for their lots, and individual financing is to be arranged for the houses. In other cases the cooperative will also oversee the construction; it will not retain title to the completed units, but will relinquish them to individual purchasers. The data at hand do not in most cases reveal what, if any, restrictions are to be imposed in order to prevent speculation by the owners.

Where an entirely new subdivision or community is planned, in a number of cases it is intended that the housing association shall retain ownership of certain designated areas to be used for shopping facilities, recreation, or other community activities. In some cases, trading facilities are to be run by a cooperative organized for the purpose; in others, they are to be leased to private dealers.

In general, it appears that the extent of cooperative practice contemplated is in direct relationship to the degree of previous experience of the members with cooperatives.

Although usually it appears that the associations plan to operate on the Rochdale principle of one vote per member, one association states that its voting procedure will allow a member one vote for each room in the dwelling unit occupied.

Actual accomplishments.—In no case had any of the associations mentioned above actually built any dwellings by the end of 1946, although some of the organizations had been in existence for as long as 2 years. There were two reasons for this: restrictions on building materials, and uncertainty as to prices. In many cases, however, the association had bought land (ranging in those for which data were available from 100 to 253 acres) and others had taken options on sites. Some had selected architects or contractors, or both, and a few had gone so far as to obtain plans for a whole community lay-out.

Few were optimistic as to any early start on actual construction One association placed its construction date as the "summer of 194 or later," largely depending on construction costs, but in most case 1948 was regarded as more probable. The few exceptions were th veterans' groups which were counting on priorities and GI loans.

Federations.—A conference of housing cooperatives, held in Chicag in May 1946, authorized the formation of the National Cooperativ Mutual Housing Association. Organization was completed ju before the national Cooperative Congress in September 1946, and t association was represented at that meeting. It is expected that t federation will turn its energies to the exchange of experience, pro sion of technical service, accounting, training of project manage etc., leaving the handling of building materials to National C-operatives (the commodity organization) and its regional wholesal

The housing section at the Cooperative Congress presented a resolution, which was adopted, urging among other things that National Cooperatives establish a strong division for the procurement of building supplies,[2] and that the National Cooperative Finance Association organize immediately a program to make mortgage credit available to cooperative and mutual housing associations.

Structurally, the national housing association is expected to be a federation of regional associations, which will in turn be composed of State federations of local associations. Already one regional has been formed by the housing cooperatives in Indiana, Michigan, and Minnesota, under the name of North Central States Housing Association.

Provision of Medical and Hospital Care

Progress of local hospital associations.—From the Mississippi River westward, the spread of cooperative provision of medical care was outstanding in 1946. The greatest advance was in the formation of hospital associations. At the end of 1945 there were in operation six cooperative hospitals—one each in Florida, Kansas, Minnesota, and Texas, and two in Oklahoma. By the end of 1946, reports indicated that at least 9 cooperative hospitals were in operation and 13 associations were known to have been formed and under way. At least 22 others were in process and some of these had received charters, but data as to their exact status at the close of the year were not available.

In October 1946 ground was broken in Sandpoint, Idaho, for the first unit of a $100,000, 17-bed community hospital, on a 3½-acre plot near Lake Pend d'Oreille. The 725 members hoped to have it in operation by the summer of 1947.

Of the other associations concerning which progress reports are available, the association at Ely, Minn., reported pledges of $38,000 from 300 persons in October; it planned to remodel a former school building. At Fosston in the same State, the association had incorporated and elected its board of directors; no data were available as to membership or funds. In Greenbush, Minn., money was being raised for a 20-bed cooperative hospital. The hospital at Two Harbors, which started operation as a cooperative in November 1944, announced in 1946 its intention of establishing a small branch hospital at Grand Marais, 85 miles eastward on the north shore of Lake Superior.

The purchase of a 10-bed hospital by a cooperative association with members in two counties in Missouri—the first of its kind, known to the Bureau, in that State—was reported at the end of the year.

In South Dakota, cooperators at Leola had raised $18,000 toward the erection of a 20-bed building after only a week's work in November

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[2] National Cooperatives stated in a letter to the Bureau of Labor Statistics, dated December 12, 1946, that it was already getting under way with the expansion of its facilities in this field.

1945; no later report has been received. In Winner, in October 1946, the Farmers' Union and local farmers' cooperatives were reported to be sponsoring and supplying organizing funds for a $100,000 cooperative hospital. The organization, Rosebud Cooperative Hospital, Inc., had already been formed, and 243 paid-up members, each contributing $100, had been obtained.

In Texas, over a score of hospital associations had been formed under a 1945 law authorizing their formation in places of less than 2,500 population. At Friona, by September 1946, 500 persons had joined a cooperative hospital association and had paid in $100 each toward the construction of a 30-bed hospital. At Olton plans were being made to remodel the building formerly used as a county courthouse. Construction of a hospital was under way at Rising Star, where a membership of over 700 had been obtained. The cooperative wholesale at Amarillo has been giving some assistance to these groups.

In most places the hospitals have been organized in rural districts which have previously had little or no medical or hospital facilities. In Washington State, however, urban industrial workers as well as farmers have been behind the organizing drive that has been going on for the past 18 months. The regional cooperative wholesale, Pacific Supply Cooperative, has had a full-time "cooperative hospital field counselor" at work throughout Idaho, Oregon, and Washington. In Seattle, Group Health Cooperative of Puget Sound was formed in 1946, with widespread community support including that of various local labor organizations, State and local Granges, and cooperative associations. Among the labor organizations were the boilermakers, milk-wagon drivers, aircraft mechanics, and Renton Central Labor Council. The members of the 1946 board of directors of the association included a representative each of the aircraft mechanics and boilermakers, a representative from each of four local consumers' cooperatives (one a students' cooperative at the State University), two Grange representatives, and a local businessman.

In November the association, which had originally planned to buy a surplus Government hospital at Renton, announced that it had merged with a doctor-controlled organization, the Medical Security Clinic. The latter was operating a 60-bed hospital and a large downtown clinic, with a staff of 18 physicians, and was providing prepaid service for some 7,500 members. Not altogether satisfied with private group practice, the clinic management had sent its manager to attend the conference of health cooperatives at Two Harbors, Minn., in August 1946.

His report and the months-long conferences that followed, with representatives of Group Health Cooperative, resulted in the decision to become part of the latter group. According to the manager—

> Frankly, the ideas presented came as a pleasant surprise to most of us, for we quickly recognized that cooperative medicine closely paralleled what we had been

> talking about, that we needed only to change names, rather than thought or intent, to make our conclusions into a good co-op leaflet. Cooperative medicine from the doctor's viewpoint, as I see it, means this: (1) A working arrangement which guarantees that no person, no thing, no corporate set-up, or sets of bylaws, comes between the doctor and his patient. * * * (2) Protection of the new doctor from exploitation. * * * (3) Provision of working conditions which offer financial security and stimulate the highest type of professional activity.[3]

Membership in the association costs $100. Monthly dues are $3 per month for an adult; $1.50 each for the first two children; maximum family charge, $9.00 per month. For these amounts the association will give the following: (1) Care in the home, clinic, and hospital, plus coverage while traveling, (2) prescriptions filled for members, without extra charge, in the pharmacy owned and operated by the clinic, (3) X-rays as ordered by staff physicians, (4) laboratory procedures required in diagnosis, (5) physical therapy treatments, and (6) vaccinations and inoculations. The association plans to add also a dental-care department which will operate on a cost-plus basis. Economic security for the staff is provided under an arrangement (financed equally by the association and the doctors) by which a physician retiring at 65 after 35 years' service receives a retirement payment of $25,000. Each year one-fourth of the annual net income of the association is to be paid to the medical staff, and an equal amount to the other employees.

Olympic Cooperative Hospital Association, at Sequim, and Kitsap Cooperative Hospital Association, at Bremerton—both on the Olympic Peninsula—were negotiating for hospital buildings at the close of the year, and a new association had been formed at Deer Park.

In Oregon the Community Hospital Association in Hermiston reported over 250 members in October, and the Salem Community Health Association sponsored by the Farmers Union had about 500 members. At Newberg an organizing drive was getting under way late in the year.

Cooperators in Wisconsin have made several attempts to organize cooperative hospitals, but have been blocked by the Wisconsin law which reserves to the medical profession the right to conduct prepaid group plans. The Wisconsin Association of Cooperatives—a State-wide organization of 214 cooperatives of all types (consumers', producers', and REA associations)—has pledged its support to an effort to amend the law so as to permit the formation of consumers' cooperative medical-care associations.

Prepaid medical care.—Group Health Association, Washington, D. C., which operates a clinic and pharmacy and which originally provided service for Federal employees only, early in 1946 adopted the open-membership principle on a "group basis," accepting Negroes as well as whites. Among the new groups reported as admitted under the new policy were employees of the local consumers' cooperative (an association operating 6 stores in the District of Columbia and Virginia), those of the Farm Bureau insurance companies, and those of the National Council of Farmer Cooperatives. The association also purchased a site of some 20,000 square feet on which it plans to erect a medical center.

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[3] Quoted in Pacific Northwest Cooperator (Walla Walla, Wash.), November 1946.

Health insurance.—Among the associations providing cash benefits to meet the cost of medical and hospital care, Group Health Mutual of St. Paul, Minn., had a total membership of about 45,000 persons in April 1946. It added to its previous services a combination plan with benefits ranging from $5 to $200 for surgical cases, obstetrical benefits up to $60, ordinary hospital benefits up to $4.25 per day, and special hospital benefits up to $50. Among the new groups being served by the end of the year was the personnel of Pacific Supply Cooperative, in Idaho, Washington, and Oregon.

Medical-care federations.—Although cooperative medical care is still in its infancy, steps toward federation have already been taken. In the spring of 1946, six associations on the Pacific Coast formed the Northwest Cooperative Hospital Federation, to coordinate their educational and promotional work.

A Nation-wide conference of health cooperatives was held in August 1946, at which were present delegates not only from medical-care associations but also from labor and farmer groups interested in the provision of medical care. This conference authorized the formation of a national association, the purpose of which would be "to engage in educational and other activities for the promotion of the health and well-being of its membership and the public, and to carry on the following activities: (1) Educational, (2) advisory service in legal, management, technical, and organizational fields, (3) public relations and legislation, and (4) research in the field of medical economics." Adoption of articles of incorporation and bylaws for the new organization, the Cooperative Health Federation of America, was announced at the Cooperative Congress in September. At the same time a labor committee was formed, with headquarters in Washington, D. C., to foster the formation of prepayment medical-care plans; a small executive committee (including a representative of the medical profession) was elected to further the federation's work. A drive is to be made to obtain the affiliation of "all prepaid medical-care plans in which consumers have effective control." The previous federation, Group Health Federation of America,[4] formed in 1940, disbanded and turned its assets over to the new organization.

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[4] It accepted into membership doctor-controlled as well as consumer-controlled plans.

Electric-Power Cooperatives

The Administrator of the Rural Electrification Administration reported, at the end of 1946, that for the first time in the 11-year existence of the REA, the outlook for the program was "grave" and that "horizons for rural electrification are shrinking."[5] This situation he attributed to the much greater cost of materials and construction and to the fact that the REA power lines are being extended into "leaner" neighborhoods with only 1 to 3 consumers per mile of line. In some cases the costs are so high as to preclude new projects from being self-liquidating. By December 31, 1946, some $957,000,000 had been earmarked or expended for loans. Of 1,008 REA borrowers, 929 were cooperatives, 39 were public power districts, 20 were other public agencies (mainly municipalities), and 20 were commercial power companies. Altogether, 1,549,057 consumers were being served by REA-financed systems at the end of June 1946, and only Connecticut and Rhode Island had no REA lines.

In Oklahoma, the citizens of one town are reported to have voted unanimously to sell the city-owned power system to a local REA cooperative, and a Kansas cooperative laid an 8-mile oil pipe line from adjacent oil fields to its generating plant. In Wisconsin, Dairyland Power Cooperative, formed by 19 Wisconsin and Minnesota REA cooperatives, purchased (subject to the approval of the Wisconsin Public Service Commission) privately owned properties including 8 hydroelectric plants, 470 miles of transmission lines, and 1,300 miles of distribution lines in the two States. Five electricity cooperatives n South Dakota late in the year bought out a private company, the purchase involving 2 generating plants and 256 miles of distribution ines. Other purchases planned or made were carried to the courts or administrative agencies for determination, being decided adversely in ome cases and favorably in others (see page 34). On the other hand, several REA cooperatives were reported to have sold out to private interests.

Insurance Associations

In Indiana the Farm Bureau Fire & Tornado Insurance Co. was aunched early in 1946, as the result of a poll among Farm Bureau members in 1945; at the end of its first 5 months of operation it is eported to have had $16,000,000 of insurance in force. The Hoosier arm Bureau Life Insurance Co., previously established, added to its enefits a group hospitalization and surgical expense benefit policy; y October 1946 the plan had gone into operation in 21 counties. arge gains in new business were also reported by the five companies perating under a unified system in Minnesota and Wisconsin, by the range life insurance association covering the northwestern States,

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Rural Electrification News (Washington), January 1947, p. 2.

and by the Ohio Farm Bureau insurance companies (writing fire, life, and automobile insurance in 12 States and the District of Columbia). The Ohio companies in 1946 purchased their fourth office building in Columbus, to provide additional office space for the 1,300 employees there.

COOPERATIVES IN SPECIAL GROUPS

Students' Cooperatives

The year 1946 was one of revival of activity for the campus cooperatives furnishing rooms, meals, or both. The departure of the male students into the armed forces during the war years had resulted in seriously decreased membership and cessation of activities in many cases, only partially compensated for by some expansion of cooperative facilities for girl students.

As the young men returned from service into the educational institutions and new students entered for the first time, many of the former student associations were revived and new associations were formed. The greatest problem for the cooperatives was that of finding quarters.

Some strong associations solved their problem by purchase, either voluntary or because that was the only means by which a building could be obtained. On the Pacific coast the University of California Students Cooperative Association, which dates from 1933 and was already serving meals and operating six houses for students, bought a large residential hotel which, with furnishings, cost $125,000. The building and its interior garden covers nearly half a city block and is being used to house 150 women members of the cooperative. It was reported that the association had 655 members in October 1946.

In Seattle the Students Cooperative Association, whose 275 members attend the University of Washington, purchased two additional houses accommodating about 45 young men.

In Illinois the student cooperatives at the University of Chicago in 1945 formed a federation to perform various services for them. Early in 1946 this federation, United Cooperative Projects, bought a large house near the campus, accommodating some 33 roomers. The University of Kansas Student Housing Association, a central organization operating several rooming and boarding houses, bought a large house in Lawrence, formerly occupied by a fraternity. At Baker University, in the same State, the Men's Cooperative Club lost its quarters in a rented house. However, this informal group incorporated under the name, Students Cooperative Association, and bought a nine-room house, paying a rent which it is reported will amortize the purchase price in 4 years. Funds are being raised through the sale of stock to other cooperative associations in the area.

Other organizations were reported to be raising money with which to buy residences for their members. At North Dakota Agricultural College (Fargo), the revived student organization, NDAC Farmers Union Cooperative Association, launched a drive for funds with which to build a permanent residence hall. Funds were being solicited in the form of capital stock in the new venture, from Farmers' Union cooperatives and sympathetic individuals. The building is planned to accommodate 38 roomers and about 60 boarders.

As the students' necessity to economize is one of the major motivating factors in the establishment of campus cooperatives, lack of money is their chief handicap in becoming owners. Some of the associations, as noted above, are trying to solve their problem through incorporation (many have been simply informal groups) and the issuance of capital stock paying a fixed rate of interest. The stock is then offered to local cooperatives in the region and to individuals. Others suggest that financing could be done by an organization combining all cooperatives on a campus (as at the University of California, University of Washington, etc.) more successfully than would be possible for a one-house association.

Others are considering the long-term possibilities of a central revolving fund which could be used over and over to help finance various student cooperatives. This idea was advanced early in the year by the Central League of Campus Cooperatives, which had already raised some $2,000 for the purpose. It has since proceeded along this line, assisted by legal advice from the regional wholesale, Consumers Cooperative Association.

Federation for various purposes among student cooperatives has made a good deal of progress. On many campuses individual associations have formed a "cooperative council" for exchange of experience, pooled buying, and other activities.

A second step—the formation of federations of student cooperatives in a given area—was taken as early as 1938 with the establishment of the Midwest Federation of Campus Cooperatives. This was followed in 1939 and 1940 by the Pacific Coast Students Cooperative League and Central League of Campus Cooperatives, respectively.

The year 1946 saw the formation of the North Central Federation of Campus Cooperatives.

In general it is expected that the territorial coverage of the student ederations will correspond, at least roughly, with that of one or more egional wholesales. The Pacific League's membership would thereore consist of representatives from student cooperatives in California, Oregon, and Washington, and may include also those in Idaho, Nevada, and Utah. Midwest territory would cover Illinois, Indiana, Ohio, and Michigan. Central would include Arkansas, Colorado, Iowa, Kansas, Nebraska, Oklahoma, and Wyoming. North Central's territory would cover the Dakotas, Minnesota, and Wisconsin, and possibly Montana. No federations have as yet been formed for the Atlantic States (including Pennsylvania), for the Southeast, or the Southwest, although representatives from student cooperatives in Eastern Cooperative Wholesale territory (North Atlantic States and New England) have held conferences to discuss the possible formation of an eastern league.

The capstone to the student cooperative network was reached with the organization of the North American Students Cooperative League in 1946. To it the various regional federations and the newly formed (1946) Canadian Students Cooperative League are expected to affiliate. The Central League of Campus Cooperatives was the first to become a member of the new national organization.

The meeting at which the NASCL was formed was attended by representatives from six regional cooperative wholesales, National Cooperatives, and the Cooperative League of the USA. Their presence attested to the interest of the organized consumers' cooperative movement in the student cooperatives and their desire to foster closer relations. Headquarters of the national student federation are at the cooperative center in Chicago, where are also the offices of the Cooperative League and National Cooperatives.

Student cooperatives purchase their groceries and other supplies through the regional wholesales and the latter in turn assist them in organizing, with business advice, in legal matters, and in other ways. Several of the wholesales have helped to meet the cost of sending delegates to annual meetings of the student leagues. The possibility of careers in the cooperative movement for graduated members of student cooperatives was foreshadowed by the attendance of the educational director of Pacific Supply Cooperative at the 1946 conference of the Pacific Coast Student Cooperative League. According to report, he was there "to see to what extent the student cooperatives could be looked to for future leadership personnel." [6]

Practical knowledge of the operation of consumers' cooperatives was gained by 12 students, sponsored by the American Friends Service Committee, who during the summer of 1946 worked in cooperatives during the day, studied cooperation in the evening, and lived together on a cooperative basis.

Although most of the students' enterprises are run for the benefit of unmarried students, a large proportion of the enrollment at the various campuses consists of married ex-servicemen. For these, probably most of the universities and colleges have provided quarters either on the campus or adjacent to it. In numerous cases these veterans' families have also organized cooperatives, usually for the purpose of purchasing groceries. Some of these are limited to veterans; others are open to all the students, faculty, and staff. Veterans' cooperative stores are reported to have been formed at Alabama Polytechnic Institute, Iowa and Michigan State Colleges, the Universities of Florida, Kansas, Minnesota, and Wisconsin, and Texas A & M College.

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[6] Co-ops on Campus (Chicago), September 1946, p. 2

Cooperatives of Other Groups

An Indian cooperative, formed in 1939 to market the baskets, beadwork, and other handcraft products of a group of Winnebago Indian families in Wisconsin, opened a cooperative grocery store at the beginning of 1946. The store's shelves were filled with "co-op label" goods bought from the regional cooperative wholesale. In New Mexico a new Indian cooperative store was reported at Ramah, and an official of the Albuquerque Consumers' Cooperative informed a representative of the U. S. Bureau of Labor Statistics that Indians at Isleta Pueblo had requested the cooperative to open a branch there. Chippewa Indians on a reservation in north central North Dakota started a cooperative general store which began business in September 1946. Only Indians on the reservation are to be admitted to membership, although any other persons may patronize the store.

As noted in previous reports, cooperative associations in the War Relocation Centers, established to house Japanese-Americans removed from the Pacific Coast during the war, at their peak did an annual business of some 10¼ million dollars. All these centers were closed at the end of the war and the cooperatives naturally lapsed with them. That some of the residents there have really absorbed the cooperative idea is indicated by reports in the Associated Cooperator (organ of the cooperative wholesale at Oakland, Calif.). One of the wholesale's fieldmen reported early in 1946 that in one farming locality in the San Joaquin Valley returned Japanese-Americans, together with Caucasians, had already formed one new consumers' cooperative and another (entirely Japanese) was in process of formation in another place. On the basis of his reports the wholesale voted to assign a worker to assist other similar groups that might wish to organize.

Developments Among the Federations

COMMERCIAL FEDERATIONS

Joint activities.—Two regional associations were admitted to membership in National Cooperatives in 1946: British Columbia Cooperative Wholesale (Vancouver, B. C.), and Tennessee Farmers Cooperative Association (Columbia, Tenn.). The latter is reported to be a federation of 30 farmers' marketing and purchasing cooperatives in the TVA region. The national organization, now a federation of 22 regional wholesales, voted to buy Cooperative Mills, at Auburn, Ind., a flour mill formerly owned jointly by a number of regional wholesales. The annual meeting of the association also authorized a national program for the production of lumber by National, to be financed by the member regionals and their retail members.

Coal rights on some 6,000 acres in Kentucky are reported to have been acquired by joint action of Indiana and Ohio Farm Bureau Cooperatives and Midland Cooperative Wholesale. A new association, the Millers Creek Coal Cooperative, was formed to mine the coal. Midland Cooperator reported (October 9, 1946) that the property was expected to provide about a fifth of the coal distributed by the three regionals. (Indiana Farm Bureau Cooperative Association already owned a majority interest in another mine in Kentucky.) Shortly afterward, the directors of Central States Cooperatives (Chicago) decided to join the above group and assist in financing it.

Three regional consumers' wholesales (Midland, Farmers Union Central Exchange, and Central Cooperative Wholesale) and a producers' marketing cooperative (Farmers Union Grain Terminal Association) cooperated in the formation of Northwest Cooperative Mills in 1945, to manufacture feed and commercial fertilizer. The grains used in the manufacture of the feeds will be supplied by the marketing association. By September 1946, it was reported that the new organization's headquarters building, feed mill, and seed-cleaning plant—all in the midway section of St. Paul—and a fertilizer plant at Green Bay, Wis., were nearing completion. Since its formation in 1945, Northwest Cooperative Mills has been operating a soybean plant originally owned by Farmers Union Central Exchange at Menomonie, Wis., and a small leased seed plant at Thief River Falls, Minn. Several of the regional wholesales joined in the formation (in February 1946) of the Central Farmers Fertilizer Co., with headquarters in Chicago.

It was reported in July that National Cooperative Refinery Association had, in the period October 15, 1945, through June 1946, drilled 37 producing and 9 dry wells. Several others had been drilled down to the oil sand.

A fire in August on its timber land adjacent to the International Lumbering Association's shingle mill in British Columbia resulted in the loss of some 2,000,000 feet of cut timber and much equipment. This caused a shut-down of operations for some time.

Cooperative Plant Foods (the members of which are Midland Cooperative Wholesale, Indiana Farm Bureau Cooperative Association, Wisconsin Cooperative Farm Supply Co., and Illinois Farm Supply Co.) completed the erection of a fertilizer-mixing plant and an acidulating plant in 1946.

A new service federation was formed in mid-1946 by the three local cooperatives in Lake County, Ill., to run an electrical-appliance store in Waukegan. Before the end of the year it had decided to open a furniture department. In Iowa it was reported that 19 local cooperative associations with a combined membership of 7,000 persons, had formed the Propane Gas Cooperative, to store and distribute propane gas (used for cooking, heating, refrigeration, etc.). This will be a boon in rural places and, as one report put it, will give the farm home "all of the advantages of city living."

Expansion by individual wholesales.—Associated Cooperatives, California, added to its previous services for local associations "management counsel" through a field supervisor, for the purpose of working with local boards to put their associations "on a sound businesslike operating basis." In May the wholesale announced its first management contract (containing a 90-day cancellation clause) with a local affiliate. The California wholesale, as previously reported, in 1945 adopted the policy (in places where no local distributive cooperative exists) of entering into agreements with local retailers to distribute its cooperative and dairy equipment. By July two dealers, one in Merced and one in Sacramento, had entered into such an arrangement. It is expected that these dealers "will cooperate * * * in the development of a cooperative program among the farmers in the area."

An accounting service for member cooperatives was started by this wholesale in September. A $65,000 warehouse in Oakland was purchased at the end of the year; a site at Emeryville, acquired in 1945 but never built upon because of inability to obtain authorization, is to be put up for sale. Following its announced intention of expanding into the building-materials field, Associated Cooperatives invested $15,000 in a lumber mill near Eureka, giving it purchase rights to the output. Its new building-supplies department was scheduled to start operations in January 1947.

In Chicago, Central States Cooperatives had an experience similar to that of the California wholesale, in failing to obtain permission to build on the land it bought early in 1946. Later, it acquired an existing warehouse and office building, but was unable to obtain possession from the company occupying it. Illinois Farm Supply Co. opened a fertilizer manufacturing plant in 1946.

The Indiana Farm Bureau Cooperative Association completed the conversion of its skimming plant to a cracking plant and the latter went into operation in May 1946. This step increased the daily gasoline capacity from 3,000 to 4,000 barrels and made possible the production of 80-octane gasoline from 60 instead of 28 percent of the crude oil. It was reported that the wholesale would thereafter be able to supply from its own refinery (which occupies a 20-acre tract near Mt. Vernon, Ind.) almost all the petroleum requirements of its member associations. In April this association was reported to have 72 producing oil wells. In addition to its three sawmills in Arkansas, the wholesale reports that it is also "financing and controlling" three in Mississippi. The feed mill at Hammond,[7] which the wholesale bought in the fall was severely damaged by fire shortly after it came into the possession of the wholesale.

A stock issue of $600,000 by Michigan Farm Bureau Services, to build a fertilizer-manufacturing plant, was oversubscribed. A large fertilizer factory with an annual capacity of 40,000 tons, was placed in operation by Minnesota Farm Bureau Service Co.

In the spring of 1946, Midland Cooperative Wholesale purchased 440 acres of oil-bearing land in Oklahoma, near its refinery at Cushing; the tract had 21 producing wells in operation at the time of purchase, yielding some 1,600 barrels of crude oil daily. Later in the year two producing wells were brought in, one in an area owned by Midland and the other on a 900-acre tract in which it owns a half interest A $15,000 addition to its oil-blending plant and office building in Minneapolis was authorized by the board of directors.

The Laurel (Mont.) petroleum refinery owned by Farmers Union Central Exchange (St. Paul, Minn.) was seriously damaged by fire in June 1946, but was able to resume partial operation almost immediately. In July it was reported that 4 wells had been brought in on the 200-acre tract the association had leased from the State for $39,000 in 1945 (300 acres adjoining were later acquired). These wells were producing between 65 and 75 barrels of crude oil per day. An oil-trade journal was quoted as predicting that the earnings from the 4 wells would retire the entire investment cost in 1 year. Other accessions to its facilities by the wholesale included additions to its warehouse at Great Falls, Mont., and the expansion of its headquarters in South St. Paul.

Consumers Cooperative Association (Missouri) made improvements at its lubricating-oil refinery valued at about $1,000,000 in 1946, designed to increase the productivity and make possible the recovery of by-products. During the first half of 1946, it purchased a lease on 300 acres in Kansas and a third interest (with two independent operators) on 1,860 acres in Oklahoma. The latter it will operate for the other two owners. With these acquisitions, the association reported, it had under its control nearly 100 square miles of oil-bearing land. At the end of its fiscal year (August 31, 1946) it had 448 producing wells, yielding 31 percent of its refineries' requirements; of these, 45 were drilled and 54 were purchased during the year and 19 were sold or abandoned. For the third successive year all of the needs of its affiliates for refined fuels were supplied from its own refineries and that of the National Cooperative Refinery Association.

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[7] Formerly operated by the Farm Bureau Milling Co. (members of which were the Indiana and Wisconsin Farm Bureau Cooperative Associations, Michigan Farm Bureau Services, and Illinois Farm Supply Co.).

In December 1946 the wholesale announced the purchase of privately owned oil property in Kansas and Oklahoma, including 189 wells producing 70,000 barrels of crude oil per month and 20,000 acres of developed and undeveloped leases; also the purchase of a controlling interest in a Kansas company with 99 wells and 65,000 acres of oil leases. These additions increased the total number of wells owned or controlled by it to 736.

A new petroleum terminal at Watertown, S. Dak., was opened by this association in 1946. Since the end of the war the wholesale has resumed its overseas shipments, and its lubricating oil has been sent to eight countries (Australia, Belgium, China, France, Netherlands, Norway, Sweden, and Union of South Africa). Improvements to its sawmill at Swisshome, Oreg., increased its weekly capacity from 17 to 22 carloads; lack of railroad cars, however, was a continuing handicap throughout the year. The output of its cannery was expected to reach 350,000 cases (140,000 cases in 1944–45) as a result of adding numerous less-perishable commodities.

Eastern Cooperative Wholesale (New York City) bought a new and larger branch warehouse in Cambridge, Mass., increasing its space by about 93,000 square feet. Its annual meeting authorized the erection of a branch warehouse building on land already owned in Philadelphia and approved a program calling for addition of electrical appliances, and expansion of the departments handling household and automotive supplies and perishable and nonperishable groceries.

The Pennsylvania Farm Bureau Cooperative Association built a chick hatchery. Consumers Cooperatives Associated (Texas), which bought a petroleum refinery in 1945, purchased 24 producing oil wells in 1946, near Roswell, N. Mex., and Midland, Tex. Since the passage of the Texas cooperative-hospital enabling act in 1945, this wholesale has been assisting organizing groups to purchase equipment and supplies from the War Assets Administration. It has also made available to them lists of hospital equipment, estimates of costs, etc.

On the Pacific Coast, Pacific Supply Cooperative (Walla Walla, Wash.) and the newly formed Cascade Cooperative Wholesale took over a large building in Seattle which will serve as headquarters for Cascade and as a branch warehouse for Pacific. Pacific Supply Cooperative purchased two privately owned feed mills in central Oregon, bringing its total to three.

Central Cooperative Wholesale (Superior, Wis.) bought another warehouse in Superior and erected a branch warehouse in Escanaba, Mich., from which to serve cooperatives on the Upper Peninsula. Other expansion planned included a terminal at Wadena, Minn., and a lumberyard at Virginia in the same State.

NONCOMMERCIAL FEDERATIONS

Congress of the Cooperative League.—The most important cooperative event of the year was the national Cooperative Congress, held in September. This was a joint congress of the Cooperative League (educational body), the Cooperative Finance Association, and National Cooperatives (wholesale association). Its deliberations covered the whole range of cooperative effort in the consumer field; its sessions dealt with production, promotion, insurance, distribution, finance (including credit unions), housing, health, recreational, education, women's activities, young people's activities, personnel, relations with various groups (labor, churches, urban-rural, etc.), as well as international relationships and activities.

Among the more important actions of the congress were the following: (1) The transfer from the Cooperative League to National Cooperatives of employee training, general educational work, and publicity; (2) the transformation of the Cooperative League into a national organization, which would be a federation of national organizations in various branches of the consumers' cooperative movement (distribution of commodities, credit, electricity, insurance, medical care, housing, and recreation), to carry on research, statistical, and public-relations work; and (3) the passage of resolutions (*a*) urging the establishment of an international cooperative petroleum association, (*b*) requesting the International Cooperative Alliance to establish a branch in the United States, (*c*) declaring "full and unqualified support of the entire United Nations effort," and (*d*) favoring the establishment of a permanent Inter-American cooperative educational institution with branches in North and South America. A meeting of the board of directors of National Cooperatives, previous to the Congress, established as policy that in future all production on a national scale is to be carried on by National Cooperatives. Action taken by the congress on other specific subjects is here noted under such subjects.

A new association, Arizona Cooperative Association, whose first activities, it is reported, will be in writing insurance and making small loans, was admitted to membership in the League in 1946.

Other educational federations.—The past 2 years have seen the formation of many noncommercial federations. Some of these have been formed mainly as a means of defense against attacks such as those made by the National Tax Equality Association,[8] others to provide a clearing point of experience for existing cooperatives, and all to provide educational service and materials.

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[8] State-wide councils for this purpose exist in Colorado, Iowa, Kansas, Missouri, Montana, North and South Dakota, Nebraska, Wisconsin, and Wyoming. These in turn are federated in the National Association of Cooperatives, formed in 1944.

Following the example of certain other States, cooperatives in Minnesota early in 1946 formed the Minnesota Association of Cooperatives—a State-wide association for all types of cooperatives. Its announced purpose is to "present a united front in advancing and defending the interests of cooperatives of all kinds," provide "research, public relations, and educational services," and act as a clearing house on matters of common interest.

State or regional educational federations of consumers' cooperatives have already been formed for Connecticut, the D. C.-Maryland-Virginia area, New England, and New Jersey. Many federations have also been established, covering a metropolitan area, one or more counties, or other regions of less than State-wide coverage. Many of these also are not limited to any one type of association but seek to embrace and to forward the interests and expansion of all cooperatives in their area, promoting their understanding of each other's problems and providing mutual assistance.

In addition, several of the regional wholesales have been encouraging the formation of educational federations throughout their trading areas. It is pointed out that such federations are valuable in increasing the members' knowledge of cooperative principles and aims, in arousing and sustaining the membership interest, in carrying on drives to increase cooperative membership and business, in arousing cooperative interest among young people, and in fostering better public understanding of cooperatives.[9] In May 1946 Consumers Cooperative Association announced the formation of six such federations, and a seventh was being organized; these included three in Colorado, one in Iowa, two in Kansas, and one in Missouri.

In the territory of Midland Cooperative Wholesale several educational federations have been started in Minnesota and Wisconsin, and Central Cooperative Wholesale announced the establishment in September of a federation for Western Minnesota. In Ohio the Farm Bureau Cooperative Association has been fostering the formation of small discussion groups or "advisory councils," with great success. As of September 1, 1946, there were 1,385 such councils, the main purpose of which, it was stated, was to "make democracy work." The agenda of these councils therefore covers practically all subjects (including cooperatives) affecting the life and welfare of the people.

The new federations of students', medical-care, and housing cooperatives have already been mentioned (pages 6, 10, and 14).

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[9] Cooperative Consumer (Kansas City, Mo.), May 15, 1946.

Problems of Organization and Structure

ON THE NATIONAL LEVEL

A proposal for the merger of the Cooperative League, National Cooperatives, and the National Cooperative Finance Association has been under consideration for several years. The boards of the three organizations had approved a single executive for the three and established a joint committee to work out the details of consolidation. At the national Cooperative Congress in September 1946, after many protracted meetings during the year, the committee presented a surprise report and recommendations which differed completely from previous plans. Briefly, it proposed that, instead of a merger, National Cooperatives would become the national organization for the distributive branch of the cooperative movement, .combining commercial activities with educational and publicity work and therefore taking over Rochdale Institute, the Co-op Magazine, Cooperative News Service, and national employee training, all of which had previously been departments or functions of the League. The latter (which celebrated its thirtieth birthday in March 1946) would carry on research, compile statistics and other information, and do public-relations work on an over-all basis. It would become the national organization of all branches of the consumers' cooperative movement in this country—distributive, electricity, credit, insurance, housing, medical care, etc.

The report and recommendations were accepted by the congress, after considerable discussion.

Unlike the situation in many European countries, in the United States each branch of the cooperative movement has developed independently. The REA cooperatives, credit unions, student cooperatives, medical-care associations, and distributive associations each have their own national federation. The federations in the fields of housing, medical care, and provision of meals and rooms for students have only recently been formed and have as yet no great accomplishments to their credit.

The Credit Union National Association ("CUNA") became a fraternal member of the Cooperative League in 1939, and the Cuna Supply Cooperative became a full member in 1942. The affiliation of the latter (a commodity organization) probably will hereafter be through National Cooperatives. The new federations of students' associations and of housing and medical-care cooperatives undoubtedly will affiliate with the League, but no relationship has as yet existed with the REA cooperatives; their affiliation has still to be won. No national insurance federation exists, though some of the most powerful of these associations have been consistent financial supporters of the the League.

It appears, therefore, that the solid underpinning of the League at present consists of only the distributive movement and these insurance organizations. Support from the other branches either consists largely of good will or has still to be won. Undoubtedly the new structural plan offers a much wider scope for the League than before, if the latter is successful in rallying to its banner the various service branches of the movement.

ON THE REGIONAL LEVEL

The 1946 annual meetings of Eastern Cooperative League and Eastern Cooperative Wholesale approved a committee draft of a constitution and bylaws of a proposed consolidation of the two that has been under way for some time. The name of the new organization is Eastern Cooperatives, Inc.

In the territory of the above organization, which serves local cooperatives on the whole eastern seaboard as far south as Virginia, a move among some of the New England associations to secede and form a separate wholesale for that region was under study during 1946. The report of a committee, appointed in conformity with instructions from a membership meeting in February, was laid before a special meeting held in September 1946. The committee recommended the establishment of a separate wholesale. Debate at the meeting covered the possible deleterious effects of such a move on the unity of the cooperative movement in the East, and the difficulty of financing a new wholesale. The meeting decided to postpone action until April 1947, with an enlarged committee gathering more facts in the meantime.[a]

Among the district federations, Cooperative Services, Bruce Crossing, Mich. (handling petroleum products), voted to merge with Copper Country Cooperative Enterprises (a fish-marketing organization that evolved out of a self-help cooperative started during the depression). This action caused some threats of withdrawal of associations that were members of Cooperative Services; no information is available to indicate whether action was actually taken.

Education, Recreation, and Publicity

Realizing that the foundation of a sound cooperative movement is an informed membership, well grounded in the cooperative philosophy, and that well-trained efficient employees are essential to the financial success of the organizations, the cooperative movement lays great stress on educational work directed to both these requirements.

Education.—The central educational organization of the consumers' cooperative movement is Rochdale Institute, established in New

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[a] At the April meeting the proposed separation was rejected, but with a recommendation of greater independence of action for the Cambridge (Mass.) branch warehouse of Eastern Cooperative Wholesale.

York City in 1937 and moved to Chicago in 1944. Provisionally chartered by the University of the State of New York in 1938, it received an absolute charter from that institution in 1945. In 1946 it held two short-term institutes—a 2-week course for educational directors, and a cooperative and labor institute sponsored jointly by the Wisconsin School for Workers. It also offered an 8-week course in the history, philosophy, methods, and practices of cooperation designed for those seeking employment in cooperatives, those already working in cooperatives, and "teachers, ministers, social workers, and co-op lay leaders" wishing to inform themselves about the cooperative movement. At the 1946 Cooperative Congress the director of the Institute reported that, during the 2-year period since the 1944 congress, the school had given 43 weeks of schooling to 436 students.

The Cooperative Correspondence School, initiated by Central Cooperative Wholesale in 1943 but now sponsored by six regional wholesales, continued in 1946 its courses in principles, practice, and administration and was reported to have an enrollment of over 1,000 students.

In addition, many of the regional wholesales themselves offer technical courses for cooperative managers and employees, and either alone or in cooperation with Rochdale Institute also offer advanced courses along the same lines. Under the auspices of Eastern Cooperative League and Wholesale, an institute for cooperative leadership was held in July–August, which also covered personnel matters, and housing. Under the same sponsorship a conference of educators and school administrators held earlier in the year discussed "education for democratic living." Central Cooperative Wholesale announced the inauguration of "membership clinics" to be held three times a year, to "discuss basic problems, train leadership, plan contact activity, and give an opportunity to exchange suggestions and ideas so that educational effort on the part of the locals and the Central Cooperative Wholesale will meet the greatly expanding requirements." In connection with the opening of a "co-op supermarket" in Lansing, Mich., a 4-session course in cooperation, open to public as well as members, was given.

During 1946 a score of students from South America came to the United States in a move sponsored by the Bolivarian Cooperative Union,[10] Rochdale Institute, Consumers Cooperative Association, the University of Kansas City, and the U. S. Farm Credit Administration. The training combined academic courses with actual work in cooperative enterprises.

Early in the year Midland Cooperative Wholesale created two annual fellowships of $1,000 each, for graduate study at the University of Minnesota in the fields of "business administration and economics, particularly agricultural and consumer economics."

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[10] A federation of cooperatives in Bolivia, Colombia, Cuba, Panama, Peru, and Venezuela.

Among the general educational institutions of the country, several were reported to have included cooperative subjects. Cornell University was said to be giving a course in cooperative law, Harvard University continued its course in consumers' cooperation (given for a number of years in cooperation with the New England Cooperative Federation), and the University of Kentucky offered a short course for cooperative officials. The Cooperative and Labor Institute held at the School for Workers of the University of Wisconsin was attended by both CIO and AFL unionists.

A number of cooperative nursery schools—some of which were started in 1946—have come to the attention of the Bureau, mainly in the metropolitan area of Washington, D. C., and in and around Chicago. There are probably many others not known. The advantages of these schools, it is said, are that they provide the children with excellent preschool experience and afford their parents an opportunity to work with and observe training procedures under trained teachers and to participate in a nonprofit, cooperative enterprise.

Recreation.—In the cooperative movement, education and recreation usually go hand in hand, in that each generally contains elements of the other. In various places throughout the United States, local or regional cooperatives sponsor cooperative parks or camps as vacation spots for cooperators and their families; in connection with these, lectures, movies, etc., are usually given which provide information on cooperatives. Several of the regional wholesales also give courses for recreational leaders, in a vacation setting. In addition, the Cooperative Society for Recreational Education each year for a decade has conducted a national recreation school for persons training as cooperative recreation directors. The 1946 school was reported to have drawn the largest enrollment in the history of the organization.

Among the vacation events of 1946 was an auto caravan of cooperators which toured the cooperatives of Saskatchewan and Manitoba, Canada, and several centers in North Dakota, Minnesota, and Wisconsin. In Philadelphia, a "consumers' cooperative theater," Philadelphia Civic Theatre Cooperative, to be operated "for and by Philadelphians of all ages, colors, and beliefs,"[11] was started.

Publicity.—Cooperators have for some years been using radio as a means of spreading their message. In August the Federal Communications Commission granted the Potomac Broadcasting Cooperative (Washington, D. C.) permission to construct its own FM (frequency modulation) radio station. The new cooperative will operate in the DC-Maryland-Virginia area. It will issue both common and (nonvoting) preferred stock, the former to be held by cooperatives in the area, the latter to be offered to individuals and nonprofit organizations. It is reported that an application for an FM license was also made by the Connecticut Cooperative Federation.

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[11] The Cooperator (New York), October 11, 1946.

Relationships with Other Groups

WITH LABOR ORGANIZATIONS

Closer relationships between the cooperatives and organized labor developed during 1946, continuing a movement that has been under way for a number of years. At the 1946 AFL convention the report of the Federation's executive board noted "significant progress in strengthening the ties between the AFL and the Cooperative League of the USA." It said, further:

> We commend the growing interest in consumers' cooperation which is developing among our unions. We urge all affiliated unions to take an active part in the consumer cooperatives in their communities, and where there are no well-managed cooperatives, to organize them.

At the 1946 Cooperative Congress the United Auto Workers (CIO), in a speech by its president, pledged its support in a strong drive to organize consumers' cooperatives in all communities in which it has locals. This is to be done through a series of advisory committees composed of key UAW and cooperative staff members. A month later the first full-time worker under this arrangement was appointed for the Michigan area. UAW workers were reported as being active in the organization of cooperatives at Detroit, Flint, Iron Mountain, Jackson, Lansing, and Pontiac.

The Minnesota State Federation of Labor, at its 1946 convention, adopted a resolution urging all the local unions to appoint committees on cooperatives. Its public relations department will assist these committees in informing the union members about the cooperative movement. In Massachusetts the State Federation of Labor appropriated from its treasury money to pay the tuition of 10 unionists in the course in cooperation offered by the Massachusetts Department of Education. The Federation has for a number of years joined with the New England Cooperative Federation in sponsoring a course on cooperatives given by Harvard University.

Individual local unions are also reported to be actively supporting the organization of new cooperatives in various places. Among these reported as in process of formation in 1946 were cooperatives in Iron River, Mich. (iron miners, CIO), Negaunee, Mich. (miners and steel workers, CIO), Eveleth, Minn. (iron miners and other unionists), Borger and Crane, Tex. (oil-field workers' union), Burlington, Vt. (auto workers, CIO), and Everett, Wash. (aircraft and other unionists). In Arizona, AFL unionists are said to have sponsored the new Arizona Cooperative Association, recently admitted into membership in the national Cooperative League. In Connecticut a CIO union is reported to have turned over the first floor of its building to accommodate a new branch store opened by the local cooperative.

Several successful labor-cooperative conferences were held in 1946. The resolutions of one of these, held in Milwaukee in September, indicate the scope which such conferences may cover. These resolutions urged cooperative and union assistance for the new national housing and health cooperative federations and the formation of union-sponsored health plans in Wisconsin, recommended the formation of credit unions by every trade-union and cooperative, and endorsed the Wagner-Ellender-Taft housing bill. A labor-cooperative conference in Minneapolis, attended by representatives of AFL, railroad, and CIO unions, resulted in the establishment of a permanent labor-cooperative council for the furtherance of urban cooperatives. Plans were made for the exchange, through the Minnesota Association of Cooperatives, of labor and cooperative news among the periodicals of both groups.

There have been many instances, over the years, of cooperative aid to striking unionists. In 1946 several cooperatives gave aid to striking iron miners in Michigan, Minnesota, and Wisconsin. Among these were the cooperative oil and store associations in Rock, Mich., which donated $100, the small store in Ishpeming, which voted them half of the store's total earnings of $200, and the cooperative store at Wakefield, which gave $50. In addition, the annual membership meeting of Central Cooperative Wholesale (Superior, Wis.) voted to contribute $1,500, the district petroleum cooperative at Hurley, Wis., gave $200, and the Van Buskirk cooperative in the same State donated $100. The 3½-month strike was successful in winning the wage inrease and improved working conditions demanded by the workers.

In two strikes, Eastern Cooperative Wholesale reported that it had old directly to union representatives food supplies needed for their members which the strikers were reported to have been refused by ther wholesalers. Striking automobile workers in Toledo were reorted to have used the local cooperative as their commissary, spendng their strike-fund vouchers for co-op groceries.

The Fort Bragg (Calif.) consumers' cooperative contributed $100 er month to the relief funds of striking lumber workers.

Striking automobile workers received a carload of wheat from 10 embers of a Farmers' Union local in Montana—a step characterized y officials of the farmer and union groups concerned as "symbolic growing farmer-labor unity."

WITH CHURCHES AND CHURCH GROUPS

Several conferences of clergymen and cooperatives were held durg the year. Among these was one in Minneapolis in October, onsored by two regional cooperative wholesales and a grain-marketing cooperative, which was attended by ministers of many faiths as well as by representatives of cooperatives. Under the aegis of the Federal Council of Churches of Christ in America regional meetings on "the church and labor in consumers' cooperation" were held in Columbus (February), Baltimore (April), and Seattle (December). These meetings reaffirmed the Council's endorsement of the cooperative movement and the wish to "encourage the extension of cooperative techniques and other similar means of bringing about economic justice and brotherhood." The annual meeting of the Unitarian Fellowship for Social Justice, held in May 1946, adopted a resolution urging the American Unitarian Association to consider transferring its investments to consumers' and producers' cooperative enterprises.

It was reported [12] that Pope Pius XII, in a message to a conference of French Catholics in Strasbourg, France, advocated the formation of cooperatives in preference to nationalization of industry, declaring that "the cooperative form of economic life is more conformable to the teachings of Christianity, notably in what concerns human personality, the working community, and private prosperity."

CONSUMER-FARMER RELATIONSHIPS

There were numerous indications, during 1946, of the increasing desire of urban dwellers and farmers to come together on common ground. In various places in the Middle West, farmers and townspeople were working together for the establishment of new associations to run cold-storage locker plants, retail stores, electrical appliance and service businesses, etc. Meetings were held to explore new ways and means of working jointly for their common good. One such meeting, in Grand Rapids, Minn., in June 1946, was called by a committee representing the Farm Bureau, iron-ore miners, and paper-mill workers, assisted by a department of the cooperative wholesale at Superior, Wis. Another, in Minneapolis, in September, brought together 260 delegates from eight States, representing Farmers' Union locals, cooperatives, and AFL, CIO, and railroad labor organizations.

Several sessions of the 1946 meeting of the American Institute of Cooperation (an organization of farmers' cooperatives) were devoted to consumers' cooperative purchasing.

It has been the policy of cooperative associations sponsored by farm organizations (Grange, Farmers' Union, Farm Bureau, etc.) to admit to membership only members of the sponsoring group; some also practice the policy of check-off of farm-organization dues from any patronage refunds declared by the cooperative. Membership restriction is of course a violation of Rochdale principles. The explanation of the restriction in this case lies largely in the facts that these farmers' cooperatives in large measure owe their very existence to the educational work done by the parent farm organization, and that only in recent years have the farmers' cooperatives providing consumer goods and services identified themselves in any number with the consumers' movement that practices the Rochdale principles. It is also true of these cooperatives, as well as of those not connected with any farm organization, that they must restrict their membership to farmers if they wish to claim exemption from Federal income tax;[13] and they must meet certain membership requirements in order to borrow under farm credit laws. However, each year a number of the farmers' retail cooperatives (especially those sponsored by the Farmers' Union) adopt the open-membership policy.

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[12] Cooperative News Service (New York), September 2, 1946.

One farmers' cooperative paper in Nebraska is advocating open membership on the grounds that a town family which patronizes the farmers' cooperative in sufficient volume to earn the price of a share of stock has shown its good faith and should be given a voice in its affairs, and that it is doubtful whether the small saving realized by a distributive cooperative through tax exemption compensates for the violation of cooperative principle.[14]

A tendency in the opposite direction is indicated in the recent movement of the farmers' marketing cooperatives into retail marketing of farm produce, not through consumers' cooperatives but through outlets owned by the farmers as producers.[15] Cooperative Producer and Consumer Family Foods, started as a department of the Cooperative G. L. F. Exchange at Ithaca, N. Y., in 1941, became an independent organization in 1944. By September 1946 it was operating 20 retail stores, of which 13 were of the supermarket type. In the fall of 1945, the Indiana Farm Bureau announced its adoption of a similar plan. Its first retail outlet was obtained by purchase of a privately owned supermarket in Veedersburg, Ind., in June 1946.

WITH EMPLOYEES[16]

The employee-retirement plan adopted by Midland Cooperative Wholesale in 1944 celebrated the end of its first year of operation in September 1946. This plan, financed by employee contributions of 3 percent of wages and association contributions of up to 5 percent of pay roll, initially covered only employees of Midland and of Central Cooperative Wholesale but was later opened to employees of affiliates of these two organizations. New members are accepted only at the beginning of each operating year. At the end of the first year 875 employees of 84 cooperatives were participating in the plan. At the beginning of October 1946, new adherents raised these numbers to 1,550 employees and 137 associations.

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[13] Nonfarm cooperatives have no exemptions.

[14] Nebraska Cooperator (Omaha), July 17, 1946.

[15] See Bureau of Labor Statistics Bulletin 859, pp. 18–20.

[16] No study of collective agreements or round-up of changes in working conditions in cooperative associations was made by the Bureau. The information in this section therefore includes only the scattered items on this subject that came to the Bureau's attention.

Consumers Cooperative Association (Missouri) announced in July that it would start a similar plan for "workers in regional and local cooperatives throughout the Middle West," beginning September 1, 1946. Retirement age under the plan will be 65 years. The scheme will be on a contributory basis—3¾ percent from employees, and from the employing cooperatives enough "to maintain the plan on a sound basis" (but not over 6 percent of pay roll).

A cost-of-living bonus, based on the U. S. Bureau of Labor Statistics' index of consumer prices, was granted to its employees by Midland Cooperative Wholesale. Under its plan the amount of bonus is determined quarterly in accordance with the rise or fall in the index.

Local associations in increasing numbers are adopting the policy of devoting a specified proportion of the association's earnings to paying bonuses to the employees, thus providing a direct incentive toward improved efficiency.

Associated Cooperatives of California in February 1945 put its warehouse employees on a 5-day, 40-hour week (previously 44 hours). Several months later these workers joined the International Brotherhood of Teamsters, Chauffeurs, Warehousemen and Helpers (AFL) and in July the wholesale signed a collective agreement with the local.

For a number of years Eastern Cooperative Wholesale has had an agreement with a local of the International Brotherhood of Teamsters. A sudden strike was called by the union at the end of January 1946, in the effort to enforce demands upon the Wholesale Grocers Association. Although the cooperative was not a member of that association, its employees were also called on strike. The cooperative stated its willingness to accede to whatever terms were obtained from the grocers' association, but requested that its trucks be allowed to operate, as had been done on previous similar occasions. Failing in this, the wholesale signed a contract granting the demands, but served notice that if more favorable terms were given by the union to the grocers' association, it would expect the same consideration.

Range Cooperative Services,[17] Hurley, Wis., at its annual meeting voted its employees an extra day of vacation for each year of service in addition to the one week already allowed. An extra week's vacation was also given by Greenbelt (Md.) Consumers Services, with the proviso that the time be spent at cooperative conferences, camps and training sessions, with the association also paying for transportation to these sessions as well as "75 percent of other minimum expenses."

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[17] Until April 1946 the name of this association was Iron Cooperative Oil Association.

International Cooperative Relationships

International cooperative congress.—In the international field, the event that overshadowed all others was the congress of the International Cooperative Alliance (the first since 1937) held in Zurich, Switzerland, in October. It was attended by delegates from the cooperative movement of 20 countries (including 21 from the Cooperative League of the USA), observers representing the governments of 7 countries (including the United States), the Economic and Social Council of the United Nations, and the International Labor Organization. Among the resolutions passed by the congress were those—

1. Calling for the establishment of formal relationships between the Alliance and the cooperative organizations of agricultural production and the World Federation of Trade Unions.
2. Urging the International Bank to create an administrative unit for cooperatives and give them access to available sources of funds for reconstruction.
3. Favoring free trade among the nations.
4. Urging that the Atlantic Charter be implemented by placing under UN the control and administration of the oil resources of the world, beginning with those of the Middle East, "by and with the consent of the States involved, these resources to be administered in such a way that cooperative organizations can be assured of receiving an equitable share."
5. Favoring cooperative representation in government bodies concerned with the economic and social policies of the State.

The predominant theme of the congress was the furtherance of cooperative international trade. At a conference preceding the congress it was decided that the International Cooperative Trading Agency should absorb the International Cooperative Wholesale Society.[18] International machinery to deal in petroleum products, either as a separate agency or as a department of the Trading Agency, was first proposed at the congress of 1937. No action was taken, however, as only a start in such trade had been made—by one regional wholesale (Consumers Cooperative Association) in the United States—and the time did not seem propitious.

Shortly after VE-day, a national petroleum cooperative was organized in Sweden, which immediately placed a large order for lubricating oil with CCA. In 1946 Norwegian cooperatives formed a petroleum association, and a few months later the Cuban movement did likewise. In order to expedite its shipments, the Swedish association in 1946 bought a 13,500-ton oil tanker which is being used to transport to Sweden its purchases of motor oil produced by the CCA refinery.

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[18] The Wholesale Society, established in 1919, had never carried on any commercial activities but was simply a medium of exchange of experience and information among the cooperative wholesales of the various countries.

The 1946 congress of the International Cooperative Alliance completed the organization of the International Cooperative Petroleum Association, the formation of which had been approved in principle by a meeting of representatives of the International Cooperative Alliance and the International Cooperative Trading Agency in September 1945. It was specified that the new association would not come into existence until 10 central organizations had signed up for membership and at least $500,000 of its authorized capital of $15,000,000 had been subscribed. However, it was reported before the end of the congress that cooperatives in 22 countries had indicated their intention to participate and that $900,000 in share capital had already been pledged. The headquarters of the new association are to be in New York City. Howard Cowden, president and general manager of CCA, to whose efforts the creation of the new association is mainly due, is to be its temporary manager.

United Nations.—In February 1946, the General Assembly of the United Nations confirmed the bestowal of permanent consultative status for the International Cooperative Alliance in the Economic and Social Council. Murray Lincoln, president of the Cooperative League of the USA, was appointed by the ICA as its representative at the sessions of the Council in May 1946.

Cooperative relief measures.—Late in 1945, 22 relief agencies in the United States formed a nonprofit cooperative organization for European relief. These agencies were later joined by 3 others. They included the American relief agencies for 7 different countries, the welfare organizations of 7 religious faiths (Catholics, Quakers, Jews, Christian Scientists, Congregationalists, Unitarians, and Churches of Christ), representatives of AFL and CIO unions, the Cooperative League of the USA, and various other relief organizations. The new organization, Cooperative for American Remittances to Europe (CARE), soon got under way. Its packages of food, according to a report made at the 1946 cooperative congress in September, were then being shipped to 11 countries of Europe, the governments of which have agreed not to levy duties or taxes upon them. The cooperative reserves the right to designate the agency within each country which will act as distributor. In France, Finland, and Poland the cooperatives are so designated. In Norway the cooperatives have assisted in the distribution. By September 1946 CARE had shipped some 4 million dollars' worth of food to Europe, the money for which was donated by individuals and groups in the United States. "Patronage refunds" totaling 50,000 $10 packages of food were declared on the 1946 operations of the organization; in this case, however, the "patrons" were not the donors of the packages but the needy in Europe, who received this extra amount of relief. The president of CARE is the president of the Cooperative League of the USA.

In 1944 cooperatives of various countries started the so-called "Freedom Fund" for the rehabilitation of cooperatives in war-devastated areas. About 1¼ million dollars was raised, of which cooperatives in the United States contributed nearly $93,000. Of the latter sum, $15,000 was invested in CARE, with an additional $15,000 loaned for one year, and $5,000 was appropriated to defray the expense of bringing young Italian cooperative leaders here for study of United States cooperatives. Cooperatives in France, China, and Austria had been aided from the general fund.

Laws and Decisions Affecting Cooperatives

STATE LEGISLATION

Few State legislatures met in 1946. Among those which enacted legislation relating to or affecting cooperatives, the Kentucky Legislature authorized (ch. 51) the formation of nonprofit medical-service plans, the services of which are "administered by doctors of medicine." In order to operate, such corporations must receive a certificate of "convenience and necessity" and be adjudged in the public interest; must have the participation of 51 percent of the eligible licensed doctors in the county, and (although specifically exempted from insurance laws) must deposit a surety of $10,000 with the Custodian of Insurance Securities. The above conditions would probably prevent the operation of a cooperative having its own clinic.

In New York, chapter 787 added a new section to the cooperative law, authorizing the dissolution, by proclamation, of cooperatives that have failed for 3 consecutive years to file required reports with the commissioner of agriculture and markets. Such delinquent associations are given a 3-month period of grace in which to supply these reports, before actual dissolution takes place; a fee of $25 is imposed on associations which take advantage of this period, for the issuance of a certification of compliance and a fee of $40 for filing such certificate. The law reserves to associations formed under the cooperative law the right to use the word "cooperative" or any modification or derivative thereof; by chapter 800 of the 1946 laws the word "cooperation" is also reserved for their use. Dental-care benefits are added (by chapter 548) to the medical-care and hospital-care benefits allowed to be provided by membership corporations or cooperative associations. Group Health Cooperative, organized under the cooperative law, is given specific authorization by chapter 675 to reincorporate under the membership corporation law, if within 6 months from the passage of the act (April 10, 1946) all its members vote to do so.

A South Carolina act (Act No. 417) authorized any 10 "leading and capable citizens" to form a nonprofit hospital-service plan on a prepayment basis. Such a plan must be maintained as a nonprofit "cooperative corporation" and must renew its license annually. The directors (not fewer than 9 nor more than 24) must include representatives of the participating hospitals, licensed physicians, and the general public.

DECISIONS AFFECTING COOPERATIVES

Funeral cooperatives in Iowa won a victory in May 1946, under a decision by the State supreme court. It held, in *State of Iowa* v. *Winneshiek Cooperative Burial Assn.* (22 N. W. (2d) 800) that the cooperative association in the case was properly organized under the Iowa cooperative law, as an association for the purpose of conducting the "mercantile business" authorized by that law; that embalming was a business and not a profession, and that an association with a licensed embalmer may carry on a funeral-service business without contravention of the statute against corporate practice of a profession.[19]

REA cooperatives.—Several court decisions were made during the year affecting electricity cooperatives. On the Pacific Coast, the effort of a private power organization to block an REA cooperative from building and operating an electric-power plant in Walla Walla County was rejected by the superior court. In Washington and Oregon, 13 public utility districts and a number of cooperatives formed Interstate Electric, Inc., for the purpose of purchasing the properties of a subsidiary of a holding company that had been ordered by Securities Exchange Commission to dissolve. The cooperative purchase was designed to prevent a proposed consolidation of the subsidiary with another of the same holding company. The cooperative contended that the consolidation would give the new company a monopoly over Bonneville power and impede the growth of public power distribution. Its contention was rejected by the Federal Power Commission as "lacking in substance," and approval for the merger was granted.

In the Middle West, the Wisconsin Public Service Commission denied the application of Badger Electric Cooperative to buy the properties of a privately owned hydroelectric company. The commission held that the cooperative (financed 100 percent by REA) violated the rule against 100-percent financing of utilities and that its bid was too high; the commission also challenged the cooperative's financial ability to service the 7-county area to be covered. Rehearing was denied, and later a suit by the cooperative for judicial review was dismissed by the circuit court of Dane County. In Iowa, a U. S.

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[19] For review of previous actions, see Bulletins Nos. 768 (p. 3) and 859 (p. 23).

Supreme Court decision, reversing prior decisions by the Federal Power Commission and the Circuit Court of Appeals for the District of Columbia, opened the way for an Iowa REA cooperative to operate a hydroelectric generating station; the court held that permission of the State board (which had twice refused it) was not necessary, and application could be made directly to the Federal Power Commission (*First Iowa Hydro-Electric Cooperative* v. *Fed. Power Commission*, 328 U. S. 152).

The Minnesota Supreme Court upheld the right (disputed by a private power company) of a cooperative creamery to obtain power from an REA cooperative of which it was a member and of the latter to serve it; specific permission had already been granted by the village in which the creamery was situated and under whose franchise the private power company was operating (*Gen'l. Minn. Utilities Co.* v. *Carlton County Coop. Power Assn.*, 22 N. W. (2d) 673).

Decisions on taxation.—Several decisions helped to clarify the tax position of cooperatives in 1946. The Commissioner of Internal Revenue ruled that the patron to whom a patronage refund is credited must be notified of the credit by mail, as soon as possible after the refund has been declared. The U. S. Supreme Court, in a case not related in any way to cooperatives (*Comr. of Int. Revenue* v. *Wilcox et al.*, 327 U. S. 404) enunciated, however, a principle bearing upon the tax issue, that taxable income cannot "accrue from the mere receipt of property or money which one is obliged to return or repay to the ightful owner." In California, the U. S. Circuit Court of Appeals held that to claim exemption from taxation on patronage refunds there must be a legal obligation on the part of the association, made efore the receipt of the income, to return to the members on a atronage basis, all funds received in excess of the cost of the goods old" (*Amer. Box Shook Export Assn.* v. *Comr. of Int. Revenue*, 156 Fed. (2d) 629). In Ohio the Circuit Court of Appeals ruled that an lectric-power cooperative was exempt from taxation under section 01 (8) of the Internal Revenue Code, as a nonprofit organization operated exclusively for the promotion of social welfare" (*U. S.* v. *ickwick Electric Membership Corp.*, 158 Fed. (2d) 272).

Taxation of Cooperatives

Farmers' cooperatives meeting certain requirements as to memberip and nonmember business have exemption from Federal income x on amounts held in reserves and on interest paid on share capital; nfarm cooperatives pay taxes on both of these. Neither type of sociation is taxed on amounts returned in patronage refunds.

Largely because of charges of unfair competition by cooperatives, de by the National Tax Equality Association,[20] the Small Business

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See Bureau's Bulletins Nos. 821 and 860.

Committee of the House of Representatives held hearings over a period of several months in 1945. Its first interim report [21] was issued in April 1946. In it the committee concluded that tax-exempt farmer cooperatives have a slight tax advantage in their reserve and interest exemptions but that consumers' cooperatives and nonexempt farmers' associations have no advantages not available to all types of competitive business; that, since the cooperative serves only as an agent for its members, to whom its income belongs, taxation of its income would "require a drastic change in the basic principles of our revenue laws"; that "there is substantial evidence to show that the cooperative movement operates as a very successful means of combating monopolistic concentrations and, as such, is a very healthy addition to the American economy"; and that "many of the most vocal opponents of cooperatives are themselves members of cooperatives and their firms engage as members in cooperative enterprises."

The principal recommendations of the committee were that a single Federal agency be authorized to compile statistics of all types of cooperatives; that the Bureau of Internal Revenue amend its regulations to require cooperatives to issue to each patron evidence of his equity; that farmers' purchasing cooperatives be restricted to the handling of farm production supplies; that the retention of refunds be limited to a period of 5 years; and that Congress act to provide a basis for establishment, operation, and federation of nonexempt associations.

This report was followed, according to the chairman of the Committee, by a flood of letters to Congressmen from small businessmen, "on a scale rarely encountered." A statement issued by the Committee early in June 1946 reiterated the belief that cooperatives, far from being "a threat to the free enterprise system," are actually "an integral part" of that system and "a powerful means of combating monopoly."

Numerous decisions of the courts and of the U. S. Tax Court have held that amounts returned in patronage refunds are not taxable income to the association. Some representatives of profit business seem to agree with it. Thus, a representative of the National Association of Manufacturers, in an address delivered before the Indiana State Grange, expressed the opinion that there is "no justification" for "taxing at the source patronage refunds paid to customers of cooperatives," but he believed that amounts not so distributed should be taxed as earnings.

During 1946 several court decisions relating to taxation, involving or applicable to cooperatives, were delivered (see page 35).

Attitude of farmers' cooperatives.—One of the farmers' papers has expressed the view that the tax exemptions of farmers' cooperatives could be eliminated without hurting the associations. It pointed out that nearly half do not now claim exemption, preferring to operate on an open-membership basis,[22] and that, actually, "the growth of cooperatives is impeded by having exemption." [23] The Illinois Agricultural Association, in its 1946 convention passed a resolution supporting changes in the Internal Revenue Code and regulations that would provide tax exemption for agricultural cooperatives "on only that portion of their earnings which is distributed to their members or patrons." [24] Late in the year the National Association of Cooperatives formulated its own recommendations. It proposed legislation recognizing that all forms of business have an equal right to exemption on patronage refunds, taxing refunds retained in the business without the patron's authorization, allowing exemption on dividends or interest on share capital only as to amounts actually paid therefor "at the specially limited rates set up in the law," and requiring all cooperatives to file income-tax returns and to report each patronage refund of $100 or more. No prediction can, of course, be made as to what if any action on the subject will be taken in the 80th Congress which convened in January 1947.

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[21] House Report No. 1888 (79th Cong., 2d sess.).

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[22] In order to qualify, a farmers' cooperative must show that all its members are farmers and not over 15 percent of its business is done with nonmembers.

[23] Nebraska Cooperator (Omaha), June 19, 1946.

[24] Co-op News (Chicago), March 1946.

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U. S. GOVERNMENT PRINTING OFFICE: 1947

EMPLOYMENT OUTLOOK IN

HOTEL OCCUPATIONS

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UNITED STATES DEPARTMENT OF LABOR
L. B. Schwellenbach, *Secretary*

BUREAU OF LABOR STATISTICS
Ewan Clague, *Commissioner*

LETTER OF TRANSMITTAL

United States Department of Labor,
Bureau of Labor Statistics,
Washington, D. C., July 7, 1947.

The Secretary of Labor:

I have the honor to transmit herewith a report on the employment outlook in hotel occupations. This is one of a series of occupational studies conducted in the Bureau's Occupational Outlook Division for use in vocational counseling of veterans, young people in school, and others interested in choosing a field of work.

The report was prepared by Herbert L. Gottlieb, under the supervision of Helen Wood. Sylvia K. Lawrence assisted in the library research.

The Bureau wishes to acknowledge the generous assistance received in connection with this study from the American Hotel Association, the Hotel and Restaurant Employees' and Bartenders' International Union, AFL and the U. S. Employment Service.

Ewan Clague, *Commissioner.*

Hon. L. B. Schwellenbach,
Secretary of Labor.

Photographs are by courtesy of American Hotel Association and the Mayflower Hotel.

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EMPLOYMENT OUTLOOK IN HOTEL OCCUPATIONS

Introduction

Inn-keeping had its beginnings more than 2,500 years ago, with the growth of trade and travel in the Near East. In the days of the early Egyptians, Babylonians, and Persians, there were inns scattered along the main caravan routes. Inns dotted the highways which were built throughout the Roman Empire. With the fall of Rome, however, travel became unsafe and practically ceased in Europe, and the number of lodging houses declined until the late Middle Ages, when the revival of commerce brought a great new growth in the inn-keeping business. During the 1700's, large and elaborate inns were built in France, especially near the King's court at Versailles. These were the first "hotels." From that time on, hotels multiplied in Western Europe. It was in the United States, however, that the largest and most luxurious ones were built. Many of the new American hotels catered to people of moderate means as well as to the rich; therefore, the number of hotels increased more rapidly here than in any other country.

The typical modern hotel in this country is not simply a lodging place but a complex organization ffering many kinds of services to its guests—from roviding them with food and doing their laundry o helping them get theater tickets and make travel arrangements. Most hotels also have large rooms that can be rented for public or private gatherings. Conventions (which number about 15,000 in an average year in the United States) are frequently held in hotels. Other kinds of gatherings which often take place there are local business, fraternal, and professional meetings; concerts and lectures; private dinners, dances, and weddings; and trade exhibits, where salesmen display their wares to buyers.

To furnish these many different services, hotels employed about half a million workers in mid-1946, more than were employed in such important trade and service industries as drugstores or laundries. There are hotels and hotel workers in all parts of the country—in small villages, medium-sized towns, and big cities. Many resort hotels are in remote spots in the mountains, woods, and deserts, and on islands off the coast. A great many different kinds of workers are employed: for example, managers, clerks, skilled maintenance men, restaurant and kitchen workers, and housekeeping and service employees. The qualifications needed for these jobs are so varied that men and women with very different educational backgrounds, personalities, and skills can find jobs in the hotel industry.

The Hotel Industry

There are three main types of hotels—transient or commercial), residential, and resort.

Commercial hotels are by far the most numerous pe, about three-fourths of the country's 28,000 tels being of this kind. Such hotels cater chiefly business travelers and tourists who seek lodging r short periods of time, though they may have me permanent guests.

Residential hotels, which make up less than one-nth of all hotels, let most of their rooms for relatively long periods. The rooms may be rented furnished or unfurnished and in some places housekeeping apartments are available, but "hotel service" is always provided. Commercial and residential hotels together employed about 322,000 workers during 1939, 95 percent of the average annual employment figure for the entire industry.[1]

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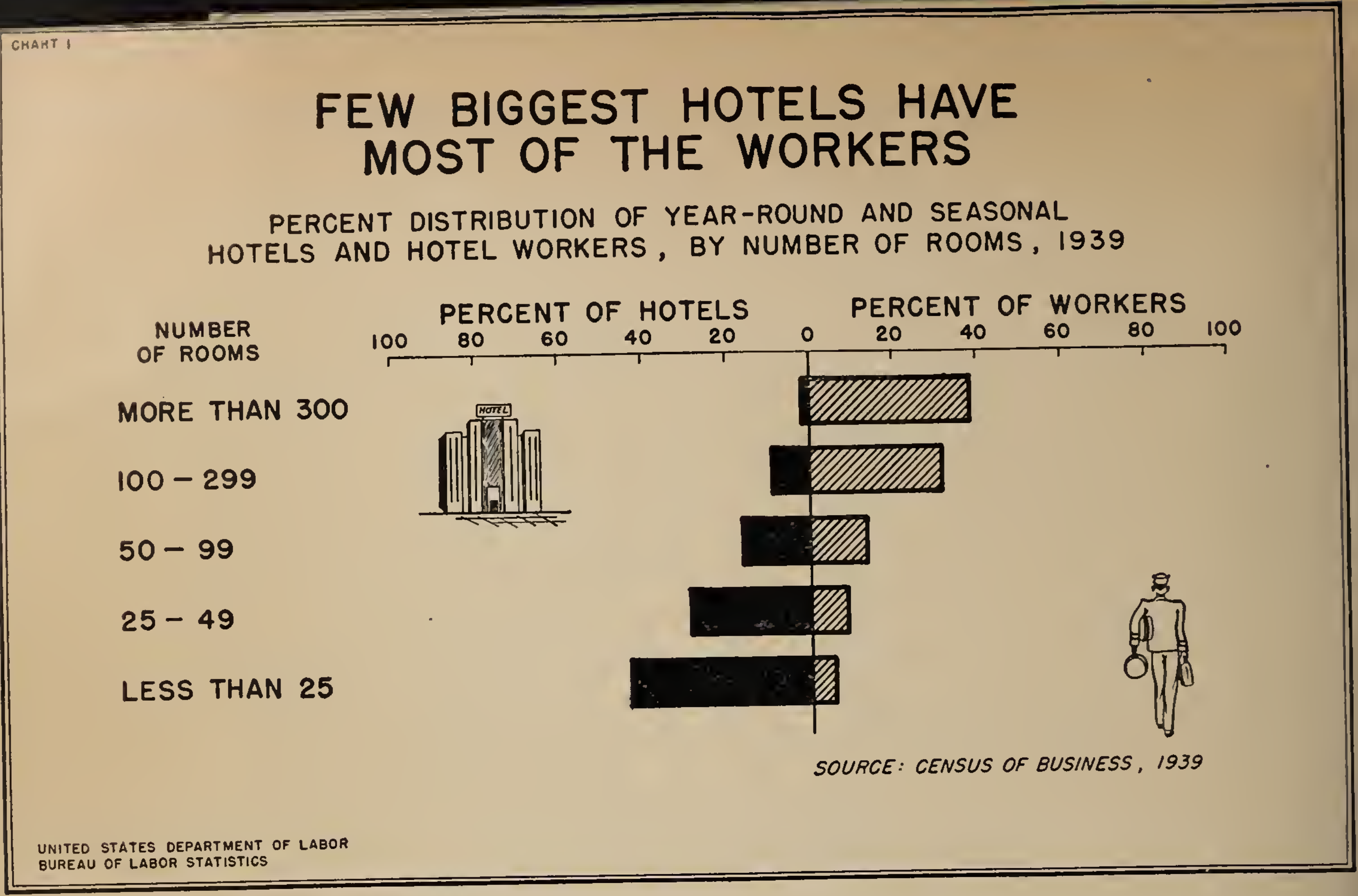
[1] These figures do not include apartment houses or residential hotels catering exclusively to permanent guests.

CHART 1



FEW BIGGEST HOTELS HAVE MOST OF THE WORKERS

PERCENT DISTRIBUTION OF YEAR-ROUND AND SEASONAL HOTELS AND HOTEL WORKERS, BY NUMBER OF ROOMS, 1939

SOURCE: CENSUS OF BUSINESS, 1939

UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS

Resort hotels cater to vacationers and are open for business only part of the year.[2] Some managers operate one hotel in the North and one in the South and move back and forth between them in the spring and fall, with all or most of their staff. Resort hotels represent about one-sixth of all hotels in the country. The number of people employed varies greatly from one season of the year to another: for example, in 1939, employment in such hotels was 13,000 in February, the busiest month of the Southern season; it fell to 8,000 in May, rose to 38,000 in August, the month when there are the most vacationers, and then dropped to a low of 4,000 in November.

The tremendous downtown transient hotels, some of which have over 1,000 rooms, are, in general, the largest ones, though some residential and resort hotels are very big also. In 1939, there were, altogether, about 3,000 hotels with more than 100 rooms; these employed 240,000 workers (see chart 1). In contrast, the 12,000 hotels with fewer than 25 rooms had only 20,000 employees.

The larger and more expensive hotels not only have more guests to serve but, as a rule, employ more workers per guest than smaller and less expensive establishments. A few big hotels have as many employees as guests, though the average for the industry as a whole is estimated at one worker to about every four guests.

There are some hotels in all parts of the country and nearly every city has at least one. However, the majority of hotel workers are employed in a relatively small number of States, resort hotel workers being concentrated in even fewer States than year-round hotel workers. Over three-fifths of the workers in year-round hotels in 1939 were employed in the following 10 States—New York, Illinois, California, Pennsylvania, Ohio, Texas, Michigan, Missouri, Massachusetts, and New Jersey. Of the workers in resort hotels, three-fifths were employed in only five States—two-fifths of them in Florida and New York and one-fifth in New Jersey, Maine, and California. Ten cities had over one-third of all the workers in year-round and resort hotels combined. These were New York, Chicago, San Francisco, Washington, Boston, Atlantic City, Los Angeles, Detroit, St. Louis, and Philadelphia.

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[2] The Census of Business defines resort hotels as those open for business less than 9 months of the year.

Hotel Occupations

A great variety of jobs are to be found in the various departments of large hotels. In the executive department of a big hotel, there is likely to be a general manager, a personnel director, a publicity director, sales and advertising managers, and other executive and junior executive workers. The front office employs such workers as mail clerks, room clerks, reservation clerks, and the front-office manager. In the accounting department are auditors, bookkeepers, office-machine operators, cashiers, and other clerical workers. The housekeeping department includes not only the housekeeper and her assistants and the chambermaids but also housemen (who do heavy cleaning), furniture polishers, seamstresses, decorators, upholsterers, and others. Headed by the superintendent of service, the service department employs such workers as bellmen, baggage porters, elevator starters and operators, and doormen. The restaurant department includes chefs, cooks of various kinds, and kitchen helpers; the steward and his staff—pantrymen, storeroom employees, dishwashers; and waiters, bartenders, and other food and beverage service workers. In the maintenance department one finds such workers as stationary engineers, electricians, plumbers, carpenters, and painters. In addition, there may be auxiliary departments which employ, for example, laundry workers, barbers, valets, and tailors. Though small hotels do not have nearly as many separate occupations as this, practically all of them employ front-office, housekeeping, and maintenance workers, and some have restaurant workers and service mployees such as bellmen.

Restaurant and bar-room employees are the rgest occupational group in hotels, as shown in hart 2. In 1939, over one-third of the workers year-round hotels with more than 25 rooms were this group. One-fourth were housekeeping emloyees, more than one-tenth were employed in e service department, and another tenth were ngaged in front-office and other clerical work.

A number of occupations—including front-office erk and bellman—exist only in hotels. Each of ese typical hotel occupations is discussed separately in later sections of this bulletin. However, any of the occupations in hotels—for example, countant, carpenter, cook, waiter—are found also other industries. In these occupations, the work performed and the training required are much the same in hotels as in other fields, and hotel employees make up only a small proportion of all employed workers. The employment opportunities for these occupational groups are affected by general conditions in their trades. The outlook for them in hotels is suggested by the trend of employment in this industry, which is described in the next section.

Young people interested in a career in hotel work usually have to begin at the bottom of the ladder—in jobs such as bellman, elevator operator, clerk, or maid. From these entry jobs, they may be promoted to supervisory positions, if they have the needed personality and ability. Exceptionally able and well-qualified men may advance eventually to managerial jobs, which are almost always filled by promoting workers with many years of hotel experience. Managers with sufficient capital and good experience have sometimes been able to go into business for themselves, as owner-operators of small hotels.

Trend of Employment

Employment in hotels will probably tend to increase slowly both in the next year or two and in the more distant future.

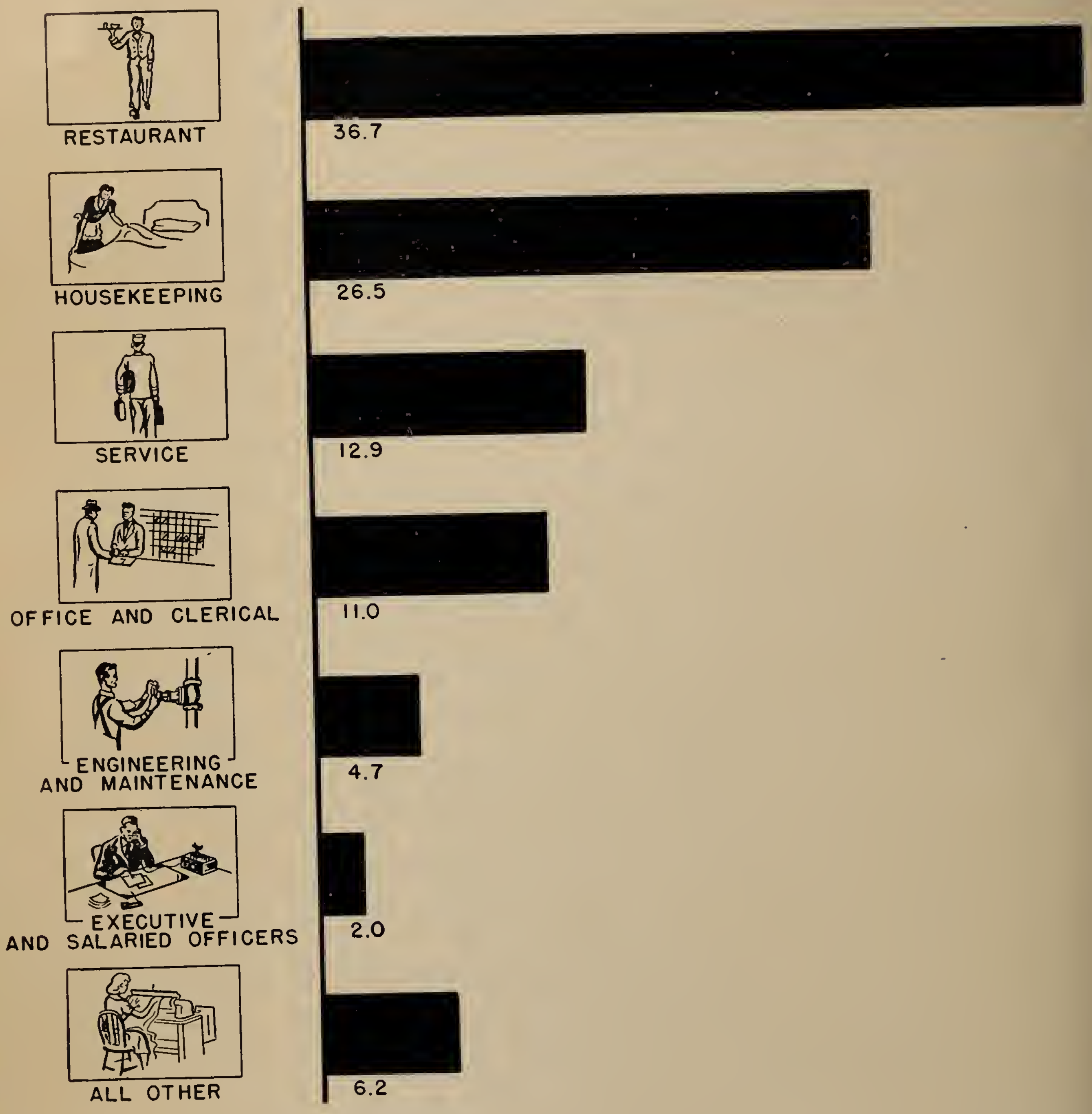
When the war ended, there were labor shortages in almost all hotel occupations. Wartime conditions brought a marked increase in hotel business, at the same time that large numbers of experienced workers were leaving to go into the armed forces or into higher-paid jobs in other industries. Though many inexperienced workers were hired and employment rose, the number of new recruits was not large enough to fill all the openings. With the return of former employees to the industry, the need for workers has been greatly reduced, but there still are openings in some occupations in many hotels. Additional opportunities will arise continually owing to turnover, which is especially high among the less skilled and lower-paid workers such as maids and kitchen help. Moreover, if the plans that have been made for building new hotels are carried out, these will create some further jobs within the next few years.

In the long run, a slow upward trend in employment in practically all hotel occupations is to be expected, as population and travel increase.

CHART 2

RESTAURANT AND HOUSEKEEPING EMPLOYEES ARE LARGEST GROUPS OF HOTEL WORKERS

PERCENT DISTRIBUTION OF EMPLOYEES IN YEAR-ROUND HOTELS, BY MAJOR OCCUPATIONAL GROUPS, 1939



UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS

Sources: CENSUS OF BUSINESS, SERVICE ESTABLISHMENTS, VOLUME III, 1939
"HOTEL BUSINESS" - BY R. T. HUNTINGTON, 1940

Tourist camps and other lodging places will take some business away from hotels, as they were doing before the war, but the growing demand for lodgings should offset this competition in most localities as long as general business conditions continue to be good. Declines in business activity have led to sharp declines in hotel employment in the past, however, and would probably do so in the future; some occupational groups would be affected more than others. How stable employment is likely to be in different hotel occupations is one of the points discussed later on in this bulletin.

Earnings and Working Conditions

Earnings of hotel workers have risen greatly during the past few years, in line with the general upward trend in wages. Besides their money wages, nany workers are furnished meals and lodgings by he hotel. In addition, many receive tips from cus- omers. Not counting any of these items, the av- rage pay of employees in year-round hotels (ex- luding high-salaried executives and supervisors) vas 60 cents an hour in the first half of 1946. This as nearly twice as high as in 1940. Weekly wages n early 1946 averaged about $26 or $27 for approx- nately 44 hours' work.

The amount an individual hotel worker can ex- ect to earn depends, first of all on his occupation nd the degree of skill which it requires; also on ie size and location of the hotel, how well the orker does his job, and other factors. Large umbers of hotel employees, such as maids and isboys, are in unskilled occupations paying less an the average earnings cited. On the other nd, certain occupational groups make much more than the average, as is indicated by the earnings data for a few occupations given in later sections of the bulletin.

One of the advantages of work in year-round hotels is the fact that employment and earnings are likely to be steady throughout the year. Some employees of resort hotels, who move each fall from a hotel in the North to one in the South which is under the same management and then back again in the spring, also have steady jobs. More often, however, workers in this branch of the industry face the problem of finding new jobs when their hotel closes at the end of the season.

Hours of work and other working conditions vary greatly from one hotel to another and also from occupation to occupation. Although some workers, especially in large hotels, are on regular 8-hour shifts, many others have a longer workday. "Split shifts"—on which employees have several hours off duty during the day but start their work early in the morning and end it after dinnertime in the evening—are frequent among kitchen and dining-room workers. Owing to the fact that hotels provide service 24 hours a day, some employees must work at night; in some hotels, employees take turns at the different shifts.

In general, hotel work involves no serious accident hazards, nor are there any special industrial-disease hazards. In many occupations, however, workers have to be on their feet all day long and this may lead to various health problems.

Employees such as housekeepers and maids, who often "live in" and are provided with meals find that living conditions vary greatly from one hotel to another.

Employment Prospects in Typical Hotel Occupations

Front-Office Clerks

Everyone who has been in a hotel lobby has seen "front-office clerks" at work behind the main el desk. Their major responsibility is to rent ms to incoming guests, trying to give each one kind of room he wants for the length of time wants it. This is not always easy: guests want- double rooms with southern exposure do not always show up in exactly the numbers calculated by the architect who designed the hotel; and sometimes after room 703 is rented, Mr. Jones, who always stays in that room, arrives in the lobby with his baggage. Bearing in mind arrivals and departures from all the rooms in the hotel and trying to please all the guests, the clerks must try to make room assignments in such a way as to obtain the greatest possible room revenue. They also have many other duties, such as acknowledging room reservations received by telephone or mail and filing reservation cards; handling guests' complaints; issuing and receiving room keys; supplying information about arrivals and departures of guests and about local points of interest; receiving and delivering messages; and taking care of incoming mail.

In small hotels with few employees, one clerk may do all this work by himself or with the help of one or two assistants. Where there is a large staff, however, employees usually specialize in different types of work. In such cases, beginners are assigned routine jobs such as those of key clerk, information clerk, or mail clerk, and there are also higher-grade clerks with such titles as room clerk, desk clerk, or front-office manager, who supervise other clerical workers in addition to handling the more difficult and responsible work.

Openings in beginning jobs are filled sometimes by hiring inexperienced outsiders, sometimes by promoting bellmen, switchboard operators, and other workers already employed by the hotel. Positions of higher grade are usually filled by promotions from within but, in some instances, by hiring experienced clerks from other hotels. A supervisory clerk may be promoted to assistant manager, and, after becoming familiar with the operation of other departments of the hotel, may possibly become general manager. Men are generally preferred for front-office clerical jobs. High-school education is often helpful in entering and advancing in this work. Completion of a course in hotel work in the public schools, where one is offered, is also likely to be an aid in getting a job.

Room clerk filling out "rooming slip" showing guest's name and address and the room number and rate, while guest registers.

There will be some job opportunities in the immediate future, not only for experienced workers but also for newcomers who have the desired personal qualifications. During the war, about half of the many thousands of men employed in these occupations left for the armed forces and war industries. Although a large number of new clerks were hired, including many women, there was a shortage of help in both supervisory and lower-grade jobs. Some former workers have returned to their jobs since the end of the war, but the shortage has not been filled in all hotels. In addition, many hotels have been anxious to replace some of the clerks hired during the war. The best chance of jobs for inexperienced workers will generally be found in the larger commercial hotels, where beginners can be assigned o specialized jobs.

Because of the long-run upward trend and also ecause employment of front-office workers is only lightly affected by declines in general business ctivity, most men who find positions in year-round otels and prove satisfactory may expect to keep heir jobs for many years.

No up-to-date statistics on earnings in different otel occupations are available. However, scatred information for a few large cities suggests iat typical weekly salaries in beginning frontfice jobs were roughly $25 to $35 in the early part f 1946; in higher-grade jobs, about $35 to $45. arnings of head clerks tend to be somewhat gher, especially in large hotels.

Service Employees

The first worker one meets when coming into a tel is a member of the service department—the orman. Bellmen are a still better-known group service employees. Other workers in this dertment include elevator operators and starters, l captains, head baggage porters, and the superendent of service. These positions form a protional ladder up which men may move as they n in experience and skill. The usual steps in motion are outlined in the next three sections ribing the most important service occupations.

Bellmen and Baggage Porters

he ringing of a bell or the call of "Front!" in otel lobby quickly brings the "bellman" to r a guest up to his room and carry his baggage. Bellmen also run errands, deliver messages and packages, and supply various types of information to guests. In large hotels, a separate group of employees, known as "baggage porters," handle the suitcases and other baggage of guests who are leaving. They also help to set up sample rooms for salesmen, supply travel information and buy transportation tickets, and arrange for shipment of express articles. The duties of bellmen are frequently combined with those of baggage porters, except in large hotels, and the worker in such cases is generally known as a bellman. In some instances, bellmen and baggage porters act as relief men in such jobs as elevator operator and switchboard operator.

The way of entering these occupations differs from one hotel to another. Some hotels fill openings only by promoting workers already employed by the hotel—most often elevator operators and starters. Some also hire workers with experience in other hotels—as bellman or baggage porter or, occasionally, in another occupation. A good many hotels, especially the smaller ones, sometimes hire outsiders without previous hotel experience. In a few localities, training courses for bellman jobs are given by the public schools; completion of such a course is generally helpful in obtaining work.

A man who wishes to advance from the job of bellman may aspire to be bell captain. A baggage porter may advance to head baggage porter. From either position, the second step up is to become superintendent of service. Some workers have a chance to transfer to front-office clerical jobs, which may enable them to advance eventually to managerial positions. Moreover, both bellmen and baggage porters may increase their earnings by moving to jobs of the same kind in better-grade hotels.

These occupations are overcrowded, taking the country as a whole, although there are a limited number of openings in a few localities. As former workers have returned from the armed forces and war industries, many of the men hired during the war have been down-graded, usually to elevator-operator jobs, or have been laid off. Hiring standards have become much more strict.

During the next few years inexperienced men are likely to find it difficult to get positions as bellmen or baggage porters. In general, competition for jobs will be keenest in large commercial hotels in metropolitan centers. The chance of entering the occupations will probably be best in resort hotels, and experience gained there may enable men to transfer to commercial or residential hotels. It may also be possible for beginners to find jobs in occupations such as elevator operator or houseman in which there are still shortages of workers in some areas. These jobs may lead to positions as bellmen or baggage porters in the future. The length of time it will take to be promoted will vary greatly, however, depending upon the rate of turnover in the particular hotel and the number of employees with greater seniority.

Though the long-run trend is upward, employment in these occupations is very much affected by declines in business activity. Whether all bellmen and baggage porters will have steady employment over a long period of time will therefore depend on whether or not general business activity continues at a high level.

A fairly large number of bellmen and baggage porters belong to unions. The union members are mostly in large cities outside the South. They are represented by the Hotel and Restaurant Employees' and Bartenders' International Union, AFL, and in a few places by the Building Service Employees' International Union, AFL.

Wages in union hotels were about $12 to $16 per week in early 1946, according to scattered data for some large cities. Including tips, the total amount received by many bellmen was reported to be roughly $45 to $60 a week.

Bell Captains and Head Baggage Porters

The work of bellmen and baggage porters is generally done under the watchful eyes of the "bell captain" and the "head baggage porter." These supervisory employees are to be found in almost all medium-sized and large hotels, though seldom in small hotels with only a few service employees. It is their job to assign work in rotation to employees in their respective departments and to keep time records. They also instruct new employees, interview job applicants, investigate and adjust guests' complaints relating to the work of their departments, and decide what action should be taken on unusual requests for service. The head baggage porter is sometimes called a "transportation clerk" because of his expert knowledge of train and airplane schedules. The bell captain, in addition to his other duties, may occasionally perform bellman's work.

Bell-captain positions are usually filled by promoting one of the bellmen employed by the hotel; head-baggage-porter jobs, by promoting one of the porters. Although a man may advance to the job of superintendent of service from either position, bell captains are more likely to receive this promotion than head baggage porters.

Both occupations are small ones, employing only a few thousand workers. In both, the number of men employed declined slightly during the war. Vacancies created by withdrawals to the armed forces and war industries could not always be filled and, often, part or all of the duties were taken over by other employees such as the superintendent of service, room clerk, or assistant manager. The shortage of qualified workers has largely been met, however, by the return of most of the men who left; only a small number of

Bell captain receiving telephone request for service from a guest, while a bellman waits for instructions.

openings remain. These openings, plus those arising because of turn-over, will, as usual, be filled in most instances by promoting the most qualified bellmen and baggage porters. Men who obtain such promotions in year-round hotels will have a good chance of holding their positions indefinitely, since employment in these occupations is not affected very much by declines in general business activity and will probably tend to rise slowly over the long run.

Typical weekly wages of both bell captains and head baggage porters were roughly $35 to $45 in the early part of 1946, according to fragmentary data for a few large cities. Total earnings were higher, however, because of tips. The amount of money earned through tips varies considerably from one hotel to another. In general, head baggage porters make more than bell captains, because they receive larger and more frequent tips—mainly for making travel arrangements and pur- hasing tickets.

Superintendents of Service

At the head of the service department in some rge hotels is the "superintendent of service." He ires, instructs, disciplines, and discharges em- loyees in his department. In addition, he confers nd cooperates with the people in charge of other partments—for example, the chief clerk and the usekeeper—and he may also make out the pay ll for his department. In smaller hotels, these ties are performed, as a rule, by the assistant or neral manager, the room clerk, or the bell cap- n (who may be called "working superintendent service").

Ten years of hotel experience is often necessary order to become a superintendent of service. As eady indicated, most employees in this occupa- n have been promoted from the job of bell cap- n, though some were previously head baggage ters. Occasionally, a superintendent of service nsfers to a front-office clerical job, with the aim advancing eventually to a managerial job.

mployment is likely to rise slightly above the sent figure, which is in the hundreds, during the t few years. During the war, a small number nen left the occupation for the armed forces war industries. As in the case of bell captains head baggage porters, vacancies were not al- s filled and employment therefore declined somewhat. With the return of most of the men who left, employment has risen again, and the occupation has become overcrowded in most parts of the country. A few openings may be expected as a result of turn-over and the long-run upward trend in hotel employment but these will, as usual, be filled by promotions from within. Since this is another occupation that is little affected by declines in general business activity, the small group of men who succeed in obtaining positions in year-round hotels should have steady employment for many years.

On the basis of scattered data for some large cities, it appears that typical wages were approximately $40 to $60 a week in this occupation in the early part of 1946. A few men who work in very large hotels earn more. Tips are seldom received, but meals may be provided by the hotel. The number of hours of work per day and per week vary greatly, depending upon pressure of work.

Housekeepers and Assistants

The furnishings, rooms, and halls of hotels must be kept clean and attractive—and this is the housekeeper's responsibility. The housekeeper supervises the work of room maids, linen maids, wall and window washers, furniture polishers, housemen (who do heavy cleaning), and seamstresses. Generally, she hires and discharges employees in her department. In addition, she buys or assists in the buying of supplies, reports expenditures to the manager, makes out the pay roll for the department, takes periodic inventories of supplies, and trains new employees.

Large hotels have an executive or head housekeeper and also one or more assistant housekeepers and floor housekeepers or inspectresses. In small hotels, on the other hand, there is only one housekeeper (often called a "working" housekeeper) who not only handles all the supervisory duties by herself but may, in addition, do some of the work of a maid.

Openings for housekeepers are usually filled by promotions from within the hotel or by hiring women who have performed similar work in another hotel. Positions as inspectresses or assistant housekeepers in large hotels are filled sometimes by hiring inexperienced women and giving them on-the-job training; sometimes by promoting chambermaids, linen maids, and seamstresses.

From these assistant supervisory jobs, promotion to the position of housekeeper is possible. Training courses for housekeeping jobs are given by the public schools in some localities and are likely to be helpful to girls wishing to enter the occupation.

Many thousands of housekeepers and assistants are employed in the industry as a whole, and their number is likely to increase slowly both during the next few years and in the long run. The shortage of workers which developed in those occupations during the war has been much reduced since VJ-day, but there are still some vacancies, especially in small hotels and in lower-grade jobs. In addition, there will be hundreds of openings a year owing to turn-over. As already indicated, however, inexperienced women will be able to find jobs only as maids or, if they have the desired personal qualifications, as assistant housekeepers or inspectresses. Moreover, competition for the better-paying jobs in large hotels is likely to be keen, as it was before the war.

Housekeeper supervising a houseman in hanging drapes and inspecting the color of paint before it is put on the walls.

The long-run trend of employment in this occupation is upward also. Women who obtain promotions to housekeeper jobs in year-round hotels should have a good chance of holding them indefinitely. Assistant housekeepers and inspectresses, however, have less assurance of steady employment, since declines in general business activity affect the number of assistants needed to a much greater extent than the number of top jobs. Th number of maids employed is likely to be still mor affected by changing business conditions.

Earnings of housekeepers, according to limite data for a few large cities, were about $150 to $35 a month in large hotels and $75 to $100 in smal hotels in early 1946. In addition, housekeeper are often given their meals and, sometimes, room as well. Assistant housekeepers and inspectresse make less.

Managers and Assistants

Over-all responsibility for the operation of a hotel rests with the manager. It is his job to see that the different departments function efficiently, so that the guests are satisfied and the greatest possible profit is made. The manager has many luties to perform, such as hiring personnel, buyng or supervising the buying of supplies, directng publicity, introducing improvements in service, nd determining rates and credit policies. In arge hotels, some of these duties are delegated to ssistant managers. In small hotels, on the other and, the manager—who is frequently the owner—ay also do front-office clerical work.

Advancement to the position of manager is ossible from many hotel jobs, including bellman, okkeeper, and cook, but the most common line promotion is from the front office. To qualify r promotion to manager, it is often necessary to ve a high-school education and very helpful to ve college training, especially in hotel manageent. College-trained persons often start in such sitions as room clerk, auditor, sales manager, countant, purchasing agent, or, sometimes, astant manager.

Each of the 28,000 hotels in the country has a nager, and big hotels also have one or more istant managers. At the present time, these upations are overcrowded. As former workers e returned to their jobs from the armed forces and war industries since VJ-day, some of the men who were placed in managerial positions during the war have been downgraded or laid off. Men without experience in such positions will therefore find it very difficult to enter the occupations in the immediate future.

In the next few years and also in the long run, employment will tend to rise slowly as new hotels are built. In addition, there will be hundreds of job openings a year, owing to deaths, retirements, and transfers to other fields. As in the case of managerial positions in many other fields, however, competition for jobs is keen. Therefore, only men with exceptional ability and many years of experience will be able to obtain positions as managers, especially in large hotels. In general, the trend is toward filling openings by promoting college-trained persons with hotel experience, but it will still be possible for some men without such education to rise very slowly to the top jobs.

Most managers and assistant managers may look forward to continued employment over a long period of time, both because of the long-run upward trend in hotel employment and because, in this occupation also, employment is little affected by declines in general business activity.

Earnings of managers have an extremely wide range and largely depend upon the size of the hotel. In addition to a fixed salary, many managers receive a percentage of the profits and frequently living accommodations and meals for themselves and their families.

How To Get More Information About Job Opportunities

The descriptions of job opportunities in typical hotel occupations refer to conditions in the country generally. Individual hotels and local areas may for various reasons offer better or poorer chances of employment. Information on opportunities and how best to obtain a job in a particular locality, in the occupations discussed in this bulletin or in other hotel work, may be obtained in several ways. The applicant may go to any local office of his State employment service, affiliated with the U. S. Employment Service. He may obtain the addresses of nearby hotels from the classified section of the telephone book and go directly to these establishments. If he lives in a city where there is a local office of the American Hotel Association, or locals of the Hotel and Restaurant Employees' and Bartenders' International Union, AFL, or of the Building Service Employees' International Union, AFL, he can obtain helpful information by writing or visiting these organizations. Information may be obtained also by writing to their national offices at the following addresses:

American Hotel Association, 221 West 57th Street,
New York 19, New York.
Hotel and Restaurant Employees' and Bartenders'
International Union, AFL, 528–530 Walnut
Street, Cincinnati 2, Ohio.
Building Service Employees' International Union,
AFL, 130 North Walls Street, Chicago 6, Illinois.

One of the best ways to get information on training courses in hotel work is to write to the State Director of Vocational Education at the Department of Education in the State capitol.

Occupational Outlook Publications of the Bureau of Labor Statistics

Studies of employment trends and opportunities in the various occupations and professions are made by the Occupational Outlook Service of the Bureau of Labor Statistics.

Reports are prepared for use in the vocational guidance of veterans, young people in schools, and others considering the choice of an occupation. Schools concerned with vocational training and employers and trade-unions interested in on-the-job training have also found the reports helpful in planning programs in line with prospective employment opportunities.

Occupational Outlook reports are issued as bulletins of the Bureau of Labor Statistics; sometimes they are also published in the Monthly Labor Review (subscription price per year $3.50; single copy, 30 cents). Both the Monthly Labor Review and the bulletins may be purchased from the Superintendent of Documents, Washington 25, D. C.

Two types of reports are issued:

Occupational Outlook Bulletins describe the long-run outlook for employment in each occupation and give information on earnings, working conditions and, the training required.

Special Bulletins are issued from time to time on such subjects as the general employment outlook, trends in the various States, and occupational mobility.

Occupational Outlook Bulletins

Employment Opportunities for Diesel-Engine Mechanics
Bulletin No. 813 (1945), price 5 cents. (Monthly Labor Review, February 1945.)

Employment Opportunities in Aviation Occupations, Part I.—Postwar Employment Outlook
Bulletin No. 837–1 (1945), price 10 cents. (Monthly Labor Review, April and June 1945.)

Employment Opportunities in Aviation Occupations, Part II.—Duties, Qualifications, Earnings, and Working Conditions
Bulletin No. 837–2 (1946), price 20 cents. (Monthly Labor Review, August 1946.)

Employment Outlook for Automobile Mechanics
Bulletin No. 842 (1945), price 10 cents. (Monthly Labor Review, February 1946.)

Employment Opportunities for Welders
Bulletin No. 844 (1945), price 10 cents. (Monthly Labor Review, September 1945.)

Postwar Outlook for Physicians
Bulletin No. 863 (1946), price 10 cents. (Monthly Labor Review, December 1945.)

Employment Outlook in Foundry Occupations
Bulletin No. 880 (1946), price 15 cents. (Monthly Labor Review, December 1945 and April 1946.)

Postwar Employment Prospects for Women in the Hosiery Industry
Bulletin No. 835 (1945), price 5 cents. (Monthly Labor Review, May 1945.)

Employment Outlook for Business Machine Servicemen
Bulletin No. 892 (1947), price 15 cents.

Employment Outlook in Machine Shop Occupations
Bulletin No. 895 (1947), price 20 cents.

Employment Outlook in Printing Occupations
Bulletin No. 902 (1947). (In press.)

Special Bulletins

Occupational Data for Counselors, A Handbook of Census Information Selected for Use in Guidance
Bulletin No. 817 (1945), price 10 cents. (Prepared jointly with the Occupational Information and Guidance Service, U. S. Office of Education.)

Factors Affecting Earnings in Chemistry and Chemical Engineering
Bulletin No. 881 (1946), price 10 cents. (Monthly Labor Review, June 1946.)

State and Regional Variations in Prospective Labor Supply
Bulletin No. 893 (1947), price 15 cents. Monthly Labor Review, December 1946.)

U. S. GOVERNMENT PRINTING OFFICE 1947

GUARANTEED WAGE OR EMPLOYMENT PLANS

Bulletin No. 906

UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS

GUARANTEED WAGE OR EMPLOYMENT PLANS

Bulletin No. 906

A reprint of Appendix C from Guaranteed Wages: Report to the President
by the Advisory Board, Murray W. Latimer, Research Director

LETTER OF TRANSMITTAL

United States Department of Labor,
Bureau of Labor Statistics,
Washington, June 9, 1947.

The Secretary of Labor:

I have the honor to transmit herewith a report on guaranteed wage and employment plans, which was prepared in the Bureau's Wage Analysis Branch and submitted to the Office of War Mobilization and Reconversion for inclusion in their final report. The field work was conducted under the direction of the Bureau's regional wage analysts.

Ewan Clague, *Commissioner*,

Hon. L. B. Schwellenbach,
Secretary of Labor.

PREFACE

In the summer of 1944 the Bureau of Labor Statistics began an inquiry into the subject of guaranteed wage and employment plans, anticipating a general demand for information on the nature of such plans and of the Nation's experience with them. At the time the Bureau began its inquiry, union demand for a guaranteed annual wage was at issue in a dispute case before the National War Labor Board, involving the basic steel industry and the United Steel Workers of America. In rendering its decision in November 1944, the Board refused to grant the union's demand under conditions prevailing at the time. However, in view of the lack of adequate information relating to guaranteed annual wage plans, it was recommended that a thorough study of the subject be made by a special commission to be appointed by the President.

On March 20, 1945, the President designated the Advisory Committee of the Office of War Mobilization and Reconversion to survey "the whole question of guaranteed wage plans and the possibility of their future development in American industries as an aid in the stabilization of employment and the regularization of production." Following this action, the Bureau's program was carried on in cooperation with the Guaranteed Wage Study Staff, designated by the Office of War Mobilization and Reconversion to investigate the problem. In December 1945, the Office of War Mobilization and Reconversion submitted to the Bureau of Labor Statistics a request for a survey of specific experiences with existing and discontinued guaranteed wage and employment plans.

The following report summarizes the major findings of the Bureau's survey, and appears as Appendix C of the Final Report to the Advisory Board of the Office of War Mobilization and Reconversion which was prepared by the Guaranteed Wage Study Staff.

The Bureau's forthcoming final report on guaranteed wage and employment plans will include an analysis of the major characteristics of a number of individual plans.

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APPENDIX C—GUARANTEED WAGE OR EMPLOYMENT PLANS

DEFINITION AND METHODOLOGY EMPLOYED IN THIS STUDY

DEFINITION

The Bureau of Labor Statistics has included in its study of guaranteed wage or employment plans all arrangements, written or unwritten, by which an employer guaranteed or assured to some or all of his employees, in advance, a definite period of employment equal to at least 3 months a year, or an equivalent amount of wages.

This definition is broad, and covered plans framed in a variety of ways: plans which were lesignated as "guarantees" by the employers and mions which operated under them, and plans vhich did not carry the title of "guarantee" but vhich in fact operated as guarantees. In a rela- ively small number of cases, the plans provided or an "annual wage." In the majority of cases, mployment was guaranteed for a stated number of eeks per year and hours per week, frequently ss than 52 weeks per year and 40 hours per week. n practice, these guarantees of employment, as ell as the few guarantees that were explicitly ated in terms of wages, did guarantee wages for e total number of hours a year over which em- oyment was guaranteed. A distinction between uaranteed wage" and "guaranteed employment" ans was unnecessary for the purpose of this dy.

Despite the general inclusiveness of the defini- n employed, a number of problems arose re- ecting its application in border-line situations. e distinction between a guarantee plan and a vate unemployment benefit plan, for example, s difficult to draw. The latter were included y where the period of time over which benefits re paid was 3 months or more and where there s a commitment to pay benefits regardless of size of reserves set aside for this purpose.

t was difficult also, in many instances, to draw line between a guarantee and an employer's oral pledge that work in his establishment would be "steady." A large degree of stability is inherent in many types of industry. Moreover, many employers have maintained fairly stable employment in their plants, frequently as a result of planned production and hence employment regularization, without instituting formal guarantees. The volume of employment regularization planning in this country is, in fact, far greater than that encompassed by the actions of the firms that have guaranteed wages or employment. The practice of employing white-collar personnel on an annual rate basis is widespread, especially in government, financial, and institutional establishments. Guarantees of minimum weekly hours or wages are found in many labor agreements, notably in the meat-packing and trucking industries; the practical effect of these arrangements is to afford a guarantee of almost full weekly earnings even when wage earners work only during some part of each week. In none of these situations, however, is there a formal pledge or assurance of continued employment, and the employee is not free from the possibility of lay-off or loss of his job. Oral arrangements (amounting to 36 percent of the currently operating plans included in the study) were included only where there was a formal guarantee or assurance of continued employment or wages.

Many of the plans contained the theoretical possibility of abrogation or modification during the life of the guarantee period under various circumstances. Provisions for modification or cancelation of an announced guarantee did not result in exclusion of the plan from the study.

The so-called wage advance plan was another type of guarantee which raised questions of inclusion. Such plans are sometimes regarded as loan arrangements, because their central feature is the advancement of wages by the employer during short-hour weeks, and the repayment by workers during weeks in which longer hours are worked. They are different from loan plans in essential characteristics, however. Where there was no obligation to repay the advance unless the employer provided sufficient work to enable the advance to be repaid, the plan was considered to be a guarantee of wages or employment for the maximum period over which wages were advanced, and was included in the study.

METHODOLOGY

On March 1, 1945, the Bureau of Labor Statistics mailed a brief questionnaire to about 90,000 employers for the purpose of determining the extent to which guarantee plans had been adopted in the United States. From the replies to this questionnaire, from a canvass of previous studies and available literature on the subject, and from a list of employers who had filed contracts with the Wage and Hour and Public Contracts Divisions under section 7 (b) (2) of the Fair Labor Standards Act, the Bureau was able to compile a list of firms which appeared to have had a guaranteed wage or employment plan in effect at some time. The Bureau then conducted a field inquiry to determine finally whether these arrangements actually met the requirements of the definition of guaranteed wage or employment plans used in this study, and whether these plans had actually operated. At the same time, information was collected on the basic features and provisions of those plans which met the definition that had been established. A total of 241 plans (196 still in operation and 45 that had been discontinued) were surveyed in this manner and are included in the tabulations in this report. To this group were later added 106 additional discontinued plans about which information was obtained subsequent to the field survey. This number included 96 cases which operated under the Wisconsin unemployment compensation law in 1934 and 1935.

In addition, the Bureau made more specific and detailed investigations of the operations of 62 of the plans and the situations into which they were introduced. Some of the material gathered in the course of this subsequent investigation is also presented in this report.

HISTORICAL DEVELOPMENT OF PLANS[1]

INITIATION OF PLANS

Until the passage of unemployment compensation legislation, the history of guarantee plans was part of the history of individual efforts, unaided by government, to mitigate the effects of unemployment in particular industries and plants. During this early period, the idea of guaranteeing wages was not differentiated from other unemployment compensation arrangements. In fact, the term "guaranteed wages" was not used in connection with early plans that have since come to be known as "guaranteed wage" or "guaranteed employment" plans. A good example of this situation was reflected in the language of the Procter & Gamble Co. plan, introduced in 1923, which provided a 48-week-a-year guarantee of employment by assuring that no worker would be unemployed for more than 4 weeks a year.

Trade union sponsorship and individual employer initiation were both important in the early history of guarantees. During the nineteenth century trade union activity had in several instances encompassed the furnishing of out-of-work benefits to members, but such arrangements, of course, carried no obligations by employers to furnish work. The first plans in which employers assumed responsibility for providing work or wages were those of the decade of the 1890's, negotiated in the wallpaper industry, by brewery workers, by textile printers in a New Jersey dyeing and finishing establishment, and established by a small midwestern retailer of sporting goods.

Best-known among the early guarantee plans were those in the wallpaper industry. A guarantee of 11 months' employment was first introduced in 1894, as a result of negotiations between the National Association of Machine Printers and Color Mixers and the National Wall Paper Company, then a newly formed amalgamation controlling from 50 to 75 percent of the industry. In 1896 the guarantee was extended to 12 months a year; modifications were made in subsequent years. The independent companies in the industry followed the bargaining pattern set by the largest firm, and the plan became industry-wide for members of the wallpaper association who bargained with the union. Similar arrangements were made by negotiation with the National Print Cutters' Association of America, which in 1923 joined with the National Association of Machine Printers and Color Mixers to form the United Wall Paper Crafts.

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[1] The material in this section of the report is based upon data gathered by the Bureau of Labor Statistics and upon published accounts of guaranteed wage or employment plans.

Among the other early arrangements, that involving the National Union of the United Brewery Workmen of the United States is known to have arisen in at least two areas, Philadelphia and New York, and took the form of contract provisions restricting lay-off of regular employees to no more than specified numbers of days during the dull season of the year. The agreement between the Machine Printers Beneficial Association and a New Jersey textile finisher provided each journeyman printer full pay for any period of unemployment prior to July 15 of each year, and half pay for any period of unemployment during the remainder of the year. The plan of the midwestern sporting goods retailer provided an oral guarantee of 52 weeks' pay each year to all employees who had passed a probationary period of approximately 90 days.

Guarantee plans introduced during the early years of the twentieth century involved small establishments in which employers made oral commitments to all or some of their workers to provide them with year-round employment. A retail men's furnishing store, starting in 1905, guaranteed permanent employees 52 weeks of work at full veekly hours; a coffee-roasting establishment, in 1912, began to pay its production workers full veekly pay during slack season weeks; a poultry-leaning establishment began, in the following ear, to guarantee 52 weeks of full-time employ- nent to permanent workers; a small department tore began the same guarantee in 1914; and a nall drug firm about 30 years ago instituted year-round weekly wage payment plan covering employees.

The next well-known plan, that of the Columbia onserve Company of Indianapolis, a producer soups and other canned products, appeared in 17. The guarantee was part of a broader social periment which included profit-sharing and an nployee council to give permanent workers a voice in the management of the enterprise. Phases of the experiment which attracted public attention included the steps taken by the company after introduction of the plan to level out its normally seasonal production pattern, and the eventual turning-over of ownership to the permanent workers covered by the guarantee.

Employer interest in the problem of employment security is reported to have increased substantially after the business depressions of 1914 and 1921, and also as a result of the increasing general interest in scientific management and improved personnel procedures. A number of unemployment benefit plans, many of which had characteristics that are currently attributed to guarantee plans, were adopted during the period between 1919 and the passage of Federal and State unemployment compensation legislation. These plans typically provided for the payment of out-of-work benefits rather than for a guarantee of continuous employment. Where the unemployment benefits covered an extended period of time, the line of demarcation between an unemployment benefit plan and a guarantee plan was difficult to distinguish. As has already been indicated, unemployment benefit plans that provided assurance of benefits for 3 months or more have been included in the data on guaranteed wage or employment plans presented later on in this report.

Several unemployment benefit plans are worthy of mention at this point because of their similarity to many of the early guaranteed wage or employment plans. None of them were included in the data contained in subsequent sections of this report, because they did not meet the 3-month guarantee test referred to above. In 1919 the Dutchess Bleachery, followed in 1920 by an affiliate, the Rockland Finishing Co., began setting aside part of its profits in order to provide its workers half pay during periods of unemployment. The American Cast Iron Pipe Co. introduced an unemployment benefit plan in 1924; the Brown & Bailey Co. did likewise in 1927. During the same period of time, a number of unemployment benefit plans were introduced by joint agreement between management and labor, notably in the needle trades in New York and Chicago, and in the hat and lace industries.

Among the plans introduced during the 1920's that can be classed as guarantees, the most notable were the joint agreements of the Cleveland garment industry and the International Ladies' Garment Workers Union (1921), the plan of Crocker-McElwain Co. and its affiliate, the Chemical Paper Co. (1921), the Procter & Gamble Co. plan (1923), and the joint agreement between the Seaboard Airline Railway and a federation covering its shop craft employees (1928). The plan in the Cleveland ladies' garment industry was the first of several unemployment compensation devices introduced in the apparel industry during the 1920's, and the only one that qualified as a guarantee under the definition used in this study. By agreement with the International Ladies' Garment Workers Union, Cleveland apparel manufacturers guaranteed 20 weeks of full employment in each 6-month period (later changed to 40 weeks a year), at two-thirds of minimum weekly wages (later changed to half of minimum wages). The Crocker-McElwain plan assured year-round employment at full pay to workers with at least 5 years' service; in subsequent years this plan was modified to provide, finally, less than 50 percent of full-time annual compensation. The Procter & Gamble plan assured 48 weeks' employment to all workers with at least 6 months' service. Since the time of its introduction, the plan has been somewhat modified, principally by limiting eligibility to workers with at least 2 years' service. The Seaboard plan as originally introduced was a guarantee of annual employment for an agreed-upon number of shop employees each year.

As was the case during the earlier two decades of the century, the occasional introduction of a less formal plan by small employers continued. A shoe retailer guaranteed and maintained year-round employment to 15 regular employees starting in 1923; a commercial machinery wholesaler guaranteed 52 full weeks' pay a year to 2 service mechanics; beginning about 1924, a Michigan coal dealer guaranteed weekly wages throughout the year to 7 employees regardless of prevailing conditions; in the same year, a garment manufacturer introduced a guarantee of 52 weeks' full pay covering a group of key workers; from 1 to 4 plans of similar character were introduced during each of the remaining years of the 1920's.

Introduction of guarantees and unemployment benefit plans continued during the depression of the early 1930's. The General Electric Company in 1930 adopted an unemployment-pension plan, covering 12 of its electrical apparatus manufacturing plants, and in 1931 adopted a plan guaranteeing 50 weeks' work of not less than 30 hours each (modified in subsequent years) to employees with 2 years or more service in 12 lamp manufacturing plants. The Wm. Wrigley, Jr. Co. in 1934 adopted an employment assurance plan with unemployment benefits varying according to a sliding scale dependent on pay level and length of service. The plan of Geo. A. Hormel & Co., meatpackers of Austin, Minn., was started on a small scale in 1931 and its scope gradually extended until in 1940 it covered all but a small percentage of the company's employees.

During and following the depression of the early 1930's, the character of the plans introduced shifted from guarantees of unemployment benefits to guarantees of continued employment. Compulsory unemployment insurance legislation was adopted in Wisconsin in 1932 and at later dates in other States, the latter chiefly under the provisions of the Federal Social Security Act. The legislation permitted modification of the contribution or tax features in the cases of employers who provided guarantees of employment or wages equivalent to legislatively-established standards. The chief, and as far as can be ascertained, the only direct effect of the legislation upon the introduction of guarantee plans occurred in the case of the Wisconsin law, which completely exempte from the unemployment tax employers who guar anteed 42 weeks' pay (at 36 hours a week, change in 1935 to 40 weeks at two-thirds of full-time) t their workers. A total of 96 employers operate guarantee plans under this law for a period c slightly more than a year, beginning in 1934 an ceasing at the end of 1935. At that time the sta utory provisions in Wisconsin were changed conform to the requirements of the Federal sta ute, applicable to all State unemployment co pensation laws, under which employers who gua anteed employment or wages were given t credits, but not complete exemption. Only additional States—California, Florida, Ida Indiana, Minnesota, and Oregon—are reported have made provision in their unemployment co pensation laws for guarantee plans, but none them implemented the clauses with the necess administrative regulations. No guarantee plans were ever adopted under these laws.

Further legislative provision affecting guarantee plans was made in 1938, when the Fair Labor Standards Act was adopted. Under section 7 (b) (2) of this act, exemption from penalty overtime provisions (up to 12 hours a day or 56 a week) was granted in cases where workers were employed—

> "on an annual basis in pursuance of an agreement with his employer, made as a result of collective bargaining by representatives of employees certified as bona fide by the National Labor Relations Board, which provides that the employee shall not be employed more than 2,080 hours during any period of 52 consecutive weeks."

To date, very few employers have used this exemption. The most substantial plan operating under the provision is that of Geo. A. Hormel & Co., which had been in operation prior to the passage of the act.

During the period following the depression of the early 1930's, greater numbers of plans were introduced yearly than in any year prior to the depression. During the years 1938–42 new plans were introduced at the rate of from 19 to 23 a year, compared with a maximum of 4 a year during the 1920's, and from 2 to 6 during the early 1930's. The latter half of the 1930's saw the introduction of a number of "basic crew" provisions in agreements in the wholesale and retail trades. Under hese contracts, specified numbers of workers, ranging from less than half to well over three-quarters of the workforce, were guaranteed full weekly wages throughout the year.

The last of the well-known plans, that of the Nunn-Bush Co., was established in 1935. This lan early in 1946 guaranteed a continuous em- loyment relation to workers with the greatest seniority, and provided that the total earnings f all workers with 2 years' service (including, ut generally exceeding, the number of workers ho had the employment relation guarantee) hould be a predetermined proportion, no less han 20 percent of the wholesale value of the ompany's product. Workers shared in this mount in proportions determined by rates which flected job differences.

By the beginning of 1946, according to the in- rmation which has been compiled by the Bu- eau, a total of 347 plans which met the definition ed in this study had been introduced. A year-by-year tabulation of the time of their initiation is shown in table 1.

TABLE 1.—*Number of guaranteed wage or employment plans in Bureau of Labor Statistics survey, by year of initiation*

Year of initiation	Number of plans
Total	[1] 347
Prior to 1900	3
1905	1
1912	1
1913	1
1914	1
1916	1
1917	1
1918	1
1919	1
1920	4
1921	3
1922	1
1923	4
1924	3
1925	2
1926	2
1927	2
1928	1
1929	4
1930	2
1931	5
1932	6
1933	6
1934	[1] 102
1935	17
1936	11
1937	10
1938	23
1939	20
1940	19
1941	21
1942	19
1943	8
1944	21
1945	9
Data not available	11

[1] Includes 96 plans initiated in 1934 under the encouragement of the tax exemption provisions of the Wisconsin unemployment compensation law.

DISCONTINUANCE OF PLANS

Of the plans known to the Bureau of Labor Statistics that had been introduced up to the beginning of 1946, 196 were still in existence at that time. The remainder, a group including all of the 96 plans introduced in 1934 under the Wisconsin unemployment compensation law and 55 others, had been discontinued before the end of 1945.

In the case of the 96 Wisconsin plans and a small number of others, discontinuance resulted from the circumstances surrounding the introduction of compulsory unemployment insurance legislation. In the case of the Wisconsin plans, amendment of the State law to conform with the requirements of the Federal Social Security Act removed the tax exemption which the companies had enjoyed under the former statute, and the employers thereafter individually elected not to come under the guaranteed account provisions of the legislation. In a few other cases, plans that had been instituted prior to the passage of compulsory unemployment compensation legislation were discontinued upon the passage of such laws because it was believed that the objective which the plans were designed to meet was met by those laws.

In the remainder of the cases, discontinuance was largely the result of special individual circumstance, in a number of cases related to the general state of business conditions at the time the plans were discontinued, but on the whole the result of problems facing the individual employer.

Two of the earliest plans abandoned were those of the American Cast Iron Pipe Co., discontinued in 1926, and the Consolidated Water Power & Paper Co., discontinued in 1929. Only incomplete information is available on the reasons for their discontinuance: The former was discontinued on the eve of a major technological change in the industry, the latter during a period of relatively full employment. The wallpaper plan—one of the earliest begun—was discontinued in 1930, after a considerable amount of dispute over the plan's administration, and in a period when depression conditions and the rise of substitute materials were seriously affecting the industry.

The plan of the United Diamond Works, under which benefits had been paid for almost a full year during the 1921–22 depression, ended in 1931, following a period of uncertainty in the industry to which international tariff problems contributed. In the same year the unemployment benefit plans of the Brown & Bailey Co. and the Cleveland garment manufacturers were discontinued; in the latter case the reason is reported to have been the long-range decline of the local market and the shift in the character of the industry. The plans of the Leeds & Northrup Co. and the Dennison Manufacturing Co. were discontinued in 1932 when their unemployment benefit reserves were exhausted. The depression years also saw the disappearance of many of the unemployment benefit plans not included in this study (those that could not meet the test of a 3-month guarantee), resulting chiefly from depletion of their individual unemployment compensation reserves.

Of the plans discontinued after the depression of the early 1930's, 15 were studied in detail by the Bureau, and information is available concerning the circumstances of their discontinuance. The effects of the depression seem to have been an important contributory cause of abandonment in only one case, where the guarantee was substantially modified to provide less than 50 percent of the earnings originally guaranteed, and the plan was finally abandoned in 1937. Four of the plans were abandoned during World War II, largely as a result of wartime business uncertainties. Four were abandoned after management had come to the conclusion that the plans were not needed, because the employer was able to provide substantially more work than the guarantee assured. All but one of these plans had been in existence for 3 years or less, and all were abandoned between the years 1939 and 1942. Three plans—two of which were introduced to avoid overtime compensation and one of which was introduced as an alternative to a wage increase—were abandoned as a result of employee dissatisfaction with the plan and union opposition. One of the remaining three plans was abandoned following the passage of unemployment compensation legislation; another was ended during World War II when management became worried about possible conflict between its obligations under the plan and its obligations to returning veterans, and when a newly organized unio showed indifference to the plan's continued existence. Finally, the plan of the Columbia Conserv Co., which had operated successfully over a perio of 25 years and through three periods of busines depression, was abandoned as the aftermath of labor dispute. Wages and union organization ha arisen as issues among the employee-owners, r sulting in a National War Labor Board dispu case and a court suit. The employee-ownersh feature of the plan was ended by court order as result of the suit, and the management of the co pany simultaneously ended the guarantee. In t s case, as in a number of other cases where pla s were discontinued, management and union rep sentatives expressed great interest in possible ture attempts at guaranteeing employment r wages.

As can be seen from table 2, guarantee pl s were discontinued from time to time during ne entire span of years over which plans have en in existence. With the exception of the year 1935, when the 96 Wisconsin plans were discontinued, there is no significant concentration. It is noticeable, too, that the discontinued group includes plans which had been in existence for varying lengths of time. Some, like the wallpaper plan and the plan of the Columbia Conserve Co., were among the oldest plans on record, while others had been in operation for only a few years when they were dropped.

TABLE 2.—*Number of discontinued guaranteed wage or employment plans in Bureau of Labor Statistics survey, by year of discontinuation and number of years of existence at time of discontinuation*

Year of discontinuation	Total number discontinued	Number of discontinued plans by number of years in existence					
		1 year	2–4 years	5–9 years	10–14 years	15–24 years	25 years and over
Total	[1] 151	[1] 107	22	13	4	3	2
Total excluding 96 plans adopted in 1934 under the Wisconsin unemployment compensation law and discontinued in 1935	55	11	22	13	4	3	2
26	1	------	1	------	------	------	------
29	1	1	------	------	------	------	------
30	1	------	------	------	------	------	1
31	3	------	1	------	2	------	------
32	2	------	------	1	1	------	------
33	1	------	------	------	1	------	------
35	[1] 97	[1] 96	------	1	------	------	------
37	2	------	------	1	------	1	------
38	3	2	------	1	------	------	------
39	3	2	1	------	------	------	------
0	6	2	2	1	------	1	------
1	5	------	4	------	------	1	------
2	6	1	3	1	------	------	1
3	8	2	3	3	------	------	------
4	5	------	4	1	------	------	------
5	7	1	3	3	------	------	------

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[1] Includes 96 plans initiated in 1934 under the encouragement of the tax mption provisions of the Wisconsin unemployment compensation law, discontinued in 1935 when the tax exemption was eliminated.

THE NET STATUS OF PLANS

As has already been shown, the net result of the ntinued inauguration of new plans and the dis- ntinuance of others was a total of 196 during early part of 1946. With the exception of the r 1935, when the 96 plans adopted under the sconsin unemployment compensation law were continued, the picture, as shown in table 3, is one of constant growth of the number of plans in existence, at an accelerated rate during the period since 1934.

TABLE 3.—*Total number of guaranteed wage or employment plans in Bureau of Labor Statistics survey that were in operation each year, 1893–1945*

Year	Number of plans in operation at the end of each year	Year	Number of plans in operation at the end of each year
1893	1	1929	35
1894–95	2	1930	36
1896–1904	3	1931	38
1905–11	4	1932	41
1912	5	1933	46
1913	6	1934	[1] 148
1914–15	7	1935	68
1916	8	1936	79
1917	9	1937	87
1918	10	1938	107
1919	11	1939	125
1920	15	1940	138
1921	18	1941	154
1922	19	1942	166
1923	23	1943	167
1924	26	1944	183
1925	28	1945	185
1926	29	(Data not available—11 plans)	196
1927	31		
1928	32		

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[1] Includes 96 plans initiated under the encouragement of the tax exemption provisions of the Wisconsin unemployment compensation law in 1934 and discontinued in 1935 when the tax exemption was eliminated.

The plans that are now in existence, as shown in table 4, have been in operation over varying periods of years. Approximately one-third have been in operation for 10 years or longer, and 11 plans have been in operation for 25 years or more.

TABLE 4.—*Number of currently operating guaranteed wage or employment plans in Bureau of Labor Statistics survey, by number of years in existence (as of January 1946)*

Number of years in existence	Number of plans still in operation	Number of years in existence	Number of plans still in operation
Total	196	10 years	9
Less than 1 year	7	11 years	17
1 year	2	12 years	6
2 years	19	13 years	6
3 years	7	14 years	5
4 years	17	15 to 19 years	8
5 years	13	20 to 24 years	8
6 years	17	25 to 29 years	4
7 years	14	30 to 34 years	4
8 years	11	35 years and over	3
9 years	8	Not available	11

THE EXTENT AND NATURE OF GUARANTEED WAGE OR EMPLOYMENT PLANS IN THE UNITED STATES

CURRENTLY OPERATING PLANS

Prevalence

In January 1946, the 196 guaranteed wage or employment plans known by the Bureau of Labor Statistics to be in operation in the United States covered a total of approximately 61,000 workers. Some of the plans were master contract arrangements, involving a number of employers and unions in the same industry and community, and others were plans which covered several plants of the same company. As a consequence, the number of establishments was, of course, considerably greater than the number of plans. There were, in all probability, additional bona fide plans that were not included in the study. Compared with the total number of establishments or wage earners in the United States, the coverage of all guaranteed wage or employment plans is small. It is estimated to be less than 1 percent of the total number of wage earners employed in nonagricultural, nongovernmental establishments. The significance of the plans lies, however, in their provisions and accomplishments, rather than in their prevalence.

The 196 plans were found in a great many industries. Almost 40 percent of them, involving 38 percent of total employment covered, were in manufacturing industries. Within the manufacturing group, the plans were most frequently found in industries which have substantial seasonal variations, and those which produce for consumer demand. The greatest numbers of plans occurred in establishments manufacturing food products—brewing, meat packing, grain and flour; in textile mills—primarily in dyeing and finishing establishments; and in apparel companies. Relatively few plans were found in heavy or basic manufacturing industries, which are subject to much wider cyclical fluctuations, but often to less marked seasonal variation (table 5).

TABLE 5.—*Number of currently operating guaranteed wage or employment plans in the Bureau of Labor Statistics survey, by industry group*

Industry group	Number of currently operating plans
Total plans	196
Manufacturing, total	75
Food and kindred products	21
Textile-mill products	15
Apparel and other finished products made from fabrics and similar materials	12
Lumber and timber basic products	1
Paper and allied products	3
Printing, publishing, and allied industries	8
Chemical and allied products	5
Leather and leather products	1
Stone, clay, and glass products	1
Iron and steel and their products	2
Nonferrous metals and their products	1
Machinery (except electrical)	2
Electrical machinery	1
Transportation equipment (except automobiles)	1
Miscellaneous manufacturing industries	1
Nonmanufacturing, total	121
Nonmetallic mining and quarrying	1
Construction—general contractors	3
Wholesale trade	23
Retail trade	56
Real estate	2
Railroads	1
Water transportation	10
Warehousing and storage	1
Services incidental to transportation	1
Communication	1
Heat, light, and power	2
Services	19
Nonprofit membership organizations	1

Outside manufacturing industry, the greatest number of plans was in the retail trade group As in the case of the manufacturing industrie which produced consumer products, the establishments in retail trade were in many instance in lines of activity that were subject to significan seasonal variation: mail order houses, clothin stores, department stores. The same was true o establishments in wholesale trade, which contained the next most numerous group.

The detailed studies of experience with guaranteed wage or employment plans in 62 case demonstrated about as wide a variety of month to-month employment variations as exists in all American industry. Within individual industries or groups of plants, the studies did not point to the existence of special situations or exclusive processes that might have led to greater employment stability or served to give competitive advantage among the companies which had guarantees in effect. An overwhelming majority of the guarantees, in fact, were introduced by firms which faced employment stabilization problems of the same kind that are faced by employers generally.

The majority of the establishments that guarnteed employment or wages were located in the ndustrial regions of the country. More than 70 ercent of the 196 were in the Middle Atlantic nd Great Lakes regions, and almost 45 percent ere in the cities of New York, Chicago, Clevend, and Philadelphia. Very few were found n the Southeast, Southwest, or West. The folwing cities had the largest numbers of plans:

Chicago, Ill	10
Cleveland, Ohio	10
Detroit, Mich	6
Milwaukee, Wis	5
New York, N. Y	61
Philadelphia, Pa	5

Plans were found in establishments of all sizes. though most of them were in small establishents. Table 6 contains a distribution of the al number of wage earners in establishments ered by the plans in 172 cases for which such ormation was available. While in several cases employment data for individual plans group ether the employment of a number of establments, as in the cases of master contracts and panies with more than one establishment un- the same plan, the table gives a fairly good ture of the size of the establishments involved. ut 55 percent of the plans were in employing s of less than 50 persons; an additional 10 per- of the plans were in employing units of 50 00 persons. Ten percent of the plans were in loying units of 1,000 persons or more.

Table 6.—*Number of currently operating guaranteed wage or employment plans in Bureau of Labor Statistics survey, by total number of wage earners*

Total number of wage earners in establishment or establishments covered by plan	Number of currently operating plans
Total	[1] 196
Less than 25	64
25 to 49	29
50 to 74	13
75 to 99	5
100 to 249	23
250 to 499	[2] 14
500 to 749	3
750 to 999	3
1,000 to 2,499	[2] 6
2,500 to 4,999	[2] 6
5,000 to 7,499	2
7,500 to 9,999	1
10,000 and over	3
Total employment not available	[3] 24

[1] A guaranteed wage or employment plan embodied in a master contract between a trade association and a union is counted as a single plan, and is classified according to the total number of wage earners in all of the covered establishments. There are 10 such cases.

[2] Includes 1 master contract plan.

[3] Includes 7 master contract plans.

In 130 of the 196 plans, unions represented the employees covered by the guarantees in general collective bargaining relations (table 7). Where one union was involved, the unions were A. F. of L. affiliates in 36 cases, C. I. O. affiliates in 64 cases, and were unaffiliated in 13 cases. In 17 cases there were 2 or more unions of different affiliation representing the workers. In a majority of the cases where unions represented the workers, the plans were subjects of collective bargaining. In a number of cases, however, the plans were introduced prior to unionization and have not since been included within the scope of collective bargaining.

Table 7.—*Number of currently operating guaranteed wage or employment plans in Bureau of Labor Statistics survey, by representation of covered workers*

Representation of covered workers	Number of currently operating plans
Total	196
Nonunion	66
Union	130
A. F. of L. affiliate	36
C. I. O. affiliate	64
Unaffiliated union	13
Two or more unions with different affiliations	17

Characteristics

The basic features of the guarantee plans may be characterized best in terms of the kinds of workers eligible for coverage and the requirements which workers must meet before they are eligible for benefits, the proportions of workers actually covered, and the amounts of wages or employment guaranteed.

In 101 of the 196 plans, as indicated in table 8, coverage under the plan was open to all or nearly all workers (in some cases to all production workers, and in others to some or all other wage earners as well, including office workers, supervisory force, salesmen, etc.). In 63 of these cases, employees automatically became eligible upon hiring or within 30 days thereafter. Service requirements ranged from 3 months to more than 5 years in all but 4 cases; in these the duration of the requirement was indefinite, depending upon the employer's judgment concerning the necessary probationary period. In a large number of cases, especially where there were union contracts, the eligibility period coincided with the probationary period provided in the contract for the attainment of permanent status or a place upon the seniority rolls.

Table 8.—*Eligibility requirements in currently operating guaranteed wage or employment plans in Bureau of Labor Statistics survey, by representation of covered workers*

Eligibility requirement	Number of currently operating plans		
	Total	Union	Non-union
Total	196	130	66
Coverage open to all employees	101	54	47
Upon hiring or after service of 30 days or less	63	37	26
Upon service of 3 months	4	2	2
Upon service of 6 months	9	4	5
Upon service of 1 year	9	5	4
Upon service of 1½ to 5 years	7	4	3
Upon service of 5 years or more	5	2	3
Upon selection by employer	4	------	4
Coverage includes only employees in "regular" jobs	35	29	6
Coverage open only to employees in specific departments or occupations	51	45	6
Upon hiring or after service of 30 days or less	36	32	4
Upon service of 3 months or more	9	7	2
Upon selection by employer	2	2	------
Employees in "regular" jobs only	3	3	------
Unknown	1	1	------
Coverage confined to key employees	9	2	7

Coverage was open only to employees in "regular" jobs in 35 of the 196 plans. The limits of this kind of coverage were in some cases established by "basic crew" contract provisions that specified the numbers of workers who were to be covered, and in other cases were established by specific elimination of "temporary," "extra," or other similar groups of workers. Limitation of the guarantee to regular workers occurred chiefly in retail and wholesale establishments, and additional length-of-service requirements were either nonexistent or brief.

In 51 cases, coverage was confined to employees in certain departments or occupations: For example, to machine printers in textile finishing and dyeing mills, to pressmen in a newspaper plant. More than two-thirds of these cases had length-of-service requirements of 30 days or less.

Coverage in nine cases was confined to key employees, usually selected upon an individual basis with an eye to the importance of the job and the service record of the individual. Plans of this variety included one which covered a small group of key production and nonproduction workers in a garment plant but excluded the bulk of the production workers, and another in an ice-cream factory which covered a small selected group of employees in a number of key skilled jobs during the dull season.

The proportions of workers covered were, of course, highest in the group of plans which permitted all employees to be eligible, and lowest in the plans restricting coverage to employees in specific departments or occupations and to key employees (table 9). Among the 101 plans where al the employees were eligible for coverage, there were 38 where every employee in the establishmen was actually covered by the guarantee; in the remainder of these plans, the minor exclusions o small groups of workers and the length of servic provisions reduced the proportions of workers actually covered, but only in a small number of case to less than 60 percent. Among the 60 plans r stricting coverage to specific departments or occupations or to key employees, generally less than 3 percent of the total number of workers in the e tablishment were actually covered by the guara-tee. A tabulation of proportions of workers covered showing union and nonunion establishments separately indicates a great range in both groups, but with more restricted coverage in the case of the plans in unionized establishments (table 10). This reflects to some extent the influence of the "basic crew" contracts, and the fact that the plans were limited to those parts of the establishments over which the unions had jurisdiction.

TABLE 9.—*Proportion of wage earners covered in currently operating guaranteed wage or employment plans in Bureau of Labor Statistics survey, by eligibility provisions*

Percentage of total wage earners covered by guarantee	Number of currently operating plans	Number of currently operating plans with eligibility open to—			
		All employees	Employees in regular jobs	Employees in specific departments or occupations	Key employees
Total	196	101	35	51	9
Jnder 5 percent	12	-------	-------	12	-------
and under 10 percent	13	-------	-------	12	1
0 and under 20 percent	7	-------	-------	5	2
0 and under 30 percent	12	3	1	7	1
0 and under 40 percent	10	5	-------	3	2
0 and under 50 percent	10	2	4	3	1
0 and under 60 percent	11	4	2	4	1
0 and under 70 percent	17	13	3	1	-------
and under 80 percent	15	11	4	-------	-------
and under 90 percent	14	12	2	-------	-------
and under 100 percent	9	8	1	-------	-------
0 percent	38	38	-------	-------	-------
ata not available	28	5	18	4	1

TABLE 10.—*Proportion of wage earners covered in currently operating guaranteed wage or employment plans in Bureau of Labor Statistics survey, by representation of covered workers*

Percentage of total wage earners covered by guarantee	Number of currently operating plans		
	Total	Union	Nonunion
Total	196	130	66
Under 5 percent	12	11	1
5 and under 10 percent	13	12	1
10 and under 20 percent	7	5	2
20 and under 30 percent	12	10	2
30 and under 40 percent	10	5	5
40 and under 50 percent	10	7	3
50 and under 60 percent	11	7	4
60 and under 70 percent	17	14	3
70 and under 80 percent	15	10	5
80 and under 90 percent	14	9	5
90 and under 100 percent	9	5	4
100 percent	38	17	21
Data not available	28	18	10

The proportion of coverage was highest in plans in small employing units, as shown in table 11. Thus, 34 of the 38 plans in which 100 percent coverage was reported were in establishments employing less than 50 workers. There were, however, a small number of plans covering 70 percent or more of the total workforce in establishments or employing units with several hundred or more than one thousand workers. In absolute figures respecting numbers of covered wage earners, 149 of the 188 plans for which information was available covered less than 100 wage earners, 18 covered from 100 to 500 wage earners, 7 covered from 500 to 1,000, and 14, or 7 percent of the total number, covered 1,000 workers or more (table 12).

ABLE 11.—*Proportion of wage earners covered in currently operating guaranteed wage or employment plans included in Bureau of Labor Statistics survey, by total number of wage earners*

Percentage of total wage earners covered by guarantee	Number of currently operating plans by tota lnumber of wage earners										
	Total	Less than 25	25–49	50–74	75–99	100–249	250–499	500–749	750–999	1,000 and over	Total employment not available
Total	196	64	29	13	5	23	14	3	3	18	24
nder 5 percent	12	------	1	------	------	4	6	1	------	------	------
nd under 10 percent	13	1	------	------	2	3	1	1	1	4	------
and under 20 percent	7	1	1	1	------	2	------	------	------	2	------
and under 30 percent	12	5	2	3	------	------	1	------	------	1	------
and under 40 percent	10	1	2	1	------	5	------	------	------	1	------
and under 50 percent	10	5	------	------	------	1	1	------	------	3	------
and under 60 percent	11	4	1	3	------	1	1	------	1	------	------
and under 70 percent	17	7	3	2	1	------	2	------	1	2	------
and under 80 percent	15	9	1	------	------	2	------	------	------	3	------
and under 90 percent	14	4	4	1	1	2	1	------	------	1	------
and under 100 percent	9	2	4	1	------	1	------	------	------	1	------
percent	38	25	9	1	1	1	------	------	------	1	------
ta not available	28	------	1	------	------	1	1	1	------	------	24

TABLE 12.—*Distribution of number of wage earners covered by currently operating guaranteed wage or employment plans in Bureau of Labor Statistics survey*

Number of wage earners covered	Number of currently operating plans
Total	[1] 196
Less than 5	33
5 to 9	32
10 to 24	41
25 to 49	30
50 to 99	13
100 to 499	[2] 18
500 to 999	[2] 7
1,000 to 4,999	[3] 13
5,000 and over	1
Covered employment not available	[2] 8

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[1] A guaranteed wage or employment plan embodied in a master contract between a trade association and a union is counted as a single plan, and is classified according to the total number of wage earners in all of the covered establishments. There are 10 such cases.

[2] Includes 2 master contract plans.

[3] Includes 4 master contract plans.

For purposes of comparative analysis of the duration of the guarantees, the Bureau has classified the plans in accordance with the amount of wages or employment guaranteed or advanced, in terms of weeks of full-time or part-time hours or pay. In the few cases in which the duration of the guarantee was adjusted according to a sliding scale on the basis of such factors as wage rate or length of service, the maximum duration of the guarantee was used for the tabulation. The number of weeks of employment guaranteed was chosen as the means of expressing the common denominator because guarantees in terms of number of weeks of employment per year occurred most frequently. The actual wording of the guarantees reflected a wide range of plan and contract terminology. The variety of language used is illustrated by a listing (on p. 13) of extracts from the texts of plans which guarantee substantially the same employment—a full year, at full-time wages.

Almost two-thirds of the plans (128 out of 196) guaranteed employment for a full year at full-time hours or pay (table 13). Most of these arrangements were guarantees of 52 full weeks of employment or pay in the absence of employment; very few were expressed in terms of an annual wage. Eighty-five percent of the plans (166) guaranteed full-time pay for 40 weeks or more. The total of 61,000 workers covered by the 196 plans was distributed in approximately the same manner as the number of plans (table 14).

TABLE 13.—*Duration of guarantee in currently operating guaranteed wage or employment plans covered by Bureau of Labor Statistics survey, by representation of covered workers*

Duration of guarantee	Number of currently operating plans		
	Total	Union	Non-union
Total	196	130	66
Full year (52 weeks, 2,080 hours, etc.)	140	80	60
At full-time hours or pay	128	69	59
At less than full-time hours or pay	12	11	1
50 weeks' full-time hours or pay	9	9	------
48 weeks' full-time hours or pay	7	5	2
47 weeks' full-time hours or pay	4	4	------
46 weeks' full-time hours or pay	8	8	------
40–45 weeks' full-time hours or pay	10	9	1
38–39 weeks' full-time hours or pay	11	10	1
13–37 weeks	7	5	2
At full-time hours or pay	3	2	1
At less than full-time hours or pay	4	3	1

TABLE 14.—*Duration of guarantee in currently operating guaranteed wage or employment plans covered by Bureau of Labor Statistics survey, by number of workers covered by guarantee*

Duration of guarantee	Total number of workers covered in currently operating plans
Total	[1] 61, 229
Full year (52 weeks, 2, 080 hours, etc.)	[2] 51, 250
At full-time hours or pay	[2] 41, 529
At less than full-time hours or pay	9, 721
50 weeks' full-time hours or pay	1, 465
48 weeks' full-time hours or pay	[3] 4, 176
47 weeks' full-time hours or pay	41
46 weeks' full-time hours or pay	2
40 to 45 weeks' full-time hours or pay	74
38 to 39 weeks' full-time hours or pay	[4] 13
13 to 37 weeks	3, 39
At full-time hours or pay	1, 20
At less than full-time hours or pay	2, 18

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[1] Data not available for 8 plans.

[2] Data not available for 5 plans.

[3] Data not available for 2 plans.

[4] Data not available for 1 plan.

Most of the guarantees were expressed in term of employment rather than in terms of wage The detailed studies made by the Bureau in 6 cases indicated that this manner of expressio arose largely from the employer's confidence th he could provide the stated amount of work, an where the worker failed to make himself availab for work, no pay was generally given.

Thus far, it has appeared that a major propo tion of the guarantees provided full-time pay f an entire year, and that a large group provid coverage for all employees upon hiring or after a relatively short period of time. A cross-tabulation of these two characteristics provides a method of determining the extent to which full-year guarantees and guarantees to all employees after a short period of time coincided. Table 15 shows the multiplicity of combinations of guarantee and eligibility provisions that were embodied in the plans. For example, of the group of 128 plans which guaranteed full-time employment for an entire year, 39 afforded coverage to all employees upon hiring or within 30 days thereafter. The remainder had additional length-of-service requirements, or restricted coverage to employees in "regular" jobs, to employees in specific departments or occupations, or to key employees.

TABLE 15.—*Duration of guarantee in currently operating guaranteed wage or employment plans covered by Bureau of Labor Statistics survey, by eligibility requirements*

Duration of guarantee	Number of currently operating plans																
	Grand total	Coverage open to all employees								Coverage includes only employees in regular jobs	Coverage open only to employees in specific departments or occupations						Coverage confined to key employees
		Total	Upon hiring or after 30 days or less	Upon service of 3 months	Upon service of 6 months	Upon service of 1 year	Upon service of 1½ to 5 years	Upon service of 5 years or more	Upon selection by employer		Total	Upon hiring or after 30 days or less	Upon service of 3 months or more	Upon selection by employer	Employees in regular jobs only	Unknown	
Total	196	101	63	4	9	9	7	5	4	35	51	36	9	2	3	1	9
Full year (52 weeks, 2,080 hours, etc.)	140	70	40	4	6	8	5	3	4	32	29	19	6	1	3	------	9
At full-time hours or pay	128	67	39	4	6	7	4	3	4	27	25	16	5	1	3	------	9
At less than full-time hours or pay	12	3	1	------	------	1	1	------	------	5	4	3	1	------	------	------	------
0 weeks' full-time hours or pay	9	4	3	------	------	1	------	------	------	2	3	1	1	------	------	1	------
8 weeks' full-time hours or pay	7	4	1	------	1	------	2	------	------	------	3	3	------	------	------	------	------
7 weeks' full-time hours or pay	4	4	4	------	------	------	------	------	------	------	------	------	------	------	------	------	------
6 weeks' full-time hours or pay	8	8	8	------	------	------	------	------	------	------	------	------	------	------	------	------	------
0–45 weeks' full-time hours or pay	10	4	3	------	------	------	------	1	------	1	5	4	1	------	------	------	------
8–39 weeks' full-time hours or pay	11	4	4	------	------	------	------	------	------	------	7	7	------	------	------	------	------
3–37 weeks	7	3	------	------	2	------	------	1	------	------	4	2	1	1	------	------	------
At full-time hours or pay	3	2	------	------	1	------	------	1	------	------	1	1	------	------	------	------	------
At less than full-time hours or pay	4	1	------	------	1	------	------	------	------	------	3	1	1	1	------	------	------

ISTING OF GUARANTEED WAGE OR EMPLOYMENT PLAN CLAUSES, ILLUSTRATING THE VARIETY OF METHODS EMPLOYED TO EXPRESS GUARANTEES OF FULL-TIME ANNUAL EMPLOYMENT

1. The employer agrees to continuously employ__________ union persons * * *. These shall constitute the basic staff and shall not be subject to lay-offs at any time.
2. The tenure of employment of permanent employees shall be 52 weeks in each year without any lay-off whatsoever.
3. For each full year of service after the first year, 2 months of indemnity in case of complete lack-of-work lay-off, or 346⅔ hours of straight time pay in case of partial lack-of-work lay-off, will be added to the indemnity or guarantee until, after 6 full years of service, a maximum of 1 year or 2,080 hours' indemnity or guarantee is provided.
4. All employees shall receive 12 months of uninterrupted employment.
5. All steady employees who come under the scope of this agreement shall be guaranteed steady employment throughout the life of this contract.
6. The basic gang employed by the employer hereunder shall consist of 3 mechanics, 2 helpers and 1 car washer. Each of such men shall be employed by the employer for 2,000 hours during the period of 1 year covered by this agreement * * *.
7. All skilled employees covered by this agreement who have passed their probationary period as hereinbefore set forth, shall be paid on the basis of 52 weeks per year.
8. * * * each of the said members of the said association in the employ of the company * * * shall * * * work not more than 2,000 hours during 50 calendar weeks of the period covered by this contract. It is the intent of the parties hereto that the members of the association shall have 2 weeks' vacation with full pay.
9. Each employee * * * will be offered 2,000 hours of work during the calendar year. In addition to offering each employee 2,000 hours of work, each

employee will be given paid time off at times to be designated by the employer to make this agreement conform to the 40-hour provision in the regular contract.

10. The employer guarantees to the 5 maintenance men named in the contract between the parties, dated November 1, 1941, not less than 48 hours of work, or the monetary equivalent thereof, in every week during the 52-week period which is the term of this contract.
11. It is further agreed that regular employees be employed 52 weeks per year.
12. Whenever the term "steady employee" or "steady employees" shall be used in this agreement, it shall refer to such employees of the employer who are guaranteed under this agreement 12 months work in each year during the period of the contract.
13. A salesman may be discharged upon 2 weeks' written notice by the employer to the union * * * (slack season, however, shall not be deemed a cause or a reason for the discharge of a regular salesman).
14. Said employer agrees to employ said employee as ________ for a term of 1 year from the date hereof, at a weekly salary of __________.

Further examination of the group of cases which provided the most substantial guarantees to the broadest groups of workers shows that they were for the most part cases that involved small or medium-sized groups of workers (table 16), and that more than half of them occurred in wholesale and retail trade (table 17). The proportion of unionized establishments was substantially less in this group than in the entire group of 196 plans.

TABLE 16.—*Distribution of 56 currently operating plans guaranteeing full-time employment or wages for 52 weeks a year to all workers upon hiring or upon service of 1 year or less, by number of covered workers*

Number of wage earners covered	Number of plans	
	Upon hiring or after 30 days or less	Upon service of 1 year or less
Total	39	56
Less than 5	5	5
5 to 9	9	12
10 to 24	9	10
25 to 49	10	15
50 to 99	1	3
100 to 499	3	5
500 to 999	--------	--------
1,000 to 4,999	1	3
5,000 and over	--------	1
Covered employment not available	1	2

TABLE 17.—*Distribution of 56 currently operating plans guaranteeing full-time employment or wages for 52 weeks a year to all workers upon hiring or upon service of one year or less, by industry*

Industry group	Number of plans	
	Upon hiring or after 30 days, or less	Upon service of 1 year, or less
Total	39	56
Manufacturing, total	7	14
Food and kindred products	3	7
Textile-mill products	--------	1
Apparel and other finished products made from fabrics and similar materials	--------	1
Printing, publishing, and allied industries	3	4
Chemicals and allied products	1	1
Nonmanufacturing, total	32	42
Construction—general contractors	2	2
Wholesale trade	9	13
Retail trade	14	18
Real estate	1	2
Communication	1	1
Heat, light, and power	--------	1
Services	5	5

DISCONTINUED PLANS

A total of 151 plans are known to have operated in the United States and to have been discontinued prior to 1946, including the 96 which were in existence for slightly more than 1 year under the provisions of the Wisconsin unemployment compensation law during 1934 and 1935. The discontinued plans involved total employment of nearl 180,000, of which approximately 3 percent involved the 96 Wisconsin plans and more than 8 percent the plan of 1 large manufacturing concern The reasons for their discontinuance have alread been discussed in an earlier section.

The plans that have been discontinued exhibi no characteristics essentially different from thos of the plans which are still operating. Information concerning the number of wage earners covered under the plans (table 18), the coverag provisions and eligibility requirements of th plans (table 19), and the duration of the guarantees provided (table 20), show the same gener picture that has already been presented with r spect to the plans that are still in operation. As far as industry distribution is concerned, the discontinued plans show a substantial scattering among virtually all of the same industries in which guaranteed wage or employment plans continue to exist (table 21). Aside from the 96 Wisconsin plans, it appears that plans in retail and wholesale trade were discontinued to a lesser extent than in other industries.

TABLE 18.—*Discontinued guaranteed wage or employment plans covered in Bureau of Labor Statistics survey, by number of covered workers*

Number of wage earners covered	Number of discontinued plans
Total	[1] 151
Total, excluding 96 plans which operated under Wisconsin unemployment compensation law, 1934–35	55
ess than 5	11
to 9	2
0 to 24	6
5 to 49	6
0 to 99	6
00 to 499	13
00 to 999	3
000 to 4,999	2
000 and over	2
overed employment not available	[1] 100

[1] Includes 96 Wisconsin plans for which data are not available.

ABLE 19.—*Discontinued guaranteed wage or employment plans covered in Bureau of Labor Statistics survey, by eligibility requirements*

Eligibility requirements	Number of discontinued plans
Total	[1] 151
Total, excluding 96 plans that operated under the Wisconsin unemployment compensation law, 1934–35	55
verage open to all employees	36
Upon hiring or after service of 30 days or less	16
Upon service of 3 months	2
Upon service of 6 months	5
Upon service of 1 year	8
Upon service of 1½ to 5 years	3
Upon service of 5 years or more	2
Upon selection by employer	–
verage includes only employees in "regular" obs	3
verage open only to employees in specific epartments or occupations	12
Upon hiring or after service of 30 days or less	11
Upon service of 3 months or more	1
erage confined to key employees	4

[1] ncludes the 96 Wisconsin plans, which are not shown in the body of the .

TABLE 20.—*Discontinued guaranteed wage or employment plans covered in Bureau of Labor Statistics survey, by duration of guarantee*

Duration of guarantee	Number of discontinued plans
Total	[1] 151
Total, excluding 96 plans that operated under the Wisconsin unemployment compensation law, 1934–35	55
Full year (52 weeks, 2,080 hours, etc.)	31
At full-time hours or pay	23
At less than full-time hours or pay	8
50 weeks' full-time hours or pay	2
48 weeks' full-time hours or pay	3
47 weeks' full-time hours or pay	–
46 weeks' full-time hours or pay	–
40 to 45 weeks	[1] 103
At full-time hours or pay	[1] 102
At less than full-time hours or pay	1
38 to 39 weeks' full-time hours or pay	3
13 to 37 weeks	9
At full-time hours or pay	2
At less than full-time hours or pay	7

[1] Includes 96 Wisconsin plans operating from 1934 to 1935 under State unemployment compensation law which set a minimum standard of 42 weeks' guarantee (at 36 hours per week in 1934 and two-thirds of full-time hours in 1935).

TABLE 21.—*Discontinued guaranteed wage or employment plans in the Bureau of Labor Statistics survey, by industry group*

Industry group	Number of discontinued plans
Total	[1] 151
Total, excluding 96 plans that operated under Wisconsin State unemployment compensation law, 1934–35	55
Manufacturing, total	44
Food and kindred products	12
Textile-mill products	3
Apparel and other finished products made from fabrics and similar materials	4
Furniture and finished lumber products	1
Paper and allied products	6
Chemical and allied products	3
Rubber products	1
Stone, clay, and glass products	2
Iron and steel and their products	1
Nonferrous metals and their products	2
Machinery (except electrical)	2
Electrical machinery	3
Automobiles and automobile equipment	1
Miscellaneous manufacturing industries	3

[1] Total includes 96 plans in Wisconsin for which industry data are available only on the basis of broad industry groupings, and by establishments, rather than plans, as follows:

Industry group:	*Number of establishments*
Total	176
Manufacturing	21
Transportation, communication, and public utilities	37
Wholesale and retail trade	57
Finance, insurance, and real estate	25
Miscellaneous services	23
Educational, religious, medical, etc., services	12
Municipal	1

Table 21.—*Discontinued guaranteed wage or employment plans in the Bureau of Labor Statistics survey, by industry group*—Continued

Industry group	Number of discontinued plans
Nonmanufacturing, total	11
Bituminous and other soft-coal mining	1
Nonmetallic mining and quarrying	1
Construction—special trade contractors (subcontractors)	1
Wholesale trade	1
Retail trade	4
Highway freight transportation	1
Water transportation	1
Heat, light and power	1

EXPERIENCES WITH GOVERNMENT LEGISLATION

Reference has already been made to the 96 plans which operated for approximately 1½ years under the Wisconsin Unemployment Act of 1932, and the fact that no plans at all have come into existence under the guaranteed-account provisions of the Federal Social Security Act of 1935. The provisions of the Fair Labor Standards Act relating to guaranteed wage or employment plans in section 7 (b) (2) have been mentioned, and the Bureau's study has included a specific exploration of the experience with this law.

Twenty companies reported the operation of guaranteed wage or employment plans (eight of which are still in operation, the remainder having been discontinued, largely during the war years) under section 7 (b) (2) of the Fair Labor Standards Act.[2] The number of plans that have fully met the requirements of the law is unknown; none has been the subject of final court determination. In some of the 20 cases, however, there was some question whether the full requirements of the law or regulations had actually been met, (a) because of apparent failure to meet the requirement that the union representing the employees be certified as bona fide by the National Labor Relations Board, (b) because of contract provisions that may not have met the full requirements of the law (a matter which could not be finally determined because the plans had not been officially commented upon by the Wage and Hour and Public Contracts Divisions or ruled upon by the courts), or (c) because of failure (in five cases) to file contracts as required by regulation.

Eight of the companies which took advantage of the provisions of section 7 (b) (2) were included in the Bureau's detailed study of 62 cases. In one case the inducement of the overtime exemption was reported to have been responsible for initiation of the plan, which was sponsored by management. In two, the overtime exemption was reported to have been important in determining management's acceptance of union proposals for guarantee plans. In another, management's desire for overtime exemption and labor's desire for security were reported as equally important motives. Ir the remaining 4 cases, guarantee plans were al ready in effect or about to be put into effect ir October 1938, the effective date of the Fair Labo Standards Act, and were modified to conform t its provisions.

Of the eight guarantees studied, five are still i operation (in only four cases under 7 (b) (2), how ever). One of the former 7 (b) (2) plans wa abandoned because of employee dissatisfaction fo lowing a drop in annual earnings during the years after the plan's inauguration. The earr ings' decline had resulted from operation of th annual hours ceiling, some employees having be laid off as early as the first week in Novembe The second was abandoned because of the dif culty of adhering to the annual hours limit und wartime conditions. The third was abandon because of the general uncertainty of operati any guarantee under wartime conditions. In t latter two cases, some sentiment was reported f eventual reinstatement of a guarantee, althou in both cases union representatives were lukewar about the possibility of the plans again taking t shape of 7 (b) (2) arrangements because of t elimination of premium overtime pay and t absolute ceiling on annual hours of work. In additional case, where a guarantee is still in op ation, 7 (b) (2) provisions were eliminated 1942 because of longer wartime working hours

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[2] Employers who had filed contracts with the Wage and Hour and Public Contracts Divisions under the provisions of sec. 7 (b) (2) were included in the Bureau's canvass; the Administrator's regulations under the Fair Labor Standards Act require that contracts under sec. 7 (b) (2) be filed with the Wage and Hour and Public Contracts Divisions.

Five of the twenty firms which reported operation under sec. 7 (b) (2), however, were not included in the list of companies that had filed with the Wage and Hour and Public Contracts Divisions.

The best-known of the guarantee plans which has continued to operate under section 7 (b) (2), and the one which covered more wage-earners than any other 7 (b) (2) plan, has been that of Geo. A. Hormel & Co., whose plan antedated the Fair Labor Standards Act. At the congressional hearings on that act, representatives of the firm appeared, to urge the inclusion of a provision which would enable it to preserve its established guarantee; section 7 (b) (2) was framed to allow the continuation of and to encourage arrangements of this kind.

Six of the eight firms which operated under section 7 (b) (2) reported some difficulty during their experience with the plan in balancing man-hours so that the annual limitation stipulated in the law vould not be exceeded. In two of the cases it was ıecessary to lay off employees before the end of he year.

One-third of the 54 employers (of the entire roup of 62 studied) did not invoke the pro-isions of 7 (b) (2) in connection with their uarantees because they were unable to meet re-uirements of the section (either the guarantee rovided more or less employment than the stipu-ated 2,080 hours, or no bargaining unit existed n the plant) or because by the nature of its busi-ess the firm was not subject to the Fair Labor tandards Act. Other reasons for failure to take dvantage of the provisions of 7 (b) (2) reported ess frequently were union opposition to elimination of premium overtime payments and the impossibility of controlling employees' annual hours to conform to the 2,080-hour limitation. A large proportion of the employers who did not invoke section 7 (b) (2) were not acquainted with its provisions.[3]

Chiefly because of unfamiliarity with its provisions, very few of the employers or union officials interviewed had suggestions to make for improvement in the provisions or administrative interpretations of section 7 (b) (2). Three employers suggested the removal of the 2,080-hour ceiling on hours, and the substitution of an annual overtime penalty provision for hours beyond this point. Four suggested that the provisions of 7 (b) (2) be made applicable to nonunion as well as to union employees. It was also suggested that the securing of interpretations or rulings on the legality of guaranteed wage proposals from the Wage and Hour and Public Contracts Divisions be facilitated and that such action be taken before contracts were signed or went into effect. Two employers and one union official suggested that in addition to an annual guarantee, the section provide for a guarantee of minimum hours per week. In general, union officials were reluctant to consider giving up premium overtime rates for a guaranteed wage or employment plan.

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[3] No special reasons for not utilizing 7 (b) (2) were reported by the employers who had filed contracts with the Wage and Hour and Public Contracts Divisions but had not, in fact, operated under guaranteed wage or employment plans.

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ECONOMIC ANALYSIS OF GUARANTEED WAGES

Bulletin No. 907

A reprint of Appendix F from Guaranteed Wages: Report to the President by the Advisory Board, Murray W. Latimer, Research Director

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PREFACE

Upon the initiative of the Advisory Committee of the Office of War Mobilization and Reconversion in the study of guaranteed wage plans, the Bureau of Labor Statistics commissioned Professors Alvin H. Hansen and Paul A. Samuelson, of Harvard University, to prepare an economic analysis of guaranteed wages. This report was designed to supplement the description of guaranteed wage plans (Appendix C of the OWMR report and also reprinted separately as a Bureau bulletin), prepared by the Bureau for the Office of War Mobilization and Reconversion, and the exploration of the practical possibilities and problems in the extension of guaranteed wages, prepared by the Guaranteed Wage Study staff of the Office of War Mobilization and Reconversion. It appears in the Final Report of the Advisory Board of the Office of War Mobilization and Reconversion as Appendix F.

The present report is an economic analysis of the potential effects of guaranteed wage plans on the economy and the relation of guaranteed wages, if widely adopted, to economic security, business cycles, and the pattern of resource uses.

In accordance with arrangements described above, the Bureau of Labor Statistics also commissioned Professors J. M. Clark, of Columbia University, and Edward S. Mason and Sumner H. Slichter, of Harvard University, to comment on the analysis by Professors Hansen and Samuelson. These comments are included in the report.

The views expressed in all cases are those of the authors.

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APPENDIX F—ECONOMIC ANALYSIS OF GUARANTEED WAGES

I. INTRODUCTION

World War II brought full employment to the American people. The coming of peace holds forth the promise of a high level of job opportunities and production demand for some time to come. But no one can today forget how in the dozen years before Pearl Harbor the American economy was plagued with widespread unemployment and idle machine capacity—with an attendant loss of money income to all classes of society, and a reduction in human living standards so calamitous as to threaten the foundations of our democratic way of life. It is now abundantly clear that involuntary idleness cost the American people the equivalent of some $300,000,000,000 of real income in the decade prior to the war. The tragedy, suffering, and frustration of the depressed 1930's will not, and need not, be permitted to recur.

It is not too much to say, therefore, that stability at high levels of employment and production will continue to be the number one domestic economic goal of all the community—business, abor, agriculture, and the Government.

Paradoxically, the United States, one of the youngest and most vigorous of all advanced na-ional economies, seems throughout much of its recorded history to have experienced among the highest rates of unemployment of all the nations of the world. In the great depression following 929 our percentage of unemployment exceeded hat of all other nations, not even being surpassed y the German Weimar Republic. In the recov-ry years just preceding World War II we barely regained the 1929 level of real output, having wasted in unemployment a decade of potential mprovements in our standard of living.

Even before World War I, the percentage range f unemployment in this country seems to have run bout double that of a country like Britain. In dition to having greater amplitude of cyclical uctuations (and somewhat more frequent business cles), the American economy has also been characterized by far greater seasonal swings. Besides, there is some evidence that the range of cyclical variation has been getting worse rather than better in the course of recent decades.

No single line of attack can be relied upon in the battle against depression. In addition to a full employment program, with its many-sided and continuing policies, the Government must be prepared with its social security and welfare measures to ameliorate the human burdens of unemployment. Nor can business, agriculture and labor stand by, passively relegating to the public authorities all responsibility and action designed to promote over-all stability in jobs and production.

One device aimed at mitigating the instability of production and pay rolls is the policy of guaranteed wages. It is the purpose of this report to give an economic analysis of proposals which have been put forward under this general heading.

BRIEF HISTORY OF GUARANTEED WAGE PROPOSALS

The programs initiated by private enterprise to moderate irregularities in production and employment actually antedate by well over a quarter of a century the explicit acceptance by Government (in the Employment Act of 1946) of its responsibility to combat depressions. Particularly after the sharp 1921 post-World War I recession in pay rolls and production, various forward-looking corporations began to institute voluntary wage guarantee plans of one sort or another. Others, without explicitly guaranteeing wages or employment, made strong efforts to smooth out the pattern of their operations so as to provide more continuous annual employment.

Some of these plans may have involved overambitious altruism. Others may have represented ill-conceived paternalism, covertly directed against the organization of unions and the development of collective bargaining. In any case, most of these schemes were short-lived, many foundering on the rock of the great post-1929 depression. Does this mean that they were failures? Not necessarily. In an era when governmental unemployment insurance had not yet been enacted, these plans often aimed at softening the burden of unemployment for at least a limited time. They served as a first wall of defense against depression; the fact that these bulwarks were breached does not mean that they were not of considerable value. Also, in all fairness it should be said that the enactment of governmentally-provided unemployment compensation reduced the pressing need for the continuation of some of the plans.

While the great depression of the early 1930's spelled the end of many of the earlier guaranteed wage plans, it at the same time emphasized in the minds of everyone the great need for job security. And during the recovery years of the last decade, an increasing number of additional companies initiated new guaranteed wage plans.

Organized labor—in part stimulated by the late Franklin D. Roosevelt—begin to develop an interest in wage guarantees during the years just prior to World War II. At the present time, many guaranteed wage programs are embodied in management-labor collective bargaining contracts. Many unions in industries not covered by such contracts have indicated an intention to explore the possibilities of this device.

ORIGIN OF PRESENT STUDY

In 1944, at the peak of the war effort, several labor unions presented a request for a wage guarantee to the War Labor Board. The War Labor Board ruled against the establishment at that time of so important a new precedent in American labor relations. On the occasion of their refusal to grant the United Steelworkers' request, the board members indicated their interest in the proposal, and recommended that the whole problem be given careful study. Early in 1945, President Roosevelt requested that the Advisory Board of the Office of War Mobilization and Reconversion make a study of guaranteed wage plans as a means of regularizing production and stabilizing employment. In making its investigation into the whole problem of guaranteed wages, the OWMR proposed:

1. Examination of specific experience with guaranteed wage plans.
2. Analysis of methods and possibilities of regularizing production and stabilizing employment.
3. Inquiry on cost of various types of wage guaranties.
4. Analysis of economic effect of guaranteed wages.
5. Examination of relation of guaranteed wage plans to other economic measures also intended to stabilize or increase the national income.

In connection primarily with the last two of these points the authors of this report have been asked to make a general theoretical analysis of the economics of guaranteed wages and its relations to other policies. In doing so, we have not considered it fruitful to attempt a review of the voluminous literature on the subject, nor to present a well-rounded factual and quantitative picture of the status and prospects of guaranteed wages. This we can best leave to others. Early in our investigations it became clear that the greatest service we might hope to render lay in bringing under analysis and focusing attention on certain relatively neglected—but crucial—aspects of the problem.

Perhaps most important of these is the need for a critical examination of the repercussions of guaranteed wages upon the level of aggregate demand and upon the business cycle. Hardly less important is an examination of the economic principles and patterns of pricing which society needs to keep in view in order to achieve the most efficient use of our human and capital resources, the reduction of wastes of unstable production, and the equitable distribution of the burdens of unavoidable idleness. These two motifs—business cycle and aggregate demand aspects of guarantee wages, and efficient, equitable use of our nationa resources—run through all our analysis, not onl in their relationships to each other, but als against the background of other public and privat economic policies.

We have not considered it our primary responsibility to spell out in any detail a specific progra of action. We have been primarily concerned wit general economic analysis. In chapter VI we d put forward certain recommendations, which w believe represent policies which are economicall sound in the light of our analysis. Needless to sa these recommendations—and indeed all of o judgments and findings—are put forward only our own opinions as individual citizens and economists. They do not necessarily represent the opinions of the Advisory Board of the Office of War Mobilization and Reconversion, or the Washington Research Staff under the direction of Murray W. Latimer. In part our recommendations overlap or are similar to those in Mr. Latimer's final report.[1] It is a pleasure to acknowledge here the stimulus of discussion with him and his staff, even though we were not always able to agree fully upon final formulation of principle and emphasis.

DESCRIPTION OF GUARANTEED WAGE PLANS

Here at the beginning it is well to ask exactly vhat is meant by "guaranteed wages." No simple nswer can be given because of the extreme variety f plans that one company or another has intro- luced under this general heading in the last quar- er of a century. At the one extreme, we observe vhat is little more than a pious declaration of the ompany's intention to make efforts to stabilize its roduction so as to provide steady jobs and in- omes. At the other extreme, a company may have gned a legal collective bargaining contract with union agreeing to guarantee 45 or even 52 weeks work per year to almost all of its employees.

Even the three best-known plans associated in e public's mind with the guaranteed wage—those the Hormel, the Nunn-Bush, and the Procter Gamble companies—differ materially in form d substance. Because there are so many descrip- ns of the various guaranteed wage plans avail- le, we do not propose to discuss here (except very efly) the different features involved in such ns, preferring to refer the reader interested in ails and in particular concerns' plans to the uminous literature on the subject.[2]

3y a guaranteed wage plan, we shall not neces- ily mean an annual wage plan. Conceivably, the employer's commitment to maintain workers' incomes might be for longer durations than a year—for example, over the whole of the business cycle. More often guaranteed wage plans are set up with a calendar year as the fundamental unit of time. But not infrequently, a firm may wish to guarantee employment for only 6 months or only for the whole of a season. Our analysis will apply also to such plans, but we exclude from our consideration programs concerned with insuring only a full week's work or any period less than, say, a quarter of a year.

The form of the guarantee may vary considerably: Some firms may insure a certain number of weeks' employment at unspecified job assignments and wages; or more often, there may be a guarantee of a certain number of specified pay checks—even if the concern should find that it has no duties for the workers to perform. Usually, if a firm has bound itself to continue a worker's income, it will cast about for some work for him to do, even if it is of a low-productivity character or of a currently unprofitable and unremunerative sort. But where even this is lacking, the corporation agrees to maintain the incomes of the workers who are included under the guarantee. The guaranteed wage becomes in this case the precise equivalent of 100-percent unemployment compensation, maintained for the duration of the guarantee.

Often the plan provides for the maintenance of income payments from week to week at a steadier rate than hours of employment, the overtime of some periods being balanced against the hours of underemployment through other weeks of the year.[3] Under the Fair Labor Standards Act, any weekly hours of work in excess of 40 are usually to be paid for at a one-and-a-half overtime rate; but that act did provide for a partial relaxation of such penalty overtime rates in cases where a collective bargaining contract is in force guaranteeing certain minimum hours of total yearly employment.

Not infrequently, guaranteed wage plans are associated with various wage-incentive or profit-sharing programs. In addition to the steadily maintained periodic wage payments, there may

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Guaranteed Wages, Report to the Advisory Board, Office of Mobilization and Reconversion, January 31, 1947. See pp. 1 of this volume.

he most comprehensive study prepared to date is the Latimer t. The National Industrial Conference Board, the National ciation of Manufacturers, and Brookings Institution either issued or will shortly issue studies on various aspects of guarantees; and Joseph Snider's book, The Guarantee of and Wages (Andover, 1947), is just out. See also the bib- phy prepared by the U. S. Department of Labor, April 1945, ed "The Guaranteed Annual Wage and Other Proposals for ying the Worker's Income: Selected References," and the ar book by J. Chernick and G. Hellickson, Guaranteed An- Wages (University of Minnesota Press, 1945).

[3] Some companies will lend their workers money in periods of underemployment, payable in subsequent periods of brisk employment. Such wage-advance schemes are related to, but distinct from, the guaranteed-wage plans discussed in this report.

also be supplementary bonus or wage payments at longer intervals of time. The total remuneration of the workers may be geared to their productivity, to corporate profitability, or to the value of production and sales.

So much for the form of the plan, whether it (*a*) guarantees employment, or (*b*) guarantees wage income, or (*c*) involves profit-sharing and various "flexible-wage" features. Equally important are the other various features and limitations of the guarantee, such as the following:

(1) Limitation of coverage. What workers are covered? Are only those who have been employed 2 years, 1 year, or 6 months covered? Or are only workers of certain skills and departments covered?

(2) Limitation of weeks per year. Are a full years' work and income (2,080 hours per year, 52 weeks at 40 hours per week) guaranteed? Or are only, say, 45 weeks of work guaranteed?

(3) Limitation on duration of guarantee. What is the duration and legal character of the guarantee? One prominent plan guarantees 48 weeks per year of work to all of its employees of more than 2 years' standing, but the guarantee is a unilateral one which the company reserves the right to discontinue at any time it may wish to do so. Other guarantees may run from the first of the year to the last, and may be embodied in a collective bargaining contract with a union. Still others may be binding upon the company, but terminable after it has given a year's or 6 months' notice.

The possible costliness, benefits, and other quantitative economic effects of guaranteed wages all depend very much upon the type of guarantees which are adopted—upon their degree of coverage, the hours guaranteed, and the duration of the guarantee. To avoid a tedious catalog of the various plans that are conceivable or now in force we shall find it convenient to outline a few possible guaranteed wage plans, in terms of which our exposition may be facilitated. This does not imply any approval of the particular details embodied in these examples. They are set out simply as hypothetical cases:

Example 1: For each calendar or fiscal year, the company agrees—in a legally or morally binding fashion—to provide some number of weeks, say 45, of full-time pay (or its equivalent spread over the year) to a specified group of workers, selected by seniority or length of previous service. The contract or agreement may, or may not, be renewed for the following year and its coverage and hours of guarantee may be altered, provided notice to that effect is given at least 3 months prior to the end of the contract year.

In this case, if the corporation encountered a sudden slump very early in the year it might be obliged to incur the costs of maintaining income for a period of almost a year. On the other hand, if the decline in its sales came late in the year, the company might be able to reduce its pay roll in very short order.

It would run the risk of having to maintain, on the average, substantial wage payments for something like 6 months after a decline in its revenues.

Example 2: This is the same as example 1 except that the contract or agreement does not run from the beginning of one fiscal year to the beginning of the next. Instead, the guarantee runs on indefinitely—until the company gives 12 months' notice of its intention to discontinue the guarantee or change the extent of its coverage.

One could imagine a plan identical to example 2 except that the period of termination notice i reduced to, say 6 months.

Example 3: This could be like either of th above two plans, but with the extra limitation tha the employer's wage liability to workers laid of should never exceed in any year, say, 10 percen of the guaranteed pay roll. In most years, thi would, in fact, provide 100-percent income securit to all workers. But in a very bad year, when th number of idle workers became very high, then th employer's liability would have an upper limi In this event, the laid-off workers would have t share in some manner the amount available f wage payments within the limitation of the percent liability.

Obviously all sorts of variations could be a tached to each of these illustrative cases. All thr examples have this much in common: They e hance the job and income security of workers for least a limited time into the future; and they i volve the employer in the risk that, for a limit time at least, he may be obliged to maintain wage outpayments even if his sales revenue fa off sharply. However, the employer has not obligated himself to incur unlimited losses for an unlimited period; after the period specified under the terms of the contract, his guarantee terminates; and, of course, after these same periods of time, the worker may find himself jobless and without a current pay check.

One point requires notice and emphasis at this place. While the letter of the guarantee may specify that the employer's liability ends after the date of termination, management and unions both are well aware that there will be considerable social pressure upon the employer to renew his uarantee and to maintain employment longer han specified in the contract. This explains why nany financially strong companies, who do not loubt their own ability to finance guaranteed vages for the first year of a serious depression, are ievertheless reluctant to offer even a limited guarntee. Not without cause, they fear that such a imited commitment may put them on the spot fter the period of guarantee is over. They realize iat even those companies which guarantee nothig are under more or less powerful internal and xternal pressure to minimize lay-offs; but they so realize that such pressures are not brought to sharp a focus as would be the case under a guariteed wage plan. In the following discussion e shall, on occasion, have to go beyond the legalis letter of the guarantee commitment to the furer economic implications.

SOME PRELIMINARY OBSERVATIONS

Before discussing in detail the outline of our nomic analysis in the following chapters, we ll do well to clear the air with a brief statent of certain fundamental preliminary conclns.

First, the guaranteed wage is not a cure-all for problem of business cycle unemployment— could it ever approach near to being one. aggerated claims, overstating its importance advantages, do more harm than good. At the y beginning, we wish to state for the record— nkly and explicitly—that if it ever had to come choice between guaranteed wages and other ortant depression and anticyclical public and ate policies, such as our system of unemployment insurance,[4] our social security programs, or fiscal and monetary policy, then it would be guaranteed wages that would have to be rejected. We do not wish to be misunderstood. As will become abundantly clear from the pages that follow, we do not see any necessary conflict between guaranteed wages and other needed Government policies. On the contrary, it is to be hoped that guaranteed wages can be integrated with unemployment insurance so as to strengthen income security. Also, it is our view that guaranteed wages can be financed so as to contribute something toward moderating the excesses of boom and slump in the business cycle.

Second, although the primary motivation for guaranteed wages comes from wage-earners' fear of business cycle unemployment, our studies lead us to the following somewhat paradoxical conclusion. In a world of high effective demand and purchasing power, where there is no problem of chronic or depression unemployment—in such a world, guaranteed wages might make its greatest contribution: by stabilizing seasonal and other short rhythms in production and by equitably allocating the economic burden of the residual amount of unavoidable idleness and unemployment. This conclusion emphasizes all the more the importance of a full employment program, within the pattern of which the guaranteed wage can play a significant role. Under the present system of lay-off on short notice, the employer finds himself with insufficient financial incentive to undertake the costly efforts which are necessary for thoroughgoing stabilization. What are truly overhead costs to society often appear to the employer as avoidable variable costs, with the result that enlightened competition does not lead to the economically most efficient use of resources.

The view that the single individual firm, even a large one, can by good intentions and clever policies substantially contribute to solve the problem of the business cycle, we are compelled by economic analysis and all the available empirical data to discard in the beginning. No one enterprise is secure enough or powerful enough to withstand and modify the great swings of general business activity.

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[4] There are, to be sure, many technical imperfections in our present unemployment insurance system: inadequacies of integration and uniformity between states, insufficient benefits in relationship to reserve accumulations, perverse cyclical aspects of merit or experience rating, etc. These should be remedied by legislation and practice. They should not be used as an excuse to attack unemployment insurance, or as an argument for substituting guaranteed wages or any other alternatives in place of unemployment insurance.

In our judgment, there is scarcely more validity in the hope that gradually, by more and more firms voluntarily extending the scope of their stabilization activities, we shall approach finally to a condition of continuing high employment income and production. As we shall show later, there is every good reason for looking with approval upon a redoubling of the efforts of management, on its own initiative, toward ironing out its employment and production fluctuations. And when a considerable number of firms have carried through bold, imaginative, and well-conceived stabilization programs, considerable progress will have been made toward reducing the costs of economic idleness. But by far the greatest progress that will have been made is likely to be in connection with unemployment arising from seasonal and other rhythms of business activity of shorter duration than that of the business cycle.

From a dispassionate appraisal of the efficacy of guaranteed wages, the device would appear to be, by itself alone, a weak reed upon which to rely in an attack on such widespread unemployment as our economy has encountered in recent years. Indeed, it would be nothing less than tragic if, by management initiative or governmental and trade-union pressure, an ambitious program of guaranteed wages was undertaken without at the same time instituting other more important programs of government and business designed to promote high and stable levels of production, income and employment.

While it is conceivable that an ambitious program of universal wage guarantees would diminish the intensity of minor fluctuations, such as occurred in 1924 and 1927, there is danger that it might be financed in a manner that would intensify such deep and cumulative recessions as that of 1929. The relationship between guaranteed wages and the sharp recessions of the 1920–21 or 1937–38 type are by no means easy to appraise. If other governmental measures were not instituted to cope with depressions, sober quantitative appraisal of the relationship of pay rolls to corporate net worth shows that insolvency and bankruptcy could well be the price of any guaranteed wage program which was not carefully limited in its coverage and duration. Business, even large business, is not the master of its fate where the business cycle is concerned.

On the other hand, we cannot be content to accept the chaotic status quo. For if we look at, say, the automobile industry, which very properly stands out in the public's mind as typifying the very essence of our industrial society, the picture we see is far from reassuring. Automobile production is an efficient undertaking, paying higher wages than the rest of the world and yet through greater productivity able to undersell all other countries on a free-trade basis. It is and has been a relatively profitable industry. An important part of its total output is under the control of three giant corporations, each of which has presented typical chapters in American industrial life: the self-contained growth of Henry Ford's great enterprise, the evolution after World War I of the vast General Motors Corporation, and the post-1929 emergence to full stature of the Chrysler organization. In addition the recent war has placed the remaining smaller independent producers in a comparatively favorable financial position.

But if we look more closely we see that it is an industry that lives dangerously. Stocks of finished cars and of parts and raw materials are literally measured in terms of days and weeks of production rather than in terms of months and years. The continuance of production hinges on a precarious scheduling of thousands of components produced in hundreds of separate plants. This elaborate division of labor and interdependence, which we hardly notice in ordinary times, makes for efficiency but at the cost of vulnerability—as was revealed in the postwar disorganization of the industry.

Despite the fact that the use of automobile services, as measured by passenger rides or gasolin consumption, fluctuates only moderately over th year and even over the ups-and-downs of th business cycle, the flow of automobile productio proceeds in much more fitful jerks and starts, a dictated by the vagaries of consumer and deale ordering and the march of the business cycle. I consequence, the employment record of the industry—the job experience of the workers attache to the industry—can almost be termed a shockin one. Even in relatively good times workers often spend considerable time waiting to be called back to their jobs. In depression the production of autos and trucks may decline to a quarter of the prosperity levels.

To say that the situation is a shocking one is not to imply that any one group of individuals or organization is to blame or that the record of this industry is worse than that of many others. Different companies have at various times made determined efforts to iron out their fluctuations in production. The whole industry together has attempted to reduce seasonal variations by means of rescheduling the time of introducing new models and of holding auto shows. The results have been disappointingly meager. Clearly the historically developed institutional structure of the industry and of our unstable American economy must be blamed for the unsatisfactory character of the industry's performance with respect to production stability. Under the existing set-up no one company has the financial incentive or ability to provide steady jobs and income.

For a cure to the fluctuations in auto production over the business cycle, we must properly look elsewhere. But it is not too much to hope for, and to ask of management and labor, that measures be taken and practices be altered to moderate the incidence of irregular and seasonal employment and of economic idleness. This may require many far-sweeping changes in the organization of the ndustry: increases in inventories and storage facilities, limitation on undue coddling of consumers' desires with respect to modification of style nd model changes, perhaps acceptance of lower ourly wage rates in exchange for higher annual arnings. Conceivably, such a program of horough-going seasonal stabilization might even aise costs and prices to the consumer. None of hese measures would be easy and none would be ostless. But in a real over-all sense the costs re less than those of idleness under the present egime of instability, where the burden falls upon ose least able to bear it, the workers.

Is it too much to hope that in the not too distant ture all parts of the industry will look back and onder that the present day wastes of idleness ere even for an instant tolerated? We believe ot. But in taking this viewpoint, we do not mean to imply that such a happy state of affairs will come into existence simply by forcing the industry, through Government legislation or collective bargaining pressure, speedily to guarantee wages for substantially all employees. Unless a general, many-sided attack is made upon the problem of business cycle stabilization, together with a step-by-step industry-wide attack upon seasonal instability of production, guaranteed wage plans are likely to be so costly as to be doomed to failure.

It is this dilemma—that the present day deeply-rooted wastes of instability are economically intolerable but cannot simply be legislated out of existence—with which this report is concerned.

PROPOSED OUTLINE OF ANALYSIS

Of the five divisions of the study of guaranteed wages mentioned earlier, our report is naturally concerned with the final two: an analysis of the economic effects of guaranteed wages, and an examination of such plans in relation to other economic measures designed to stabilize or increase the national income. Such an analysis is a necessary supplement to a study of specific experience in different concerns and different industries.

The whole is more than the sum of its parts. Particular firms may have success with the guaranteed wage, in part because they are the only ones offering workers its advantages. The total economic impact of such plans might be negligible, or if overly ambitious or too "soundly" financed, the device might even prove harmful to over-all stability. If wage guarantees discourage investment commitments and if firms are induced to stabilize their employment at low levels in order to minimize lay-offs, the problem of reaching and maintaining full employment could conceivably be aggravated. Or if guaranteed wages had the effect of attaching workers to a single firm in subsidized idleness or inefficient production, then under certain circumstances national output and productivity might suffer.

Under the present wage contract, do the apparent money costs of hiring or laying off labor truly reflect the overhead social costs to society of maintaining the workers' standard of living? What should the relationship be between prices and wages in order that economic resources may be used most efficiently?

Perhaps more important still is the question of how guaranteed wages—on a limited or on a wide scale—affect the over-all level of aggregate demand. Would the mere act of guaranteeing employment create attitudes and behavior patterns sufficient to realize its stated objectives? We all know in a rough way that jobs make markets, and that markets for goods make jobs. Would the widespread commitment to maintain jobs automatically create the purchasing power necessary to make good such a commitment? Or to put the matter in another way, would the balance of aggregate demand in relation to our productive potential be improved; and would the basic factors causing fluctuations in investment—factors which underlie the business cycle—be compensated for?

Each one of these questions requires detailed over-all economic analysis. Each one leads inevitably to a consideration of other economic policies aimed at promoting economic security and stabilizing business activity.

In the chapter immediately following this introduction, we undertake to analyze the true economic cost of different kinds of idleness: to inquire how its amount is to be measured, to investigate how its burden is distributed between wages and property-returns, both in and outside of the industry concerned, and to examine the adequacy of incentives toward regularization.

Then in chapter III the interrelationships, comparisons, and contrasts between guaranteed wage programs and other public programs such as unemployment insurance and full employment programs are discussed.

Chapter IV presents an economic analysis of the effect of guaranteed wages on the level of and fluctuations in aggregate demand. The results are found to differ depending upon whether the guaranteed wage program impinges on a society which is highly cyclical and fluctuating, or is reasonably stable at either a low underemployment or a high full employment level. In this analysis the effects of private reserve financing in contrast with the "pay-as-you-go" method of financing are examined.

While the problem of unemployment was quantitatively most pressing before the war, it cannot be permitted to overshadow the ever-present task of seeing to it that resources shall not only be used, but used efficiently so as to contribute toward the maximum satisfaction of individual and social economic wants and needs. Chapter V is concerned with the effects of guaranteeing wages upon the pattern of resource use and upon the structure of prices, wages, and costs. Here again it is necessary to distinguish among the different kinds of economic societies into which the guaranteed wage plans are introduced.

In chapter VI, we make a number of policy recommendations growing out of our analysis. Such guaranteed wage plans as may be introduced should be set up only after the possible dangers and limitations have been thoroughly canvassed. When this has been done, we believe that, under safeguarded procedures, the guaranteed wage can be made to contribute to a better and more efficiently functioning economic order, and that inducements such as those recommended in chapter VI looking toward more widespread experimentation and expansion are justifiable.

II. ANALYSIS OF THE ECONOMIC BURDEN OF IDLENESS

In this chapter we shall undertake to analyze in some detail the precise nature of the economic costs of unemployment and idleness. In the course of our discussion it will become clear that the problem of irregular production is more than the problem of general cyclical unemployment, although the quantitative magnitude of the latter has been such in recent years as to dominate our thinking and attitudes. To the degree that we are able to avoid serious breakdowns in the years ahead, problems ("labor mobility" for example) which seemed—and were—unimportant against the background of depression unemployment, will take on a new significance. Thus we are concerned not only with depression unemployment, but with the problem as a whole, including daily, weekly yearly, and longer-term irregularities and fluctuations in business activity, many of them avoidable

SOCIAL VERSUS PRIVATE COSTS OF IDLENESS

But first let us note that the present system o hiring, employing, and paying labor is only one o many conceivable alternatives; and one which became widespread even in our own economy onl in the last century. Before industrialization ha impersonalized our economic relations, it was probably the rule more often than not for a craftsman's helper to be hired by the year or season. Often, barring discharge for personal incompetence, the worker could even count upon some measure of job security and income maintenance even through hard times, the employer and employee tightening their belts together.

Even today in agriculture and some branches of small industry, the same relationship often prevails. And throughout all industry, large and small, executives and white collar workers are in ood part assured of employment over all of the ear and through most of the business cycle. It s perhaps not too hard to imagine an economic ystem in which the wage contract with all emloyees was more nearly like that with executives nd white collar workers than like the present revailing mode of wage payment and tenure.

Let us, however, consider the prevailing form f the wage contract and analyze its economic efects for whatever they may be. An industry with igh seasonality may hire its workers for 7 or 8 onths, leaving them idle during the off-season. imilarly, a concern sensitive to cyclical fluctuaons may take on many new workers during the pswing of the boom, and conserve its resources ring the depression by curtailing its wage yments.

Still, as was pointed out so clearly a score of ars ago by Prof. J. M. Clark in his masterly udies in the Economics of Overhead Cost:[5]

> In a more general sense, however, there is a minimum maintenance of the laborer's health and working capac- which must be borne by someone, whether the laborer rks or not: that is, if it is not borne, if the maintenance not forthcoming, the community suffers a loss through deterioration of its working power which is at least ivalent to the cost of maintaining the laborer. Thus burden is there in any case: it cannot be avoided. m this point of view it appears that a large part of cost originally counted as wages represents an overd cost which the laborer is responsible for covering best he can, just as the employer is responsible for ering the overhead costs on account of capital. How-, if the laborer fails to cover it the community does escape the burden, and it is ultimately borne by inry in the shape of reduced productive power and aged morale. And thus it comes back to the employer ny case.
>
> * * * The reason why the expenses of production, some of them, normally vary in proportion to output is simply because the terms of the wage contract are drawn in that way. The employer leaves the wage earner to care for his own overhead and the terms of the contract are not scientifically adjusted as, for instance, the contract for electric current is sometimes adjusted to the overhead costs of the ultimate producer. It may be that we shall find that our general system of wage payment is thoroughly unscientific and that a more scientific system may operate to improve the steadiness of employment in much the same way in which scientific rate systems have been used to increase the regularity of use of electric power plants (p. 16).

The fundamental discrepancy between true social costs of unemployment and apparent pecuniary private costs is of course accentuated by the form of the present wage contract. Without as yet going into the merits of such a proposal, let us suppose that by voluntary action or collective bargaining arrangements, firms were induced to provide income or work for their employees throughout all the year or all the business cycle. Then not only would the burden of the worker's maintenance be spread differently between the workers and the employers in the industry in question, and among the other workers and employers who make up the community at large, but in addition the use which the employer would make of labor might be different. Moreover his production or sales decisions might very probably be appreciably affected.

Today in a depression, a firm will for the most part not hire a man unless in some sense it expects to receive in value a return commensurate with his full wage. Not so does it act with respect to the machinery it owns. If, because of slack times, a piece of machinery can produce only a fraction of the value for which it was originally purchased, the firm will not thereby leave it in idleness. On the contrary, so long as the machinery can produce anything above its costs of operation (including of course any extra deterioration engendered by use) it will pay the firm to utilize the machinery.[6]

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[5] ohn Maurice Clark, Studies in the Economics of Overhead (University of Chicago Press, Chicago, 1923).

[6] To some degree, therefore, we might expect some differences in entrepreneurial behavior of firms in such rare industries as shoe manufacturing, where much of the equipment is rented on leases of relatively short duration. Even here the changed form of the contract, from ownership to leasing, has important repercussions on how the various parties share the total social economic burden. An important qualification to the theoretical notion that firms do in fact disregard all truly fixed or overhead costs is indicated later. Often, in imperfectly competitive markets, they use full-cost considerations in their pricing—for rational and irrational reasons.

THE ECONOMIC COSTS OF IDLENESS

If an industrial worker has employment only 8 months a year and must lay off for 4, the true cost or economic burden to society is the amount of production which he is prevented from producing during the 4 months of idleness. Generally speaking, we should expect this to be roughly equivalent in value to the wage income that the worker loses by unemployment plus an additional wastage of capital and nonhuman resources as a result of the instability of production. Similarly, if a longshoreman works only a few days a week, the important costs to society are the foregone value of production and income on the days of enforced idleness.

Our earlier quotation from J. M. Clark gives an understatement of these true social costs, because the emphasis there is placed upon the necessary maintenance expenditure of the worker during periods of idleness. It is not improbable that an industrial worker capable of producing $3,000 worth of output per year might, by practising stringent economies, be able to maintain himself and his family with their health, skills, and (more doubtfully) their morale intact on an expenditure of $2,000 per year. Nevertheless, the true cost of a year's idleness of such a man is still $3,000 and not $2,000. And even if science were able to devise ways of costlessly putting men on ice, to hibernate during slack times like bears during the winter, the costs of idleness would still be the same.[7]

We feel it necessary to expound at some length these almost trite, fundamental economic principles because only in this way can a number of current misconceptions and distorted emphases be avoided. Thus, it is quite false to think that the social cost of instability would disappear completely if the employer were made to pay the workers' salary during periods of lay-off. Actually, this might be a highly desirable policy, because the worker may be least able to bear the cost of idleness; and because society may deem it desirable for the employer to shoulder part of the cost in lower business profits, or wish the burden to be shifted in part forward to consumers and the general public in higher prices, or wish the burden to be shifted backward in reduced wage rates for all workers (including those who continue to hold steady jobs). But if the workers' incomes were maintained, though they are idle, the social wastage of productive resources would still be borne by society as a whole.

The total social cost is not changed in real product terms by different modes of sharing the burden of idleness. The social cost for the community as a whole will remain unless greater stabilization of jobs and production is achieved. It is not enough merely to transfer the burden from Peter to Paul. (Perhaps we should not say "merely" since it does make a great deal of economic, political, and social difference just how equitably or inequitably economic burdens are shared between the Peters and the Pauls of different economic levels.)

We do not deny that different modes of sharing the burden can have considerable repercussions on the total amount of the burden. For example, shifting part of the burden of depression unemployment from the workers to the Government may, depending upon the method of finance, reduce the amount of unemployment. Or making industry bear the costs of certain kinds of seasona irregularity of employment may provide just th stimulus necessary to cause the introduction o effective stabilization programs.

In brief it is the effective carrying out of productive employment rather than merely the payment of wages that reduces the social costs of idleness and instability. Income maintenance without productive employment stabilization is only half-way measure which transfers the econom burden of waste and minimizes its social impac but fails to diminish it.

When, as above, we speak of the economic cos of idleness, we must be careful to distinguish b tween various kinds of idleness. Of course, no o can work 24 hours a day. The hours spent in sle are not wasted, any more than is the time spent i leisure on Saturday afternoon and Sunday, or o holidays and vacations. We need not regard ba ball pitchers who go hunting during the weeks following the World Series as wasting their time, any more than we would consider firemen on their way back from a fire or for that matter firemen playing checkers while waiting around for a new alarm, as being unproductive.

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[7] This is all the more evident if we apply the argument to the less controversial and emotional problem of a nonhuman resource like land. If a 100-acre field neither gains nor loses in productivity by being left fallow for a season, can we say that there are no costs involved in its idleness just because no outlay on maintenance is required? The answer is "No." The potential crop of that year is lost forever. If the land actually goes to weeds and deteriorates through nonuse, the costs are that much greater.

If there has been a real change in society's desire or technology so that the land or worker now has a lower potential economic productivity, then the waste due to idleness is, of course, equal only to his new potential economic productivity.

In other words there are unavoidable cessations of activity which are an intrinsic part of certain productive activities. All cost comparisons are relative. It would be pointless to compare our ac- ual national output with that which could be ob- ained if the laws of thermodynamics were other han they are; or with what we could produce if o one required sleep and desired leisure; or with hat would be producible if the seasons were con- tant. To the extent that work interruptions are navoidable and intrinsic, it will make for clearer hinking if we avoid the term "idleness" and "eco- omic waste."

Also, to the extent that curtailment of labor re- lts in a reduction of human disutility or, what almost the same thing, an enhancement of the ility of leisure—to this extent it would be ob- ously incorrect to regard the resulting loss of onomic output as an equivalent total social ste. Thus, nobody laments the fact that our onomic system fails to provide 84 hours a week work for all, or fails to find work for a subway endant in between stations. There are only so ny activities that human beings can be reason- ly expected to attend to at any one time.

nvoluntary idleness such as is encountered over business cycle or in many highly seasonal in- stries presents little or no saving grace in the n of reduced disutility. Rather does our meas- ng of the cost of idleness by the value of lost put understate the true loss. In addition there n extra psychic loss inherent in unemployment lf. A man thrown out of work against his is not on a vacation. In the present state of society, work under reasonable conditions up ome 40 hours per week and 50 weeks per year ot a curse but a boon and a benefit. The social of transferring a man from frustrating in- ntary unemployment to purposeful productive loyment may even be greater than the value of goods produced.

e may summarize our discussion of the over- conomic cost of instability briefly as follows: The primary economic cost is measured by the loss of national output resulting from unnecessary idleness; (2) in addition there is a secondary cost involved in the individual misery and social disorganization which grows out of idleness itself.

THE COST OF INSTABILITY TO THE WORKER

The intermittently employed worker suffers from instability primarily from the fact that his pay largely ceases during periods of unemployment. To some degree unemployment insurance benefits, home or work relief, and severance pay may help to keep his income from falling below an intolerable minimum; but only to a limited degree, since coverage is incomplete and of limited duration, and rates are deliberately set low in relation to full-time earnings.

It appears in general to be an empirical fact that workers subject to frequent lay-offs over the year and over the business cycle tend to fare badly in terms of average rate of earnings over the whole year and over the complete business cycle. But it is not at all obvious in theory that this should be so. It could be argued, and it is often argued, that competition in the labor market will cause higher hourly rates of pay to prevail in unstable occupations so as to compensate for their unsteadiness of employment. The mechanism bringing this about is supposedly the familiar one whereby workers refuse to go into industries offering less total compensation over time than prevails in those other industries which offer steady, full-time employment; and in refusing their supply, workers cause wages to be bid up in the highly fluctuating or irregular industries.

Before turning to the available statistics upon the subject, let us point out the rather artificial set of theoretical assumptions necessary to achieve this result. Firstly, the cyclical rhythms in activity of the industry in question must be of sufficient regularity so that workers deciding whether to enter or leave the industry can make some sort of an approximate calculation as to the hourly rate which will in the future yield average earnings comparable over time to stable occupations. Perhaps to some extent seasonal (building trades for example) and shorter rhythms are of sufficient regularity to be forecast by the workers to a limited degree, but the vagaries of the business cycle and other fluctuations preclude even this possibility.

Furthermore, there is the second implicit assumption that job opportunities are so plentiful that workers can afford to pick and choose between different industries and occupations. During the past few decades, this has been far from the truth. Often workers have been faced with the choice of accepting precarious unsteady employment, or none at all. However, if high employment conditions should come to prevail, then this second hypothesis would become more nearly true.

Thirdly, an equalization of average earnings through changes in the supply of workers going into different industries implies that wage rates are set in different parts of the labor market by the operation of competitive supply and demand. Actually, and today this is so obvious that we need not elaborate, wages are to an important degree set by the forces of collective bargaining and are a resultant of the pressures exerted by union and management organizations.

Finally, there are always individual differences in ability, training, and opportunity, all of which tend to create inequality in the earnings of different kinds of workers. Even if all jobs were equally stable, we should still expect important, persistent differences in earnings in different fields. How then can we tell what part of the actual reported differences in earnings are due to different degrees of instability of work, and what part to other factors? The answer is we cannot, certainly not with quantitative accuracy.

One thing, however, is clearly apparent from statistics relating to annual hours and earnings in industries characterized by different degrees of cyclical and seasonal variability.[8] There appears to be little tendency for hourly rates to adjust themselves in different American occupations so that average annual earnings over time are equalized in industries of different degrees of instability.

Some of the industries with most intermittent employment—especially those in rural agriculture areas of the South—also have the lowest hourly rates; while some of the highest hourly and weekly rates are to be found in lines of activity which are most stable in employment.

Logical purists may assert that the differences in average earnings over time are all due to other factors; and that hourly rates have adjusted themselves over what they would otherwise have been. not so as to equalize earnings, but so as to compensate for variability of employment. The form of this assertion makes it impossible for anyone either to verify or refute it. But such facts and analysis as have come to our attention incline us to the belief that any tendency for the hourly wage to rise so as to compensate for unemployment is only of a weak and partial character.

By and large, therefore, we incline to the conclusion on factual and theoretical grounds that the primary burden of instability of employment falls upon the worker and his family in the form of reduced average earnings over the long run. In terms of the equity considerations which underlie the modern insistence upon progressive taxation according to ability to pay and upon the socia desirability of keeping up the standard of life o low-income families, placing the burden of unemployment wholly upon the worker represents th least desirable national policy, and one which aggravates to a maximum the onerousness of th given pattern of instability.

It does not follow necessarily from this that th best economic policy to remedy this situation wou be one of raising standard hourly rates to whatever level is necessary to compensate for instability of employment. We do not say this mere because such a solution would involve extreme changes in the present wage set-up of America industry. Grave inequities may often justify drastic action. More important is the consideration that simply raising wage rates without reducing instability and idleness only shifts the burden off the worker's shoulders but may fail to reduce the economic dollar value of waste. This would tend to be true unless indeed there were some valid reason to expect that raising hourly wage rates would by itself tend to reduce the average instability of production. Moreover, we need to consider the relative merits of raising wage rates and of changing the wage contract in the direction of guaranteeing longer periods of employment as means of promoting stable production.[9]

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[8] The Washington staff of the guaranteed wage study has tried with little success to find occupations which are alike in all important respects except for varying degrees of stability of employment in order to make such estimates. The data examined were: (1) From the Censuses of Manufactures, 1929, 1933, 1935, 1937, and 1939: total pay rolls, numbers of employees month by month and average annual number of employees for selected industries. (2) From Bureau of Labor Statistics: average hourly earnings for industries selected for (1) and studies of annual earnings of employees in selected industries, published in the following issues of the Monthly Labor Review: February 1940, pp. 401–409; January 1940, pp. 172–182; April 1939, pp. 781–788; October 1939, pp. 921–931; December 1939, pp. 1470–1482; July 1937, pp. 29–37; July 1939, pp. 163–175; May 1936, pp. 1333–1335; December 1938, pp. 1393–1408; October 1940, pp. 823–833.

These questions we must defer until chapter V. But there is one aspect of the problem which deserves mention at this point. Under some circumstances raising the hourly wage rate may actually tend to increase the total of idleness—especially where the problem of "casual employment" is involved. By "casual employment" is meant primarily a condition where (*a*) workers are intermittently hired for short engagements, and (*b*) where the first worker who happens to present himself is likely to get the job. A surplus reserve of workers often results from higher rates of pay, especially if there is general unemployment.[10]

This line of reasoning is abstract and oversimplified. It should not be pushed too far. But it does indicate one aspect of reality, and it does ndicate that any policy of raising wage rates hould be accompanied by supplementary policies lesigned to reduce the total pool of unemploynent.

Even if normal annual earnings were maintained n unstable jobs by means of higher rates of pay vhen working, there would still remain the evil f irregular earnings. An ideally calculating inividual could perhaps be relied upon to budget is expenditure in equal amounts throughout the ear; or in occupations subject to much longer ythms, over the whole cycle. But for ordinary uman beings spending patterns tend to follow osely upon their current income, so that uneven come payments result in ups and downs in living andards.

Added to the evil of variability of work and y, there is the attendant feeling of insecurity. ithout some tangible advance guarantee, for ery worker who is actually fired a number of hers may quake in their boots. Living apprensively from day to day, the worker cannot efficiently make financial plans for the future, cannot undertake advantageous long-run commitments with respect to home ownership, life insurance, and other desirable forms of personal consumption and saving.

To be sure, formal and informal seniority practices already serve to ameliorate, in part, the universal fear of unemployment. But there still remains a large residue of insecurity, which, taking the long view, we must regard as partly unnecessary. This shows that there may even be merit in those limited guarantee plans which do not go much beyond explicitly guaranteeing job security to those who already in fact largely enjoy it. The mere announcement effects may be reassuring to some degree.

The question may be raised whether stabilizing employment and income over time and reducing job insecurity will serve to increase or reduce the average propensity to consume out of a given income. The answer to this question, which has a bearing on the problems discussed in chapter IV, depends upon a nice weighing of conflicting quantitative tendencies. On the one hand when people are reduced from a high income level to a lower one, they probably still try to maintain as best they can the higher standard of consumption to which they have become accustomed. Therefore, because of the "ups" in the "ups and downs" of income, there is a tendency for average saving to be lower and the average propensity to consume to be higher than with stable incomes. On the other hand the persistent fear of unemployment tends to cause people to try to save more out of a given income.

He would be a rash man who would venture a confident definitive answer to the question of which tendency is the stronger, no satisfactory statistics being available. Since there appears to be no strong presumption upon either side, we may tentatively cancel out of our appraisal any claim that guaranteeing wages will have stimulating or hampering effects upon saving habits. (To some extent steady wages improve the credit position of workers and enable them to invest in consumers capital goods such as housing and autos. Such an increase in investment implies a higher rate of effective demand.)

Guaranteeing employment to a limited number of employees raises some of the same policy prob-

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A further drawback to raising hourly rates is that workers er in their lay-off experience according to seniority and other ters.

A classic case is that of the London dock and wharf workers, lyzed almost 40 years ago by W. H. Beveridge in his significant k, Unemployment: A Problem of Industry (1909 and 1930), 07.

lems involved in excessive seniority provisions.[11] Admittedly, we need not argue that everyone must be dragged down to the level of insecurity of the least fortunate. Having granted this, however, we must still go on to point out the possible evil of carrying seniority and wage guarantees to a favored group so far as to create in effect an economic caste system, in which one fortunate privileged group is protected completely from the vicissitudes of economic life, at the expense of throwing the full burden on those left without protection. Some underemployment for all may be preferable to total unemployment for a minority. If there must always be an irreducible minimum of the working force unemployed, it would be far better for their numbers to be made up of a revolving group of different people, with no appreciable group being unemployed for very long. During the 1930's, those who had been unemployed the longest had the greatest difficulty in finding jobs after business demand began to recover. They were beginning to form part of the so-called hard core of unemployables, until the high level of wartime demand melted the core and proved their employability.

This points a possible way out of the dilemma that giving security to the majority may inequitably and cumulatively concentrate insecurity upon an unlucky minority: the maintenance of a high level of over-all effective demand by bold public policies will serve to help those recently hired employees who lack seniority and who cannot qualify for guaranteed wages.

In concluding this discussion of the evils of job insecurity, we must point out that this is not a matter of concern only to the workers involved. The employer is vitally affected by the workers' mental state in this regard. On the one hand, from a realistic hard-boiled viewpoint there is little doubt that fear of losing one's job sometimes acts as a whip to spur the worker on to more efficient production. Fear of discharge for cause certainly acts in this direction. But fear of lay-off is quite another matter, except to the extent that the order of retention of men and rehiring is made to depend upon demonstrated efficiency. Even in the fairly rare industrial situations where labor is in fact laid off in order of inefficiency and rehired in order of efficiency, there is always the counter tendency that tense and insecure workers may over the longer run be less efficient rather than more efficient producers.

Neither of these last points is so telling as the fact that increasingly in modern industry formal or informal seniority rules determine the order of a worker's lay-off, rather than his own effort and productivity. No worker feels that the chances of retaining his job are primarily dependent upon his own efforts. But all the workers together often feel—rightly or wrongly—that by their behavior they can stretch out the work to be done and prolong the average period of employment of the whole group. In order to make jobs last they will consciously or unconsciously slow down their efforts—with detrimental effects upon productivity, costs, and profits. And such is the group solidarity of any set of men working in close contact that even those workers with high seniority and no fear of unemployment will actively and passively pursue these same tactics; for just as young workers look forward to the time when they will have gained seniority and act accordingly, so too do the old-timers remember back to the days when they were at the bottom of the ladder. Besides, rarely does one have so much seniority but that he is outranked by someone else, and even his job may be thrown in jeopardy whenever there is a really deep falling off in business activity. Given the above set-up, increasing the worker's feeling of security by means of guaranteed wage plans may contribute to an increase in labor productivity.

This completes our brief survey of the ways i which the economic burden of unemployment ten to fall with heavy weight upon the workers through (1) reduced earnings, (2) loss of oppor tunity for useful and satisfying activity, wit attendant costs to the community at large, (3 through variability of the receipt and expenditur of income, and (4) through a widespread feelin of insecurity and tension among both those em ployed and those unemployed.

We turn now to an examination of the burde experienced by the employing industry.

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[11] It is not at all paradoxical that even recently hired workers tend to favor seniority rules. They hope to possess seniority themselves some day.

THE COST OF INSTABILITY TO INDUSTRY

The burden of unemployment falling on the workers is only part of the total story. Heavy unemployment causes national income to fall sharply. During such times industry is operating at low capacity levels. The rewards to property decline.

Historically, there seems to have been a rather remarkable constancy in the proportionate division of the total national income between personal effort (wages, salaries, and personally earned entrepreneurial profits) and property income (interest, net rents, and profits combined). It appears that the burden of heavy unemployment tends to be parceled out in something like the same proportion between property and labor income.

If we take property income as a whole, probably similar conclusions can be drawn in the case of easonal and other noncyclical idleness. If these rregularities cause an annual loss of national in-ome and product of some billions of dollars, an ppreciable fraction takes the form of lower earn-ng returns to property income receivers. Success n a thorough-going stabilization program would ean more stable and probably higher profits over e cycle as well as higher wages. Therefore, oth labor and management have a mutual stake ironing out irregularities in production and nployment.

We have seen that the average take-home pay nds to be decreased by instability of employment different industries. What may we infer about e profit rate in industries which are subject to e greatest fluctuations in activity? Can we ex-ct that the effective maintenance of guaranteed ges would be at the expense of the profits now rned by variable industries?

To the extent that any wage or job guarantee duces, accompanies, or follows upon successful bilization of production, the second question swers itself. If steady production at a high el tends to increase labor efficiency and to reduce pensive turn-over, the program may much more n pay for itself. But if we must assume that ranteed wage income is maintained in indus-es that are still subject to irregularities of de-nd and production, the answer to the question whether the burden will fall on profits is not simple. It depends in part upon the answer to the first question as to how profit rates have in the past accommodated themselves to differing degrees of instability.

If we select those industries with the greatest cyclical or seasonal fluctuations and compare their profit rates with steadier industries, there does not appear to be any strong relationship between profits and instability. For the period 1935–39, which includes a recession as well as years of expansion, the average profit rate of 10.1 percent for all durable goods hardly differs from the 9.8 percent for all nondurable goods. Automobiles, one of the most strongly cyclical and seasonal industries, has among the highest rates of profit, whereas iron and steel, also a cyclical industry, has rather low profit rates.[12]

If industries which had previously been stable were suddenly to become cyclically or seasonally irregular, then profits would immediately be affected adversely. Something like this probably happened as a result of the unexpectedly deep depression of 1929–33, profits in many lines being very hard hit. But by and large, unstable industries have a history of being unstable. When capital chooses between going into the canning industry and some other line, it does so with the expectation that supplies and operations will there be bunched into a relatively few months of the year. Similarly, an industry like baking is expected to be fairly stable, both seasonally and cyclically.

To the extent that these expectations are correct—and they certainly are not necessarily so—there is a tendency for profit rates to be equalized (over the cycle and year) by the competitive movement of capital between and among industries. That being the case, the residue of the economic burden of idleness that is not thrown upon the workers in the given industry—this residue is not borne by the industry's capital. Instead it is shifted forward and backward to workers and investors elsewhere.

In overcrowded lines of activity where rivalry is very keen and profits are chronically low, the cost of even customarily expected fluctuations in production may not be allowed for in price setting. Many of our industries with the greatest amplitude of seasonal fluctuation happen to meet this description at least in part. However, for the most part, the low profits experienced in these fields ought properly to be kept analytically separate from the fact of seasonality of operations. Were the same total level of demand to be spread evenly over the year or cycle, while at the same time the conditions of over-entry into the industry and past excessive investment were yet to prevail, we might still expect profits to be low. A real exception to this statement is provided by the case in which people are encouraged to overinvest their capital in an industry because of the appearance of high profits during the short-lived busy season. This would be the counterpart of a similar possibility in the labor field, where workers overcrowd an industry because of short-sighted concentration upon the transitory high hourly rates to be earned for a few months of the year or a few years of the cycle.

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[12] Unpublished study of Office of Price Administration, entitled "Return on Net Worth, Before and After Taxes, 1936–44, 2,500 Leading Industrial Corporations."

Other fields are to be found such as durable consumer goods and chain department stores where operations show a distinct seasonal and cyclical pattern but where profits are nonetheless fairly high. In many markets one or a few firms occupy a strategic position of dominance by virtue of efficiency of operation, advertising, research, trade marks, patents, and so forth. New firms are not able to come in and compete away the monopoly or quasi-monopoly returns of these concerns.

From the analysis of the last section, a few tentative hypotheses may be drawn as to the possible effect of introducing guaranteed wages upon the profit position of unstable industries. Depending upon the variability of the industry and upon the limitations placed upon the guarantee, we could expect profits to fall in the short run after the plans are first put into effect—unless indeed the plans induced an increase in efficiency. In the longer run, and to the extent that capital can be made mobile, capacity and output would gradually shrink in the more variable industries.

More and more the burden would then be shifted forward to the consumer through higher prices, or backward upon wage rates in general—not through actual pay cuts, perhaps, but through a slowing up of the rate of increase of real wage rates. Part of the burden might well fall upon monopoly profits. In fact the cut might be covered by increased efficiency.

Nevertheless the case should not be overstated. Even if profit rates were equalized over all industries in the long run, we could not conclude that profits would necessarily escape all the burden of the extra costs entailed by guaranteed wages. True, the rate of profit in the particular unstable industries would be relatively unaffected. This does not preclude the very real possibility that the "equilibrium rate of profit" would be lower under a regime of over-all guaranteed wages than under the present form of the wage contract where labor can be made a variable monetary cost. There is no reason why the historical proportion between labor and property income would necessarily be preserved in the face of so drastic an institutional change. In technical terms, the "imputed net productivity" of capital depends very much upon wage rates, collective bargaining, labor "productivity," taxation and other cost conditions. Under guaranteed wages, we cannot tell with certainty whether equilibrium profit rates would rise or fall. Any possible effects upon profits would have further repercussions on consumption, saving, and investment propensities, as we shall see in chapter IV of this report.

Probably, as we have seen, workers now directly bear the major cost of instability. Also, it is clear that the portion which workers do not bear may in part be shifted off the shoulders of the employers directly concerned to consumers and to industry in general. But still there remains some element of cost to the industry directly involved Is it not to the selfish advantage of the industry itself to regularize its activities by means of sta bilization programs? The answer is—to some de gree—yes. Doubtless industry is already pursu ing many such policies; the observed degree of ir regularity of operations in our economy is b no means the maximum conceivable.

Doubtless, too, much more remains to be dor in this connection. Business management is fa from omniscient. Custom, ignorance, and inert play a role in preventing companies from active undertaking policies which are to their own max mum long-run profit advantage. Often compani are not fully aware even of their own irregul pattern of operations; many devote far less atte tion to stabilization programs than to other pects of sales promotion, product development a research, quality control, and cost accounting. The pressure of management groups such as the American Management Association, the Chamber of Commerce, and the Committee for Economic Development, and the pressure of organized workers through collective bargaining, and of government nd the public-at-large, is all to the good in spur- ring corporations on to studying the problem of further stabilization programs. Engineering and fficiency studies have time and again shown that he surface is as yet hardly scratched. When every orporation of any size has a major executive and izeable staff working creatively upon this prob- em—then and only then can we expect even the elf-interest of the corporation, to say nothing of he economy at large, to be well served.

We can expect that the obvious stabilization olicies, which hold out immediate economies with ttle cost and no risks, have already been exhausted large part. What is needed is for management display with respect to thorough-going stabili- tion efforts the same venturesomeness and im- gination that it displays in promoting a new prod- t or in risking the construction of a new plant.

And yet, despite the above exhortation, there are od reasons to believe that under present com- ercial and financial institutional set-ups, the rd-boiled single enterprise has only a limited otive to pursue extensive stabilization policies. uring the last 25 years, good will, effort, initia- e, and intelligence have been applied again and ain to the problem. Yet plan after plan for untary stabilization has petered out or become asualty of business depression. With a loose or market and wages a variable cost, irregular duction is not always expensive production.

his condition may not last. While it would tainly be premature to conclude that the busi- s cycle is a thing of the past, nevertheless, both lic and private enterprise have learned much; today there is widespread recognition and de- nination that we must do everything in our er to prevent such catastrophic declines in onal income and production as characterized slump which followed 1929.

n any event, the longer that high employment litions are maintained, the greater will be the immediate dollar-and-cents incentive to regularize any remaining instability of productive activities. Depression conditions in the labor market have left corporations with a heritage of personnel policies, which however appropriate they may have been in the years of labor surplus before the war, may prove extremely costly in a high-employment economy.

Let us take the automobile industry as a case in point. Suppose manufacturers bow down to the seasonal character of auto demand once the immediate postwar backlog of demand has been partially filled, and in consequence are able to provide only some 8 months' work to the average employee. What will the result be? Will workers be compelled to lay off for 4 months, living on unemployment-insurance benefits and previous savings, and borrowing, or on relief? Probably not, if jobs are really plentiful. Then, when auto production is again resumed, many will be called but few will answer. Large numbers of workers will have been attracted by job offers with other concerns. Any firm with unstable employment would have to raise wage rates and undertake costly recruitment policies to keep a suitable labor force.

During depressions the cost of labor turn-over to an employer consists primarily of the costs to be incurred in securing and training a new worker. In modern mechanized industry, where a premium is placed upon general intelligence, manual dexterity, and basic training in the use of nonspecialized machinery, it is not at all impossible that the expense of training new workers is a good deal less than would appear from many exaggerated accounts. After not many weeks, a worker transfered to a new department or hired for the first time, may be nearly as efficient as he is ever likely to be; especially since the novelty of a job often elicits an enthusiasm and zeal which wears off with continued experience. Possibly this explains why the alleged reduction of cost of labor turn-over has been so ineffective in the past as a spur to stabilization. But in a full-employment economy, every employer will be pitted against every other employer in an effort to secure more labor in a tight market. Labor laid off may be lost forever. From any one firm's viewpoint, labor separations then tend to give rise to labor shortages rather than simply to labor turn-over.

This leads us to stress once more that production stabilization and the guaranteed wage involve much more than business cycle unemployment. The following chapters undertake to show the relationship between guaranteed wages and other programs; also, the direct relationship to the over-all level of aggregate demand and unemployment, and to the efficient use of resources in a high-employment economy.

III. THE GUARANTEED WAGE IN A BROAD SECURITY PROGRAM

Substantial security of income or employment, or both, is everywhere more and more recognized as a primary goal of modern democratic societies. This goal cannot be achieved by any one method. In all modern societies many institutional arrangements, programs, and procedures have been adopted, designed to contribute to stability of income or employment. Among the most important of these are (a) a variety of social security measures and (b) various programs to stabilize employment in the individual firm and for the economy as a whole.

DIFFERENT PATTERNS OF JOB SECURITY

Employment contracts under modern conditions typically are terminable without notice or upon so short notice as to give virtually no security of tenure. Nevertheless a substantial proportion of modern workers feel fairly secure in their jobs. In many cases it may be assumed that employees of long standing regard their positions as more or less permanent. Such employees are not likely to fear dismissal for cause. In general, they are not likely to be greatly concerned about lay-offs, except in the case of wholly unforeseen catastrophes of a character which are not regarded as very probable. It appears true that human beings are prone to be unduly optimistic and to underestimate risks of a character which they are not in the habit of facing more or less continuously. By and large, employees of long standing probably experience a feeling of security greater than is in fact justified by the course of events.

Employees who feel a sense of security in their job by reason of long tenure are likely to underestimate the importance of unemployment insurance, and related measures, as means of ensuring some degree of income security. For these employees it is security and continuity of the job already held that is really important, not the easing of transition to a new job.

But a large proportion of employees are not in this favored position. Typically their tenure of employment with any one firm is relatively brief. For many workers, a job is, even at best, a comparatively temporary thing. Lay-off or voluntary separation is a continually recurring experience. Workers who are accustomed to only short-period job tenure doubtless fall into different categories with respect to reemployment experience. Some, by reason of the character of their occupation, adaptability, resourcefulness, etc., expect easily and quickly to find new employment. In the transition to a new job, unemployment insurance plays an important role.

In bad times, however, reemployment, even for the alert worker, becomes difficult if not impossible. Unemployment insurance becomes then ar important means of support, just as it is for thos workers who encounter difficulty at any time i finding new work. It provides, however, only fraction (usually 50 to 60 percent) of normal earnings, with maximum limits ranging from $13 t $28 per week; while the maximum duration o benefits runs for only 14 to 26 weeks. It can serv as an important stop-gap for seasonal and trans tional unemployment under conditions in whic opportunities for reemployment are reasonab good—that is, in a relatively buoyant labor mark where aggregate demand is on a fairly satisfacto level. In addition, the dismissal wage can help bridge the gap in the event of technological unemployment, consolidation of firms, or a secular c cline in a firm's business.

A considerable proportion of the Americ labor force, even though at times laid off, does t typically change jobs. Such workers regard themselves as "attached to a firm" even thouh they experience frequent and fairly long perids of unemployment. Thus, in the automobile ndustry in the period of 1935–39, workers were employed on the average for only about 75 percent of full time.[13]

The table below gives a quantitative picture of the number of workers of different years' service with a large public utility system. In 1929, when jobs were plentiful, the turn-over of workers was very high. Consequently, the percentage of vorkers with less than 1, 2, or 5 years of service vas relatively high. During the depression, the icture was changed greatly. Few workers had een recently hired, and the number "separating" rom the company was relatively small. Workers vith 5 years' service began to be the rule rather han the exception, so that even workers with high eniority rating would have faced lay-offs if furher widespread contraction of operations had ecome necessary.

ercent of workers with varying lengths of service in a large utility system

Year	Percent of workers			Number of separations as a percent of average number of workers
	With 1 year or less	With 2 years or less	With 5 years or less	
29	25	38	61	31
32	1	2	33	10
36	9	12	17	7
38	2	10	22	7½
1	19	26	36	12

In strongly organized industries, workers are s vulnerable than formerly to dismissal, or disrge "for cause." So long as times are good, on workers with seniority are also protected m lay-offs in a wide variety of industries where traction of output is a gradual affair involving y the more recently acquired workers. There other industries, however, where technology ires whole plants and units to be shut down n output is contracted. In such industries, strong union organizations cannot protect kers with high seniority rating from being intermittently laid off—even in years of fairly high business activity.

The demand for a guaranteed wage is likely to be strong in industries of this type. Such workers, to be sure, not infrequently take advantage of unemployment insurance and job opportunities offered elsewhere in the interim period of temporary unemployment. Yet a large proportion more or less regularly experience temporary unemployment each year, and await a return to their old job without obtaining, in the interim, work elsewhere. To repeat, it is particularly for workers of this character that the guaranteed wage plan makes a strong appeal. These workers are, in a sense, "attached to a firm," yet the number of days worked per year is low. The conditions of the industry prevent or make difficult a high ratio of days worked to working days in the year. If the firm could diversify its production so as to dovetail employment throughout the year, a high ratio of days worked to working days could be achieved. In view of the character of the modern labor contract, it is probable that most employers have not yet seriously tackled the job of giving steady employment to workers regularly attached to their firms. If the labor contract were on the guaranteed basis, these firms would be compelled to explore to the utmost ways and means of finding steady work for those "attached to their firm."

GUARANTEED WAGES AND STABILIZED EMPLOYMENT

Where unemployment is primarily a matter of seasonal fluctuations, and other types of work interruptions of a short-term character, the guaranteed wage plan seems to be peculiarly suitable as a device to help solve the problem of job security. If under such conditions the guaranteed wage became the rule for all competitors in an industry, more and more those competitors would survive who proved most resourceful in the development of stable, year-round employment. At first, doubtless, relatively little progress would be made and the guaranteed wage might prove to be a heavy burden on the industry. This might involve a rather drastic readjustment of prices or wage rates or both. Eventually, however, as more and more firms increasingly solved the problem, costs would be reduced. Accordingly prices could be lowered

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he average weekly hours of automobile workers for the -39 period, using Bureau of Labor Statistics data weighted e Bureau's employment indexes, were 36.1. These were the ge weekly hours for employees working. Total labor force stimated from numbers of employees reported to the Fedureau of Old-Age and Survivors Insurance, with a correcor inclusion of nonproduction workers. The automobile force appears to have averaged about 18 percent more than erage force at work, so that average weekly hours for the force averaged about 30.6.

again or wage rates raised, or both. The net social gain would be steady year-round employment for the workers and an enlarged real income for the community as a whole.

A LIMITED GUARANTEED WAGE

In what has been said above, the assumption is made that the guaranteed wage would be applied to all, or nearly all, the workers employed by the firm. But even firms with short-run irregularities in employment have a certain residue of workers who are continuously employed. If the concept of the guaranteed wage were applied only to these workers, the plan would become at once more feasible, but also would accomplish relatively little. Similarly, with respect to industries afflicted with cyclical unemployment, a guaranteed wage which involved only that residue of workers which a firm can reasonably expect to hold through even a deep and prolonged depression, would become highly practical, but correspondingly also of less value.

Nevertheless, even this limited concept deserves consideration. It would indeed not solve the problem of either income or job security. These difficult goals must be attacked from a great many angles. The guaranteed wage is only one among many approaches to the problem. Indeed, if too much were attempted by this method, other more promising methods might be seriously impaired. The guaranteed wage, we believe, does have its place as a part of a larger program. Even the minimum concept of the guaranteed wage referred to above could achieve something of substantial value. If each firm gave assured employment to that fraction of its peak employment which experience indicates to be feasible and practical, a formally recognized status of security might be given to an appreciable fraction of the entire labor force. This would, at any rate, be something to start with. The problem would then be sharply posed: if such a fraction of workers were protected under the guaranteed wage status, what could then be done (1) to provide in other ways (dismissal wages, unemployment insurance and over-all stabilization policies) as much security as is possible for the uncovered employees, and (2) to expand gradually the number coming under the guaranteed wage plan.

THREE ROADS TO JOB AND INCOME SECURITY

Comparison may usefully be made between (1) the guaranteed wage plan, (2) unemployment insurance, and (3) a full employment program. In making this comparison it will be helpful to assume that each measure is a part of a general pattern in which each reinforces and supplements the others as means to provide security for workers. Thus considered, what can each of these three approaches contribute to the problem of security?

The full employment program aims to provide security by ensuring a good market for labor services. The goal is adequate aggregate demand, so that workers can readily find and obtain jobs. This plan does not guarantee a job to any individual. It provides a favorable market in which he may seek a job. The mere fact that the aggregate demand for goods and services is sufficiently high to ensure a good market for labor services, will not prevent fluctuations in employment in seasonal industries. It will not prevent shifts taking place between industries and between regions. A man living in town X may not be able to get a job in his particular skilled occupation in town X; or anywhere if his skill has become obsolete, or his demands exorbitant. Aggregate over-all demand does mean, however, tha job opportunities are in general plentiful throughout the Nation. A man cannot sit on his fro porch and expect just the job he wants to come t him. But if he is alert and active, the market favorable. Labor is in good demand througho the country. There are many job opportuniti from which one may choose. And retraining programs, employment offices, travel allowances, and adequate housing facilities (essential parts of complete full employment program) should make the task of transfer to new jobs and other regions relatively easy.

Such in brief is the goal or function of a full employment plan for job security. It does not guarantee a job, and at best there will be unemployment. In particular there will be seasonal, technological, and transitional unemployment. The plan thus falls short of adequately meeting the problem of security. Something more is needed.

The unemployment insurance program aims primarily at a minimum of income security, and does not directly attack the problem of job security. The program assumes that workers will become unemployed for all sorts of reasons—seasonal fluctuations, fluctuations in the business cycle, changes in technology which throw people out of work, structural changes which adversely affect certain regions, shifts in population, foreign competition, etc. The program is not designed directly to remove any of these causes of unemployment. It is designed merely to ensure a temporary minimum income to workers who are out of a job. As a by-product, the program does indeed, it is now beieved by most economists, make some contribution (if properly financed) toward the maintenance of ggregate demand. But at best its contribution o the maintenance of purchasing power is relaively limited, and its main function is to provide minimum income to those out of work. To reeat, the program is designed to give minimum inome security, not job security. The income reeived is not paid in return for work. The payent is made basically in accordance with the rinciple of partial income maintenance,[14] not in ccordance with the principle of productivity.

If now we extended unemployment insurance ndustry or firm financed) far beyond the limits hich are now actually applied in practice to the oint of full coverage of wage income for the eriod of a year or perhaps a minimum of 40 eeks of the year, instead of only 50 or 60 percent wages for 14 to 26 weeks, we should have arved, at least in terms of the income receipts of e protected individuals, at the same point as e guaranteed annual wage. Under the guarand wage, of course, the worker not only receives ontinuous income payment during the period which the wage is guaranteed; he may also be ject to the call of the employer for the performe of work.

rom one point of view the guaranteed wage be looked upon as 100 percent unemployment urance, for at least a limited time. But it is en more than that, especially where it involves "guaranteed work" as well as income. It carries the principle of merit (or experience) rating to its ultimate degree; the whole burden of maintaining the worker is assumed by the employer. Any use he can make of the workers is all to the good since his labor costs go on anyway. Under the unemployment insurance plan, the worker is obligated, in return for income payments, merely to register at the public employment office and actively to seek work if it is available. If work is found, the insurance payments cease and wage payments begin. Under the guaranteed wage, wage payments continue with or without work. but the worker is under obligation to work whenever the employer so directs. And especially if the guaranteed wage is integrated with unemployment insurance, as we suggest, he will also be under obligation to seek work elsewhere.

The guaranteed wage plan, accordingly, as opposed to the principle of unemployment insurance, tends in the direction of bringing work to the worker in the employer's establishment. Unemployment insurance, through the unemployment exchanges, seeks, on the other hand, to send the worker to the job wherever it may be. This difference can, however, easily be exaggerated since an employer under the guaranteed wage also may seek to place his idle employees in jobs elsewhere and with other establishments.[15]

Nevertheless, the guaranteed wage tends rather more than unemployment insurance toward fixity of jobs in regions and establishments to which work must be brought. The maintenance of labor mobility is no easy matter; yet much could be done to keep productive resources fluid in reference to changes in technology and in demand. Employment offices, operated in conjunction with unemployment insurance, if effectively managed, aim to promote the movement of workers from old establishments and regions to new ones as dynamic changes in products and in wants arise. Under the guaranteed wage plan the main effort is to provide work for the worker on his old job or at least in the firm to which he is attached; under unemployment insurance the emphasis is placed upon connecting up workers and jobs in any firm offering suitable work, preferably in the

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A rough calculation suggests that unemployment compensacovers less than a fifth, and possibly not much over a tenth, e wage loss from all unemployment. The system is much effective in compensating total unemployment wage loss in times than in bad.

[15] See our policy recommendation in chapter VI calling for an integration of unemployment insurance benefits and guaranteed wages.

region where the worker is located, but if not there then elsewhere, at least within reasonable limits.

To sum up, a full employment program is designed to maintain, within reasonable limits, adequate aggregate demand. Emphatically, it will not guarantee every worker a continuous job. It does no more than to ensure plentiful employment opportunities—a brisk demand for labor. And in order to achieve reasonably full and sustained employment, a fairly high degree of labor mobility is required. A full employment program must therefore include, as a part of the plan, retraining provisions, travel allowances, and adequate provision for working-class houses where jobs are available.

Nevertheless, at best, there will still be seasonal, technological, and transitional unemployment. A full employment program, therefore, leaves many workers unprotected unless supplemented by a well-developed scheme of unemployment insurance. Social security is therefore necessary, in order that at least a minimum income will be received by those workers who suffer the effects of the unavoidable unemployment which is a by-product of the manner in which production is carried on under modern conditions. This insurance of a minimum of income, since a job cannot continuously be guaranteed to everyone, is the right of all workers, and is so recognized in all modern democracies.

Within the framework of a full employment program, supplemented by unemployment insurance, a highly important function can be served by the guaranteed wage. There are already a substantial number of persons, including professional and salaried workers and some wage-earners, who have achieved a fair degree of job security, if not in a formal guaranteed wage, at least in its practical equivalent. This group could doubtless be enlarged even without a full employment program. Standing alone, however, without the protecting influence of a steady, brisk demand for labor, any widespread expansion of unlimited guaranteed wages might encounter serious difficulties. Within the pattern of a realizable high employment program of sustained aggregate demand, the guaranteed wage could be extended to include a fairly high proportion of workers in the labor force. For some firms or industries the number of weeks guaranteed might be 40, for others 45, and for others 50. The guaranteed wage, safeguarded in view of the risks involved and properly integrated with unemployment insurance,[16] could play a significant role as a means of providing income security. Most important of all, however, is the task of securing continuing high levels of employment. Income security cannot take the place of steady productive employment.

IV. GUARANTEED WAGES, OVER-ALL EFFECTIVE DEMAND, AND THE BUSINESS CYCLE

INTRODUCTION AND BRIEF SUMMARY

The subject matter of this chapter, the quantitative effects of guaranteed wages upon total demand and upon business cycle fluctuations, is intrinsically complex and can only be analyzed in rather technical terms. Perhaps it is for this reason that the voluminous literature on guaranteed wages scarcely scratches its surface. Nevertheless, no economic analysis of guaranteed wages could be complete without coming to grips with the question as to how effective such plans can be in reducing over-all unemployment and in moderating the business cycle.

For readers who are not interested in the technicalities of analysis, a few of our more important findings may be briefly sketched. However, to appraise their validity, there is no escape from the more detailed analysis which follows this section

In this chapter we do not consider governmenta programs of any kind. If the guaranteed wag were to be a governmentally financed program that would be one thing; and the economic an political implications of such a plan would the need to be examined. But this is not our concer in this chapter. We consider here the economic of a privately financed guaranteed wage. Ho would a privately financed guaranteed wage, take by itself, affect (*a*) the fluctuations of the busine cycle, and (*b*) the level of effective demand, pr duction and employment over the cycle. It is i portant, we repeat, for the reader to rememb that the problem before us is concerned exclusively with the economic effects of a privately financed guaranteed wage.

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[16] The problem of integration is discussed in ch. VI.

Those who concentrate upon the expansionary effects of guaranteed wage payments, to the neglect of how these payments are financed, come out with an exaggerated notion of the efficacy of wage guarantees to combat depression and unemployment.

It is not inconceivable that the guaranteed wage could be the means of inducing (by providing worker security and in other ways) a higher man-hour productivity. But there is no evidence from experience that increases in productivity, as such, tend to iron out the cycle or to raise the level of employment over the cycle. Increases in productivity are important from the standpoint of raising the standard of living, but not from the standpoint of eliminating the cycle. Guaranteed wage payments (whether they induce increased productivity or not) may, however, help to iron out the cycle if they are financed from reserves accumulated in good years and paid out in bad years; or they may, to some extent, raise the level of employment in the depression phase, through the redistribution of income when financed on a pay-as-you-go basis.

The fact that a guaranteed wage plan might more or less "pay for itself" is certainly signifiant. But only insofar as the plan redistributes ncome over time, or else redistributes income beween economic groups, will it have any effect ither on the stabilization of employment or in aising the level of employment. Our tentative onclusion is that the guaranteed wage, by itself, s not likely to prove very effective either as a eans of stabilizing the cycle or of lifting the level f employment over the cycle, although the guarnteed wage may be partially effective in regularing seasonal employment.

With respect to the redistribution of income, obody can say just what percentage of the finanal costs of guaranteed-wage plans will fall on rporate stockholders rather than on consumers wage earners. Except to the extent that the sts fall upon net corporate savings (without fecting dividends or interest outlay, or net corrate outlays on plant, equipment, or invenries), guaranteed wages may be regarded as a rm of personal income redistribution. Such a redistribution may be highly desirable on social grounds. But the available statistical data showing (*a*) how people in different income classes allocate their extra dollars between saving and consumption expenditure, and (*b*) the relatively small proportion of the total national income flowing to the high-income groups, suggest that such redistributions are of somewhat limited quantitative significance in raising the level of over-all purchasing power.

Apart from such personal redistribution and its relatively limited effect, we conclude that in periods when net investment outlays for the economy as a whole are deficient, causing a decline in employment and in business profits, the guaranteed wage may, indeed, for a time maintain consumption expenditure. For this to be true in these circumstances, the payments would have to be financed from accumulated business reserves previously set aside to cover guaranteed-wage payments in the subsequent depression, or else from current undistributed profits and depreciation charges not invested in plant, equipment, or inventories. Under the assumptions made (apart from redistribution of personal income via lower wages or higher prices), these would be the only methods of finance, government support being ruled out. But the amount of guaranteed wages that could be financed from depression business profits and surplus would be quite limited, even though no account were taken of possible unfavorable effects on the economy which such losses might entail. And if the amounts set aside in reserves in boom years are large enough to cover the risk involved, new problems are encountered which are rather serious. While moderate reserve accumulations could help to iron out the cycle, large reserves (as we shall see in the discussion which follows) might seriously intensify the savings-investment problem. Thus, either way, there are, we believe, rather severe limits to the extent to which the guaranteed wage can iron out the cycle or raise the general level of employment over the cycle.

We do not wish to overstate or overemphasize these somewhat pessimistic conclusions. Indeed, in the discussion that follows they are qualified at many points. Nonetheless, we must once again stress the limitations of the guaranteed wage as a remedy for the business cycle, and emphasize the need for a well-rounded full-employment program including both public and private policies designed to keep our economy stable at a high and growing level of real income.

JOBS AND MARKETS

Let us begin our detailed technical analysis by considering the simple view that guaranteed wages and employment maintain incomes and jobs, that steady incomes mean steady sales of business, which in turn give rise to high and steady employment. In short, jobs make markets, markets make jobs, and so forth, indefinitely. According to this view, a serious depression like that of the early thirties is nothing but a vicious circle; for one reason or another, the public and business has become frightened enough to contract spending; this initial contraction of spending has resulted in reduced levels of business sales and consumers' incomes; and this situation tends to perpetuate itself at low levels of national income and high levels of unemployment.

Some such theory as this is widely held both by many conservatives and many liberals. The latter say, "All we have to do to cure such a situation is to prime the pump for a little while. Once the system gets back on its feet the Government pump priming can stop because the new circular flow of income-sales will be able to maintain itself at high levels of employment."

We believe it fair to say that the majority of modern economic experts reject this view just as they reject its oversimple conservative version which goes something like the following: "Any depression can be temporary if businessmen and the public will keep their heads and realize that prosperity is just around the corner. The Government should steer clear of the whole situation, except for a little necessary emergency action. Then, if people will only act upon the assumption that conditions are fundamentally all right, and if they will only 'buy now' instead of later, the corner of prosperity can be permanently turned."

The majority of modern economists, let us repeat, do not believe that such a theory squares with the monetary, statistical, and historical evidence accumulated by students of the business cycle. They find themselves forced to reject the assumption that, like Gilbert and Sullivan's all-powerful Mikado(all we have to do is declare jobs guaranteed, and ordering that this be done is just as good as if it were done.

We do not deny that there is a germ of truth in the above viewpoint: Pessimism and reductions in spending do involve some elements of the vicious circle character, and the descent into a depression is of a cumulative, self-aggravating nature. But fundamental facts of economic life are ignored by this overly simplified theory. The fact is that people do not spend all their income on consumption goods and services. Retail sales by business to the public constitute only a part of the total national income produced at high levels of employment. Around one-eighth of national income,[17] when employment is high, has throughout our history of the last half century gone into the form of investment goods or net capital formation. And it is capital formation that basically represents the difference between prosperity and depression. All the available statistical evidence shows conclusively that capital goods and durable consumer goods experience the greatest amplitude of variation over the business cycle. Moreover, this variation spreads throughout the economy, in particular affecting the volume of nondurable consumption expenditures and replacement capital expenditures, and so it has a magnified effect on aggregate outlays, income and employment.

For the purpose of this report, it is not necessary to enter upon the controversy as to just what the long-run prospects for investment are, or just what in the past have been the primary causes of investment fluctuations. It is enough to record the fairly substantial agreement of economists that among the important factors affecting investment behavior are scientific inventions, technological innovations, population movements and growth; changes in tastes; relations between different elements in the price, cost and wage structure; interest rates and availability of capital; investor psychology and businessmen's expectations; attitude, legislative acts and policies o government; governmental public works and public development projects; and so forth.

Now it is not at all clear how much, if at al the guaranteeing of wages as such would affec the sum total of these factors in a manner favorable to the maintenance of the high levels of total outlays necessary for full employment—if, without guaranteed wages, otherwise adequate demand were inadequate. It is not even as yet clear in what direction or to what degree the over-all balance of saving and investment would be affected by the widespread adoption of the guaranteed wage.

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[17] If one preferred to relate gross investment to gross nation product, the ratio of investment to national product would far higher.

WILL GUARANTEED WAGES STABILIZE CONSUMPTION?

But cannot the following limited case be made for guaranteed wages: Would not the widespread doption of such plans at least succeed in stabiliz- ng consumption, with the effect that fluctuations n national income would then be confined to the elatively small sector of the economy—the cap- tal-goods industries? Also, would not the suc- essful maintenance of consumption moderate, at east in the short run, some of the wide swings f investment—those dependent upon the level of rrent business sales? Finally, would guaranteed ages raise the total level of consumption over e cycle, and so also lift the average level of vestment?

These are separate but related questions. The swer to the first is fundamental and prepares e way to an answer to the others. If it can be own that guaranteed wages would stabilize the vel of consumption, much (though far from ough) will indeed have been proved. For under e present system of wage and job tenure, fluctua- ns in the relatively minor (say, one-eighth) part our economy concerned with net investment give e to "multiplied and amplified" fluctuations in sumption as well. Thus if full employment national income in the postwar were about 0 billion, and net investment were to drop y to nothing, the loss to the economy would simply be around one-eighth of national in- e—or some $20 odd billion.[18] As workers and perty-owners in the capital-goods industries income and contracted their consumption expenditure, there would be set in motion a chain of cumulative contractions in income which might be two or three times as large as the initial decline in investment expenditures. In short, a relatively small failure in investment outlay tends to result, under our present system, in considerably larger changes in total income, because of the "secondary" contraction of jobs and consumption expenditure.

If the consumption outlays could smoothly and instantly rise whenever investment declines, we should not experience any general decline in aggregate demand in a prolonged depression. But this is simply not possible. Individuals will not suddenly change long-established customs and habits with respect to the disposition of their incomes between consumption and saving merely because, from the social standpoint, the turn in the cycle calls for an increase in spending out of a reduced income. Thus an offsetting increase in consumption cannot and does not occur. Worse than that, consumption actually falls off when investment declines, since unemployment and declining business prospects induce a decline in private spending patterns.

This induced decline in consumption could indeed be avoided if, by some "magic," substitute income payments could be found to take the place of the declining capital-goods pay rolls. These substitute income payments, since they do not correspond to any productive output, would be in the nature of "transfer" payments. Ideally, they might be financed out of the stream of saving which always characterizes full-employment income levels. By this "magical operation" the income flow would be maintained even though net investment should fall to zero and cause considerable primary unemployment. In short, the savings stream, instead of financing new investment, would be transferred to idle workers and the owners of idle resources. Total consumption would thereby be maintained.

Perhaps a bald statement of the problem in these terms may help to reveal the lack of realism involved in over-simplified assumptions with respect to the maintenance of consumption and employment. Unfortunately, economic analysis of guaranteed wages does not seem to substantiate the claim that this device would, as a first approximation, necessarily tend to maintain consumption for

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Even when gross investment is positive in the sense that capital goods are being produced, net investment may well egative if the total value of capital goods output is less than mount of capital goods being used up. In view of the fact gross and net investment differ only by the fairly constant itude of capital consumption or depreciation, absolute es in gross and net investment can be used interchangeably urposes of business cycle analysis.

any appreciable period of time at the appropriate full employment levels, i. e., roughly at seven-eighths[19] of the full-employment level of net national income.

To illustrate the point, let us consider the case where investment opportunities are only such as to replace existing capital. It is not enough then for all employers in the consumption goods industries to undertake guaranteed wage plans. Rather, all employers—in both consumption and capital-goods industries—must carry through with such guarantees. Total consumption and saving typically depends upon total national income (at least as a first approximation) in such a way that in order to ensure a volume of consumption equal to seven-eighths of full employment national income, the actual amount of national income accruing to people must be eight-eighths of the full employment level. If investment opportunities are for the moment moribund, where is the "missing eighth" to come from?[20]

If investment opportunities are temporarily in large part saturated—plant and equipment having been built up during the preceding boom period to about as far as prevailing technology justifies, and if houses, hotels, office and commercial buildings have been constructed to the extent (and in fact often farther than is) justified by growth and the requirements of prevailing standards—then investment outlays will decline even though consumption expenditures could, in some manner, be stabilized at the boom level. And, if this is so—and the experience of business cycles for 75 years supports this analysis—then the producers of capital goods will not be able to continue to operate at levels adequate to maintain their pay rolls or to pay guaranteed wages to their employees. And when the market for the capital-goods industries drops out, then a large fraction of the market for consumers goods will also disappear. This is the situation which cannot be waived by the over-simplified theory which holds that jobs provide pay rolls, pay rolls provide markets, and markets in turn provide jobs. The overly simplified version did indeed fit reasonably well into a primitive economy where capital goods played no significant role. And it is for this reason, basically, that primitive economies, while poor, nonetheless rarely suffer from unemployment.

If the "missing eighth" continues to be lacking, how can consumer outlay be kept up to the maximum level reached in the boom? This is the crucial question: by what method of financing is the wage guarantee to be maintained? And yet throughout most of the literature on guaranteed wages, this whole problem is either neglected completely or passed over lightly. To remedy this defect, the rest of our chapter will analyze in some detail the effects of different methods of finance—pay-as-you-go and reserve.

If a guaranteed wage plan keeps a man from being laid off and makes possible the maintenance of his income, then it is not unreasonable to expect that it will result in an increase in his consumption purchases over what they would otherwise have been in the absence of such a plan. So far, so good—but we have not carried the analysis very far if we stop with the expansionary effect of guaranteed wage expenditure.

If the Government were paying the bill, not out of tax revenues, but by the printing of crisp new dollars or by loan-financing, that would be one thing. The discussion of the implication of such a policy, together with relevant comparisons with other antidepression programs (which might b more justifiable and promising), would take u very far afield and far beyond the scope of ou present study. When only private finance is in volved, it is necessary to give attention to som important factors which offset the favorable in come maintenance effects, as we shall see.

BUSINESS CYCLE STABILIZATION AN PRODUCTION EFFICIENCIES RESUL ING FROM GUARANTEED WAGES

Before entering upon a discussion of reser and pay-as-you-go financing, we must digress consider a point which is given considera weight in the literature of guaranteed wage pla Such programs, it is claimed, often more than p for themselves because of the production effici cies resulting from lower labor turn-over, grea labor efficiency, and fuller utilization of capital. Especially in connection with the ironing out of seasonal and irregular fluctuations is this likely to be the case. If the general business cycle is not brought under control, it is more doubtful that the increase in efficiency will be nearly as great as the costs of maintaining income payments in the face of conditions which fluctuate independently of the firm's control.

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[19] This includes local community and other governmental services (education, for example) financed from personal taxes. In modern communities this is one important way in which consumers spend their incomes.

[20] All through this analysis we are assuming, it is to be remembered, that the guaranteed wage is financed by private industry and not by the Government. If consumption were automatically maintained by Government outlay, the case would be entirely different.

However, in any case there may be some savings in cost to offset against the expense of guaranteed wages. The question will inevitably be raised, therefore, as to whether widespread guaranteeing of wages cannot by itself iron out the business cycle, or at least maintain income steady throughout the cycle, and do this without any net cost to the business community. The remaining paragraphs in this section aim to throw light on these questions and clear the ground for the analysis of reserve and pay-as-you-go financing.

If the savings in cost through increase in efficiency were very important, the individual employer would be helped to finance his guaranteed wage, but it would not necessarily solve the problem of unemployment for the economy as a whole. ncreased labor productivity, meaning among ther things that less employment is provided by given volume of output, would raise the same roblems of unemployment and purchasing power s technological inventions. About this there is a rge literature, the consideration of which would ead us rather far beyond our immediate task. he mere reference to this literature is, however, ufficient to show that in the absence of a positive ull employment program, it cannot safely be assumed that technological and other developments esigned to increase worker productivity, would utomatically increase and stabilize aggregate employment and aggregate demand in the economy a whole.

If the guaranteed wage could induce an increase productivity sufficient to cover its cost, this ould be a great social gain leading, as with all vances in efficiency, to a potentially higher real come; and in an expanding economy in which chnologically displaced labor quickly became absorbed, this potential would actually be reald. But the mere fact that a guaranteed wage an or an invention "pays for itself," will not one tend to reduce the fluctuations of the cycle. There is no evidence from past experience (nor could it be expected on grounds of general analysis) that gains in productivity tend to have this effect.

Nevertheless, it is possible for the cost-savings of guaranteed wages to be used in such a way as to promote stability over the cycle—that is, by investing the financial cost-savings in good times into a reserve fund out of which payments are made in depression. This leads us into the whole problem of pay-as-you-go and reserve financing. After we have analyzed these devices, we shall return to efficiency cost-savings.[21]

TWO METHODS OF FINANCE

There are two methods by which widespread guaranteed wage plans could be privately financed. First, there might be some sort of reserve plan, according to which funds would be collected during the expansionist boom phase of the business cycle; and then during the contractionist depression phase of the cycle, these funds would be dispersed in the form of guaranteed wages. This same reserve principle is already in effect in connection with our Federal and State unemployment compensation program. The best case could be made for the anticyclical reserve method of financing if our economic system could be regarded as suffering only from cyclical swings above and below some "normal high-employment" level.

The second general method of financing guaranteed wages, is that of so-called pay-as-you-go. In contrast to the anticyclical reserve plan, in any given year the costs of guaranteed wages would be approximately balanced by current charges against sales or business gross income. Such a plan would involve relatively small payments in the boom years and therefore relatively small costs. In depression years, however, the payments would be large and the redistribution of current income would be considerable. The question to which we wish the answer is how much the payment of currently financed guaranteed wages might so redistribute income as to raise the level of consumption expenditures (or in more technical language the consumption function) and thus increase total aggregate outlay beyond what it otherwise would have been in the depression period. How would the cost be distributed between business net savings, wages, and consumer prices?

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[21] See below, footnote 26, p. 445.

PAY-AS-YOU-GO FINANCE

Except for the earlier discussion of any possible induced increases in productivity, pay-as-you-go financing necessarily involves a process of redistribution of income between the various claimants to the national income—a redistribution which would fall mainly in the depression phase when large guaranteed wage payments would be made.

How such a redistribution affects aggregate demand is one of the most difficult questions in the whole field of economic analysis. At the present time, there does not exist sufficient theoretical and factual knowledge to permit a confident or precise answer. It involves the same perplexing problem as that of the incidence of the taxes raised to finance our whole social security program; or for that matter, of the incidence of corporate and business taxes in general.

As we have already noted, we assume that any increase in productivity induced by the guaranteed wage has already had its effect in total real income. The problem to which we address ourselves, therefore, is the redistribution effect of the guaranteed wage. Three extreme positions can be stated, with the truth probably lying somewhere in between: (1) The cost of guaranteed wages is borne completely by profit-receivers through reduced earnings of their properties; (2) the cost is shifted forward completely to consumers; (3) the cost is shifted back onto workers, who lose in wage rates what they gain in steadier income.

A survey of the literature on social security taxation would show widespread doubt that most of the increase in pay-roll costs could, except in the shortest run, be at the expense of corporate profits. Economists who have written on this subject seem rather to incline to the belief that the primary incidence would be on wages or on consumer goods prices. We would be rash to attempt a pronouncement on this difficult quantitative question, since not even the two of us would be in perfect agreement as to our rough guesses.

In depression when profits are already low or negative, the heavy extra costs of guaranteed wages are perhaps even less likely to fall in large part on capital. This conclusion is reinforced when we remember that guaranteed wages are to be superimposed on a system of developed collective bargaining, where already labor is attempting to keep wages high and is already taking some advantage of management's ability to pay.

But let us first, for the sake of the argument, suppose that the cost of guaranteed wages does fall largely on profits. Then wage income will be larger, and dividends smaller. Since the bulk of dividends does not go to poor widows and orphans, there will probably be some favorable effect upon the propensity to consume. But the extent of this should not be exaggerated. The difference between the average propensity to consume[22] (and to save) of the rich and poor is known to be very great. But the available evidence from governmental family budget studies seems to suggest that the marginal propensities to consume (and save)—and it is only these which are relevant—differ less sharply between rich and poor than do the average propensities. Dollars redistributed from wealthier common stockholders to workers add something to total consumption purchases, but less than is usually supposed. Nevertheless, to the extent that such a transfer is feasible consumption is thereby increased.

Not all corporate profits are paid out i
dividends. Some go to that other silent partner o
business enterprise, the government. Con
ceivably a shift from profits to wages might lowe
tax revenue and, other things being equal, con
tribute to larger depression loan financing and s
to a slightly higher level of over-all expenditur
in other words to a slightly higher level of effe
tive demand. It should, however, not be hard
find other more obvious ways of expansion if d
pression and unemployment call for expansiona
fiscal policies.

A considerable part of profits goes into net c
porate saving, representing undistributed prof
or additions to earned surplus. Part of the i
crease in guaranteed pay rolls might be expect
to come out of such net corporate saving. (T
is true even in deep depression, when net corpor
saving may be negative if dividends are being p
out in excess of current earnings; because
guaranteed wages the figure might bec

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[22] "Average propensity" refers to the proportion of income
sumed (and saved). "Marginal propensity" refers to the pr
tion of any small additional increment of income which is
sumed (and saved).

algebraically more negative.) An increase in the payment of wages at the expense of corporate net saving would, taken by itself, tend to raise the level of total effective demand. But this conclusion would be true only on the assumption that there would not at the same time be adverse effects upon the corporation's inducement to invest.

In time of deep depression, most firms do not even replace much of their depreciating equipment. Yet they still, on their income statements, nclude charges to depreciation reserves as an item of cost to be subtracted from gross earnings in ar- riving at net profit. But these depreciation harges are expenses that, at the moment, involve o outlay. It would therefore be wrong to con- lude that a firm which was suffering business osses was necessarily flooding the community with urchasing power. A more meaningful measure f a firm's expansionary or contractionist in- uence, taking all factors into account, would be e difference between its gross investment ex- enditures (including replacement outlays) and s gross saving (including depreciation); or, what mes to the same thing, the difference between s net investment and its net saving.

With net and gross investment already cut to e bone, in a period of depression a further re- ction in earnings (and net saving) might not ve any very significant effect upon net invest- ent. But in the first years of recovery from a pression, or during the first years of descent o depression, there might be some counter- ancing adverse effects upon investment—al- ugh not necessarily dollar for dollar. These verse effects might arise *ex post* simply because an imperfect capital market many firms must pend upon their own funds for their investment lays.

robably more important would be the effects expectations aroused—the adverse effects upon estment decisions at all phases of the cycle. ing the boom, businessmen will be somewhat y of undertaking certain doubtful marginal stments if they expect to be unable to cut their roll when times become bad. The harmful l effects upon the average level of net invest- t over the whole business cycle could conceiv- be greater than the quantitative reduction in usiness saving. Or less. No one can say.

We may sum up the case usually considered most conducive to an expansionary effect of guaranteed wages—where the costs fall completely on profits—by saying that stimulus to the level of purchasing power and effective demand is of somewhat doubtful quantitative magnitude over the business cycle as a whole. In depression times, the quantitative effects may be somewhat more important, but still should not be exaggerated.

Let us turn now, more briefly, to the more realistic case where a considerable part of the cost of guaranteed wages is assumed to fall on wages or upon the consumer's real income. If only seasonal or short rhythms of particular industries are being considered against the background of a full-employment society, such a method of meeting the costs may lead to a more nearly optimal system of pricing and use of economic resources. But from the standpoint of business cycle fluctuations, such a method of bearing the costs of guaranteed wages is fairly neutral in its over-all effects upon production and (real) effective demand.

If the cost falls upon wages or raises consumer goods prices, then income is being shared by those who are employed with those workers who would be without pay if it were not for the guaranteed wage. If such benefited workers are not already in high-paid industries and do not already have high current incomes (apart from the guaranteed wage) this whole process may involve some redistribution of income from average income receivers to those who are more needy. Just as with schemes for sharing work through reduced hours, this redistribution might result in some slight increase in the propensity to consume for the community as a whole. However, the point made earlier concerning the smaller difference between marginal propensities of different income classes would apply here with even greater force—since the difference between incomes is in this case relatively small.

The guaranteed wage would amount, in these circumstances, to a sharing of the income between those productively employed and those unemployed. In other words, those who are earning incomes at productive employment would be defraying the cost of the guaranteed wages. This is all the more true in view of the fact that under depressed conditions, profits could cover no appreciable part of the cost. Thus, the guaranteed wage, under these circumstances, would in fact be a "share-the-income" program. In place of a "share-the-work" plan, we would have a "share-the-income" plan. There would occur a shift of income among the wage-earner and consumer groups with no sizable effect upon the aggregate propensity to consume.

We may conclude, therefore, that a pay-as-you-go financing of guaranteed wages which does not fall on profits would result in little change in the level of income determination at the different phases of the business cycle. With real investment fluctuating over the cycle, real total consumption (all groups in the economy considered) would not remain stable, and real income would still fluctuate more than the absolute variation in net investment. Only to the extent that the cost can be saddled on to corporate profits, and more specifically upon corporate saving and not upon investment, will the guaranteed wage plans have any appreciable expansionary effect upon the level of over-all production and employment.

This does not quite exhaust the analysis of guaranteed wage financing on the total level of effective demand. As yet no mention has been made of the possibility that the enhanced security engendered by guarantee plans might cause workers to save less over the cycle, and to purchase with their savings more durable goods such as autos and houses. This is a possibility, and to the extent that it is effective, it would work toward some strengthening of the average level of effective demand.

Can a similar case be made out for the proposition that the guarantee device will cause employers to cast about for new productive activities and thereby raise the average level of employment? As far as a single concern is concerned, there may be something in this. If a locomotive or other capital-goods producer were to take on a consumers-goods line, such as breakfast food, he would no doubt smooth out the variation of his employment and production. But for the economy as a whole, little or nothing has been gained. The average income elasticity of demand and the over-all fluctuations in income are the same as before. Similarly, if an auto company, to make work for its own employees, cancels subcontracts with suppliers and begins to make its own parts, there is no over-all gain. If the beer industry, by heavy advertising, gains at the expense of the bakery or confectionery trade, the over-all situation is the same. Only too often, the devices which seem to stabilize one concern's production are at the cost of somebody else's destabilization.

The only true exceptions, from a business cycle point of view, are policies which involve additional net investment for the community as a whole, or an expansion of consumption standards. "Producing for stock" is one stabilization device frequently mentioned by writers on guaranteed wages. Such a policy does involve net investment. How important can this factor be over the business cycle? The answer is somewhat discouraging, except for brief cycles. Production for stock might in 1930 have kept employment from slipping off as rapidly as it did. But such positive net investment in inventories is only too likely to result subsequently in commensurate disinvestment, making 1932 and 1933 even more depressed. A brief recession in business believed to be temporary might be bridged by this device. But a sharp inventory recession of the 1921 or 1938 type is likely to be accompanied by so much price uncertainty as to render this device relatively ineffective.

We must also not lose sight of the fact that many of the policies of businessmen that lead to larger total investment and employment do not give rise to much employment within their own plants. When railroads order new equipment, the extra jobs are not provided for railway labor. When a merchant or manufacturer "buys for stock" the task of guaranteeing jobs is eased for his supplier but not for himself. It is true that he is somebody else's supplier, and that if all together pursu expansionist policies, all together may benefit But it is not less true that anyone who holds bac will also benefit from the expansion of the others and it is somewhat Utopian to rely upon collusiv decision-making by business as a body or upo altruistic social planning by isolated businesses

The figures of seven-eighths consumption ar one-eighth saving are given by way of illustratio They should not be interpreted literally, especial since in many downswings of the business cyc autonomous net investment (caused by advanc in technique and the like) will not disappear co pletely. Less than one-eighth of the full e ployment income level would then have to be ma

p by guaranteed wage programs in order to keep
tal consumption stable.

There is also the further possibility that some
ppreciable part of net investment expenditure
not "autonomous" but is "induced" by, or is de-
endent on, the level of consumption or income.
ccording to this type of argument, if guaranteed
ge plans succeeded in keeping consumption at
higher level, then an appreciable amount of net
vestment would be induced (over what there
uld otherwise have been).[23]

The weakness in this argument stems from the
t that a given stationary level of national in-
ne, no matter how high it is, cannot on balance
supposed to include any continuing net—as
tinct from gross or replacement—investment.
is only the change in the level of income that
uces net investment. When the stock of capi-
has become adjusted to any new level of in-
ie, no matter how high, net investment would
in disappear [24]—in the absence of technological
nges and interest rate variations.

hese rather long-run considerations will not
n decisive to the adherent of guaranteed wages
business cycle cure. He will ask, "Isn't the
ness cycle a short-run phenomenon? Would
the maintenance of consumption lead to in-
ed investment (over what it would otherwise
been) for at least the few years that a depres-
usually lasts?"

ie answer to both of these questions may well
the affirmative. But this does not mean that
temporary, once-and-for-all, induced invest-
effects of consumption maintenance can be
rded as raising the average level of demand
employment over the whole cycle. What is gained in investment during the depression is likely to be at the expense of investment during subsequent periods. By virtue of induced investment effects, guaranteed wage plans may have some stabilizing effects on the cycle—by expanding depression demand at the expense of the following boom-time demand. In this it resembles reserve financing, which we are about to discuss, with the difference that reserve financing usually fills in the trough of depression at the expense of the previous rather than the subsequent peak. But neither method is likely to expand demand appreciably over the cycle, unless Government loan financing or private corporation net savings are used to finance the guaranteed wage plans. Moreover, as we have seen, any favorable induced investment effects must be set against the unfavorable effects upon net investment and venture capital resulting from the recognition by potential risk-takers that guaranteed wage plans are likely to increase their costs and risks.

One final point favorable to the guaranteed wage. Over time, the consumption standards of people increase as people get used to higher levels of living. Any success achieved in maintaining high real incomes tends to breed further success. Unlike induced investment effects, "induced consumption" effects may be permanent rather than transient or once-and-for-all.

Once employment is guaranteed, labor becomes in the nature of an overhead cost rather than a variable cost. We should at least explore the possibility that this might lead to a pricing policy over the cycle which would make for greater stability of production. The beginner in economic theory is taught that really fixed costs should, at least in the short-run, be disregarded in output decisions and price formation; any business should not be refused which can at least earn something more than variable costs. If a large part of labor is no longer a variable cost, this might permit downward flexibility of prices to rather low levels.

In more advanced courses in economic theory (particularly those dealing with so-called "administered" prices and monopolistic competition) we are taught that "full" costs (including both overhead and variable costs) actually have an important influence on price formation, and this more sophisticated analysis appears to be in line with business practice and business opinion. In all like-

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technical terms, some economists would assume a "margi-
opensity to invest" (out of income) as well as a marginal
sity to consume. This would tend to increase the "multi-
effects of a given increase or decline (as the case may be)
onomous investment or autonomous consumption. But so
the two marginal propensities add up to less than one, then
teed wage plans will incur some over-all losses (payments
labor) whenever autonomous investment declines. How-
hose writers who assume large marginal propensities to
and large multipliers, seem to imply that the historical
in autonomous investment (the "multiplicands") were
ondingly smaller—in order to lead to the same observed
ions in total national incomes. Therefore, to such writers
sses" resulting from guaranteed wage plans would tend to
espondingly smaller.

s situation means that there are no changes in technology
g new processes of production or new products for con-
n. Changes in methods of production or in products
ften require new autonomous investment, which would
rise in national income.

lihood, this pattern of "full-cost pricing" tends to characterize those semi-monopoly fields where industry is likely to guarantee wages. Therefore, it is something of an academic exercise to investigate the effect of flexible downward prices which abstractly might be related to the conversion of labor costs from a variable to a fixed cost.

Twenty years ago most economists would probably have considered such downward price flexibility a highly effective way of meeting depression. Today we are not so sure. The modern economy (given our present-day institutions) does not seem to go through price deflation painlessly or easily. Still there is this to be said for the kind of downward price flexibility referred to above in connection with the guaranted wage. Such price reductions would not, it is assumed, be accompanied by wage reductions or any substantial decline in worker income, so that one of the worst aspects of a deflationary spiral would not be present. Still, increasingly it is the modern viewpoint that the price elasticity of demand is much lower in depression periods than used to be thought the case. Consequently, we should think it unwise to attach too great quantitative importance to the phenomenon under discussion even if it were likely—which it is not—that prices will show the proper cyclical flexibility rather than perverse flexibility.

RESERVE FINANCING

We must now analyze the possible effects of reserve financing. This method has most significance, and is most likely to be resorted to, in a society subject to pronounced cyclical swings. If, on the contrary, employment is reasonably stable, whether at a high level with low unemployment or at a relatively unsatisfactory level with chronic unemployment, one year is very much like another, so that there can be little shifting of the financial burden over time.

A gradual and experimental introduction and extension of the guaranted wage plan might be financed in part on a self-liquidating basis. A gradual expansion of the program as experience justified might be accompanied by cost reductions which could "carry" the reserve plan without resort to higher prices or wages lower than could otherwise be paid. On this basis, it is likely, however, that progress toward the guaranteed wage would be slow and would probably be largely restricted to firms whose employment experience is in any event favorable. If anything substantial were going to be achieved, it is probable that there could be no escape from a program involving, for the great majority of firms, the accumulation of reserves financed out of profits, wages, or higher prices. Without substantial reserves, the program would be discredited by a wave of defaults at the first onslaught of any considerable volume of mass unemployment.

An examination of the experience of various firms in the 1929–34 depression reveals how costly different guaranteed wage plans might have been. The high employment commitments of the late 1920's would have entailed heavy cost outlays all through the early and middle 1930's. If guaranteed wages had then been in existence, in a real economic and accounting sense, the men necessary to produce the high 1929 outputs would frequentl have cost the companies in the thirties more thar the total wages actually paid out to them at tha time. Prudent bookkeeping would have suggested that this expense be recognized in 1929 a part of the cost of that year's output, and tha funds be set aside to meet this contingent, bu nonetheless necessary, deferred expense.

Accordingly, if we mean by a guaranteed wag program something more than a cautious an tentative introduction by a few firms with highl favorable employment experience, we must e visage a substantial program of financing— other words, the accumulation of large guarante wage reserve funds. Now it is just this proble which we need to face in assessing the feasibili of the guaranteed wage plan, unsupported governmental financial assistance. How wou the accumulation of large guaranteed wage serves affect the functioning of the economy?

An analysis of the impact of the guarante wage system (financed on the reserve basis) up the flow of income and expenditure involves a c sideration of the manner in which such a progr withdraws funds from the income stream on one hand, and pours funds into the income stre on the other. If we envisage a highly fluct ing society, and if we concentrate attention the moment exclusively on cyclical unemploym it follows that a guaranteed wage reserve will, for the economy as a whole, withdraw fu

from the income stream in boom years, and pour
ack approximately equivalent funds in the de-
ression years. The same problem of "incidence"
f the costs arises here as under pay-as-you-go;
ut the timing is different.

If we assume that the annual charges to the
eserves are financed largely from higher consum-
r prices or lower wages, it follows that the level
f consumer expenditure would be less than other-
ise in the boom years, and higher than otherwise
the depression years. The "reserve method"
ps off the boom and fills in the valley of depres-
on. It is a method of redistributing expendi-
res over the time span of the cycle. The reduc-
on of expenditures in the boom period might re-
ce employment, or it might merely have the
fect of holding down price inflation.

In technical terms, the accumulation of reserves
ring prosperous periods tends to exert a de-
tionist influence at that time by reducing the
ective propensity to consume and increasing
verage thriftiness" or the effective propensity
save. The spending of the reserves in the de-
ession period exercises an expansionist effect by
sing the effective propensity to consume at that
e.

Taken as a package, this double-barreled pro-
m is socially desirable. But if the period of
called prosperity is like that of 1936 or 1937,
other words not one near to full employment,
deflationary influence of reserve accumulation
aken by itself, a factor reducing employment,
sumption, and in all likelihood capital forma-
as well. However, if the prosperity period
ne characterized by manpower shortages, by
much effective demand, and a tendency toward
tion, then the enforced reduction of consump-
is all to the good.

e need not treat in detail the mechanics of
process whereby reserves are accumulated and
ersed, because this problem has been widely
ussed in the literature on social security. If
anteed wage reserves consisted simply of
ing up of cash or bank deposits in good times
their dispersal in bad times, the process would
elatively simple. The quantity of money
d not necessarily have to undergo any changes
ts rate of activity or velocity would be lessened
od times and increased in bad.

If reserves are treated as trust funds investable only in Government bonds or similar gilt-edge securities, the mechanics might be slightly different but the final effect substantially the same. As a matter of fact so long as the Federal Reserve banks or the commercial banks are willing to buy or sell considerable volumes of Government securities, these assets possess many of the liquidity properties of money. If, in depression, the bonds accumulated in the reserve funds were bought by the banks, then the stimulus to effective demand resulting from guaranteed wage disbursals might appear as an increase in total bank deposits rather than simply as a change in the velocity of money. In good times, if the growing reserve funds absorbed Government bonds held by the banks, the result would be to curtail the volume of deposits during the boom below what it would otherwise be.

Any thoroughgoing discussion of this problem would have to take account of the effects upon the interest rate structure of both the accumulation and deaccumulation of such reserve funds. Broadly speaking, these secondary reactions upon the interest rate structure and the capital markets are to some degree perverse. The accumulation of reserves in good times would to some measure tend to raise capital availability and lower interest rates, so that some of the enforced reductions in consumption would seep over into investment rather than curtailing over-all demand.[25] Similarly in depression, attempts to liquidate reserve funds might have some upward effects upon interest rates and consequently, some depressant effects upon investment. However, these secondary effects can be minimized if reserve funds are confined to Government bonds. Moreover, the monetary authorities can easily, and should, take account of any perverse interest and other effects of reserve accumulation and deaccumulation and take appropriate action.

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[25] So long as the funds are not hoarded, there is always the possibility that some of the purchasing power diverted away from consumption will filter into investment. (It has been argued along similar lines that raising taxes in excess of Government expenditure to retire debt may prove not to be deflationary if the owners of retired Government bonds plough the money back into productive investment expenditure.) In a perfect capital market, where the favorable effects upon investment can only take place through a reduction in the interest rate, this secondary reaction to a primary reduction in the consumption schedule would in all likelihood be quantitatively smaller, dollar for dollar, than the original primary effect. This for two reasons: the doubtful responsiveness of investment to reduced rates of interest, and the adverse effect on investment outlay of reduced consumption sales. To the degree that the actual capital market is an imperfect one, always subject to informal rationing, investment may react somewhat stronger to larger loanable funds than if the investment rate alone were involved. This modifies but hardly alters our conclusion.

A new possibility would arise if governmental fiscal policy could be assumed in the years ahead to be effective in preventing inflation when the economic system is operating at full employment. Whenever private investment demand was excessive, fiscal and monetary policy, on this assumption, would curtail the excess. In such an environment, the widespread accumulation of guaranteed wage reserves would reduce to some degree the need for alternative deflationary monetary and fiscal policies. If carried to excess, however, such reserve accumulations might have to be offset by actual expansionist governmental policies.

There is no assurance that the level of income and employment over the entire cycle would be any larger under reserve financing. Among other effects, the program would bring about a redistribution of income, partly from profits, partly from consumers in general, and partly from productively employed workers to workers who, if there were no guaranteed wage plan, would cease to draw wages. If carried out on a relatively modest scale—one which would not seriously distort price-wage relationships—the effect would be to level off more or less the boom demand and to raise the effective demand in the depression period. But if really huge reserves were accumulated in boom years, adequate to pay annual wages to a large part of the labor force in a depression as serious as that beginning in 1929, the boom could easily be converted into a depression. Reserves of the magnitude required would cause a serious distortion in the economy. Some would prefer to state this distortion in terms of the wage-price structure, others in terms of a concealed tax on consumers and wage-earners, and still others in terms of a savings-investment problem.[26]

Apart from these theoretical considerations is the practical matter that actuarial calculations of the unemployment risk are not feasible. The reserves that are built up might prove too large. In this event the accumulation of reserves would amount to a compulsory savings scheme not simply in the boom years, but also over the entire cycle. Aggregate demand might thus tend to become deficient over the long run and create a condition of underemployment. (Of course if the long-run factors were inflationary, such compulsory saving would tend to be a stabilizing factor.) Finally, in a growing society, the setting aside of reserves, even though actuarially exact, nevertheless would still result in the growth of reserves over the cycle, and to this extent, would tend to aggravate the problem of maintaining adequate levels of aggregate demand.

On the other side, the inability to make reasonably accurate actuarial calculations of the risk involved might result in wholly inadequate reserves. Unemployment insurance reserve funds, though they undertake a very limited liability compared with a comprehensive guaranteed wage program have had to be supported in various countries b the Government treasuries. While large reserve have been built up in the State unemploymen funds in the United States, a serious and prolonge depression could easily bankrupt many of ther A guaranteed wage plan, even one limited to 4 weeks per year, could be considerably more costl than unemployment insurance. The reserv funds, to withstand a serious depression, migl have to be far larger than those needed for uner ployment insurance. Put to the test, guarantee wage plans might need Government support ev more than unemployment insurance. Thus, wh was intended to be a scheme based on priva industry financing might face default under t stress of serious depression, or else be compell to call upon Government support. This ri serves to stress all the more the importance of imiting the employer's liability, as suggested in hapter VI below.

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[26] If technological cost savings from the guaranteed wage plan (assuming for the moment that such plans do increase man-hour productivity) were placed in a reserve fund during the boom phase of the cycle and paid out in the depression phase, the effect would be a redistribution of income over time. The total income payments made to individuals in the boom would be made less than would otherwise have been the case; and during the depression the income payments would be increased. Financed as here assumed, out of increased productivity, there would result no redistribution of income between individuals, and no absolute reduction in corporate profits or corporate net savings. If however, the gains in productivity were nil or inadequate to cover the guaranteed wage payments, the added costs would have to come either out of corporate net savings or else from a redis bution of the income of individuals.

Only the reserve method of financing is capable of redistri ing the income over time, i. e., from boom to depression. redistribution over time has nothing to do per se with the q tion where the funds come from, whether from: (a) gain productivity or (b) redistribution of income between individ and social groups. If the reserve method of financing is used, gains from productivity will necessarily be passed on i form of (a) larger income payments, (b) increased outlay plant and equipment, or (c) larger corporate retained earn But none of these, apart from reserve financing, would to iron out the cycle.

It would not be possible to calculate with any igh degree of accuracy the actuarial risks involved n introducing guaranteed wage plans in different ndustries even in a society committed to a program f sustained full employment, and prepared to use scal, monetary and other measures to achieve this oal. A number of countries, including England, anada, and Australia, have issued white papers n employment policy proclaiming high and stable vels of employment as a deliberate aim and sponsibility of Government. The United States mployment Act of 1946 does not go quite that r. All the British countries referred to above ve recognized the difficulties involved, and none confident of anything more than moderate suc- ss. Thus, even with the best of good will and vorable circumstances, no one knows what gree of success may attend these plans. We ow that the war has left us the heritage of numerable distortions, and these will plague us many years to come.

Let us suppose, however, that we have surpassed s difficulty—that experience has, in fact, demon- ted a high degree of success with a stabilized l-employment program for a period sufficiently g to warant general confidence. Some fluctua- s there would nevertheless be, but more moder- and presumably fairly well under control. lical fluctuations of employment would be l, yet relatively large in the heavy capital- ls industries. Seasonal and transitional un- loyment would also be experienced.

the "ideal" society described above (and we at that we have no illusions that such a society quickly be realized) guaranteed wage plans, ately financed, might tend to moderate any re- ing cyclical swings, and to facilitate an at- on seasonal unemployment. Transitional frictional unemployment might be intensified e guaranted wage had the effect of reducing mobility.

ithin the framework of the society envisaged , cyclical unemployment might become a or less manageable risk, and accordingly, the ve funds needed to meet the financial liability involved would not need to be large. In this event there would develop no long-run problem of excessive compulsory saving in the form of reserve funds. The reserves accumulated in the good years would be dispersed in the relatively low years. This leveling process would tend to smooth any remaining swings in the cycle.

A buoyant labor market, such as that here assumed, would moreover be favorable to an attack on the problem of seasonal unemployment. Employers would be stimulated by the introduction of the guaranteed wage to find year-round work for their employees. It is one thing to place such a responsibility upon employers in a society such as the one we are living in, with its grave uncertainties with respect to the stability of the market and the adequacy of aggregate demand. It is quite a different matter to introduce the guaranteed wage in seasonal industries in a society in which, within reasonable limits, the adequacy of aggregate demand is assured. The development of supplementary lines is feasible in an expanding and buoyant society, whereas it might only supplant the product of some other producer in a limited market in which there was not work enough to go around. Seasonal unemployment might be largely eliminated in a full-employment economy. But even so, this important goal could not be reached unless ingenuity and resourcefulness were brought to bear on the problem. The guaranteed wage might offer a powerful financial inducement to employers to find steady year-round work for their employees. The technical job of dovetailing short-run fluctuations in employment is no mean managerial task, but a sustained high level of aggregate demand would provide an environment within which the job could be attacked with high promise of success.

We have spelled out these various prospects of the guaranteed-wage program within the framework of a society which had achieved a high and stable level of aggregate demand, not because we think such a society is going to be reached tomorrow or the next day, but rather to lay bare the difficulties confronting the guaranteed-wage program. The conclusion is not that the guaranteed wage must await the dawn of a perfect society. The conclusion is rather that we must take account of its limitations, and especially avoid procedures that may defeat the very purposes which it is intended to achieve.

Having in this chapter analyzed the effects of guaranteed wages upon the problem of business-cycle unemployment, we turn in the next chapter to a consideration of its influence upon the pricing system as it relates to the efficient use of economic resources. Even if the problem of depression were brought under control there would still remain the challenge of seasonal and other irregularities in production.

V. GUARANTEED WAGES AND EFFICIENT USE OF RESOURCES

The problems to be discussed in this chapter are of a rather abstract and general nature. Nevertheless, the theoretical analysis involved, even though briefly stated in this report, is, we believe, important in an over-all consideration of the guaranteed wage.

THE MERIT-RATING CONTROVERSY

In chapter II it was shown that the economic cost of idleness to the community could be primarily measured by the loss of output which it entails.[27] Suppose that a particular industry or line of activity has a record of great instability of production and employment. How should its prices and costs then be set?

This identical question was involved in the extensive discussion of merit (or experience) rating in connection with unemployment compensation. The original Wisconsin Unemployment Insurance Act, drawn up under the strong influence of John R. Commons and economists of his school, required employers with unusually poor records of stability to pay higher rates of taxation. Those demonstrating unusually good continuity of employment were granted lower rates—in much the same way that steel-frame buildings, relatively immune to fire risk, are granted low fire-insurance rates.

Two principal considerations are usually invoked to justify this procedure. First, and perhaps of least importance, is a feeling that fairness (justice or equity) implies that an employer should have to pay only for the evil which he creates, but that he should be made to pay for that. This particular argument is a highly controversial one. Numerous writers, perhaps even the majority, have dissented, arguing that it is the essence of social insurance (in contrast to private insurance) that there be a sharing of burdens between groups; the essence of merit rating, on the other hand, is the perverse principle of "to him that hath, shall be given."

The second argument in favor of making the industry bear the costs of its own instability has usually been the more important one. Under such a system, management is supposed to be encouraged to stabilize its operations. It is financially penalized if it does not stabilize; it is rewarded to the extent that it does. There is certainly something to this; as we saw in our earlier discussion of the present wage contract, labor appears to each firm as an avoidable variable cost. Current practices therefore tend to warp and distort the socially desirable adjustments of production.

We do not wish to enter upon the details of thi controversy. It is enough to note that the opponents of merit rating point to empirical data t show that employers are typically not able to d much about their own instability. Experience, is said, seems to indicate that employers' reaction to higher penalty rates are not sufficiently sensiti (particularly in response to the rather modera differences in rates usually involved in merit ra ing) to be very significant. Further, it is argu that employers with steady records are not usual better planners but are more often the lucky ben ficiaries of special market situations (often of monopoly type).

This economic controversy finally burned down in the years after 1935 when the Social Secur Act was passed. The theoretical honors, if e may judge from the literature, seem to have g ne against merit rating. Nevertheless, in rec nt years merit rating has been introduced in modi d form by almost all States, principally as a e-way street making for reductions in taxation nd tending to keep unemployment reserves f m growing so rapidly during the high-employm nt wartime years—that is, during precisely the m when such reserve accumulation might contri ute

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[27] Our earlier discussion also dealt with the additional evil arising out of the effect of idleness itself on the worker and community, and also upon the problem of equitably sharing the costs involved in idleness between different individuals and groups.

oward the fight against inflation and excess aggregate demand. This, and not the establishment of
ffective differentials spurring planning for sta-
ilization, has become the primary function of
ierit rating.

BUSINESS CYCLE VERSUS OTHER IDLENESS

When we turn to guaranteed wages, which is
quivalent almost to 100-percent unemployment
mpensation borne completely by employers,
hat was previously a rather stale academic exer-
se becomes a really vital economic problem.
ould the form of the wage contract be changed
as to raise, substantially, the costs of production
unstable firms?

A quite different answer must be given to this
estion depending upon the kind of instability
olved. We saw, in the last chapter and earlier,
t a typical business concern cannot really do
y much by itself to moderate the cycle, and
en what it can do represents no corresponding
gain for society as a whole but rather only
nges the place where instability appears. We
saw that widespread guaranteed wages by all
loyers together are scarcely likely, taken alone,
prove a quantitatively important stabilizing
or in an economy subject to wide swings of
estment, which in turn have a cumulative effect
ncome and employment.

he John R. Commons view that the price of
commodity should be made to bear the cost
he idleness which it involves—we do not say
es—cannot validly, we believe, be applied to
ployment of the business cycle type. In this
ter, we wish to consider whether or not a
ar conclusion would hold with respect to un-
e industries which operate in a continuing
employment economy; or to unstable indus-
which operate in an economy whose general
all activity is steady but at a relatively low
involving considerable chronic unemploy-

the risk of being wearisome, let us repeat once
why the problem of business cycle unemploy-
differs from that of seasonal or other ir-
r rhythms. The unstable sector of our econ-
s predominantly the capital goods industries.
gue that costs and prices should be raised
h industries flies in the face of certain commonly accepted programs for fighting depression—programs which stress the need to reduce construction costs, interest rates, and capital costs in general so as to stimulate investment outlays. It would be bad social accounting to discourage employment in the capital goods industries by saddling additional costs on these industries. Such a procedure is only too likely to reduce the total volume of capital goods outlays over the cycle, thereby leaving the system at a lower average level over the entire cycle.

The same matter may be put in still another way. When unemployment is the alternative to an industry's employment of a worker, the true social (opportunity) cost of hiring the worker is nil. Let us suppose that we undertake to saddle—in the form of an overhead—the financial cost of an idle worker upon the industry in question. If indeed, it were true that the capital goods industry were characterized by a high degree of perfect competition, in the short-run these increased overhead items would not cause any increase in the selling price of the product (a capital good) since under perfect competition the selling price would be forced, in periods of falling demand, down to a level below full unit costs. This means that saddling the extra labor cost (in the form of an overhead item) need not necessarily result in curtailment of output. Instead, it would cause the short-run burden to fall heavily upon the industry's stockholders. This might well be better than having it fall upon the workers, but is not necessarily better than spreading the burden of depression more widely on the community as a whole (assuming for the moment that the Government does not act to prevent depression).

The above result would hold only for a highly competitive industry and then only for the short run. In the longer run, firms would be forced out of the industry as a result of chronic losses (incident to saddling the industry with extra labor cost in the form of a guaranteed wage overhead) until enough firms had left to cause output to decrease and prices to rise to the level of full average cost (including overhead and taken over the whole business cycle). But such increases of the price of capital goods, as we have already seen, tends to reduce total employment.

If the industry is one characterized by considerable imperfection and by administered prices set by the firm, we might still have short-run ruinous competition. But more likely the firms will be aware of their competitive interdependence in pricing and of their monopoly power to raise prices without losing any considerable part of their customers. Full cost considerations are likely to provide a powerful rallying ground for the firms in the industry, so that, even in the short run, prices might rise. In the long run, the same result as already indicated would follow, although we must also be prepared for the possibility that so-called monopoly profits may be made to bear part of the cost.

In the absence of effective Government full employment measures,[28] it would not be good policy to permit the whole scale of capacity and labor force in the capital goods sector to shrink to a point where the average price over the cycle would cover full costs including the guaranteed wage overhead. This might only make the saving and investment problem worse.

And yet, it is patently unfair to let workers (attached to the capital goods trades and who have no other place to go) receive lower earnings over the cycle than other workers. One obvious solution would be to let the Government make up the difference in relief payments or social insurance, it being manifestly undesirable to permit capital goods prices to rise over the cycle. However, if the policy of Government aid is to be followed, it becomes rather obvious that the Government might better get something for its money in the way of useful public projects. Thus we are brought to a planned program of public expenditures to fight depression; or if the people democratically feel that high priority should be given to private consumption activity, the logical policy implication is Government transfer expenditure (or tax reduction) which will increase private consumption and thereby provide job opportunities outside of the construction and capital goods industries. And just as taxes should be raised during inflation and Government expenditure carefully trimmed, so in lean times tax reduction is in order, while useful governmental investment and public services will need to be expanded.

CONDITIONS OF CHRONIC UNEMPLOYMENT

But what if there is no effective full employment program and the economy operates at a steady level with considerable unemployment? How does the view that the prices of unstable industries should be made to bear the costs of their instability then stand up?

It will be clear from the discussion above, that the answer must be "very poorly." In effect we are asked to place a sales tax on the capital goods industries in order to keep up the income of the unemployed. This is very nearly the worst type of financing that anyone could devise.

OPTIMAL PRICING UNDER HIGH EMPLOYMENT CONDITIONS

When we deal with a world of adequate aggregate demand and generally high employment however, the John R. Commons reasoning come into its own. Then any industry with grea seasonal variability or with some other irregula pattern will be withdrawing the labor it hire from other productive employment.[29]

In a high employment economy any industr that draws resources to itself and then uses the only part of a year ought properly to be charge with the cost of those resources. This industry output must bear the responsibility of causing r ductions in output elsewhere, equal in value to t productive resources taken away from all oth industries.

Even if an industry is unable to stabilize s operations, it should still be charged up with s full costs, inclusive of idleness created by t. Otherwise too many resources will be going i o that industry, its price will be too low, and the c sumer of the goods in question will be subsidi d at the expense of the group least able to afford e ourden—the workers subject to intermittent in- ome. Higher costs are more than a whip to the mployer; they are a device for contracting an nstable line of activity.

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[28] We deliberately refrain from discussing the problem of letting wages (and prices) fall in an attempt to reduce the surplus supply of unemployed labor. Such a discussion would be highly technical and would involve a volume by itself. Except for a small fringe, the majority of writers dealing with this problem in the last decade are of the opinion that cutting wages and prices in a hyper-deflation spiral is either undesirable or unfeasible (or both) in a modern capitalistic country. It will be clear from our emphasis that we believe that any alleged advantage of such a deflationary process could better be achieved by expansionary policies.

[29] These remarks are not meant to apply to those season in- dustries which hire workers who come for limited periods to the labor market, from schools and from homes. Such indus ies perform a highly useful function in providing short-perio em- ployment at just the season of the year when there occ a temporary increase in the labor force.

If it is unavoidably necessary for a municipal reman or an auto worker to stand by in idleness uch of the time, we must redefine our concept of roductive labor to include such necessary "ac- ivity." At the same time we must tender to the uto worker what we already concede to the fire- an, adequate pay for all working time that he unable to perform elsewhere.

Undoubtedly the gradual carrying out of a pro- ram such as is implied in the above remarks would sult—gradually but surely—in some drastic antitative changes in the present pattern of ices and output. So much the better, if it is ue that the present-day structure of prices is ossly distorted away from an efficient and equi- ble pattern of resource use.

Some people may grant that an industry should charged with the full cost of the resources it kes away from other industries, but still argue at higher hourly wage rates rather than a longer aranteed tenure is the proper solution to the oblem. The statistical data referred to in chap- II suggest that there is no universal tendency hourly rates to rise so as to compensate for iability of employment. However, it is un- btedly true that in some very seasonal lines, rly rates are very high; and variability of work one reason offered by unions for even higher rly rates. Often such unions are opposed to ranteed wages, if this is to mean lower hourly es or slower increases in future hourly rates. n such situations, higher hourly rates may be er than no adjustment to heavy seasonal unem- yment. But so long as steady work does not olve extra disutility, the longer tenure provided guaranteed wages would be a more economically ient arrangement because then, and only then, ld there be an incentive toward regularization mployment, an incentive to put the available ker to some sort of useful work.

he only real economic drawback to guaranteed es in such a situation arises out of the very possibility that the workers laid off by the stry in question might possibly (had there no guaranteed wage) been able to find fill-in luctive employment elsewhere. Such possibilities are no doubt limited, but to the extent that they exist, it is not proper to regard the industry in question as being responsible for totally withdrawing labor from other useful work; it is therefore incorrect to saddle the industry with their full guaranteed wages. In fact, in such situations, the guaranteed wage can have harmful effects on the mobility of labor. Our proposal of chapter VI with respect to "integration" with the unemployment insurance system may remedy this in part.[30]

DOVETAILING AND LARGE MONOPOLIES

To the extent that the idle time of the workers hired by one industry can be dovetailed with the operations of another industry or with schooling and leisure, we need not attribute to the industry the full cost of its laid-off workers. Ideally, dovetailing of activity is one solution to the irregularity of seasonal and other short rhythms of different industries. Hence it is essential that unions relax their objections to changes in function and activity of workers.

Dovetailing is easier the larger the units, since when many intermittent lines of activity are merged, the extremes of their sums is much less than the sum of their separate extremes. Or to put this in another way, by merging activities we can cancel off the peaks of some against the troughs of others. This would seem to provide some argument in the direction of large-scale monopolies, necessarily possessed of tremendous amounts of economic power. And so it does, if the dovetailing is to take place within the firm; i. e., if the work is to be brought to the worker and not the worker to the work.

However, dovetailing tends to stabilize primarily to the extent that the components dovetailed have different cyclical rhythms and phases; in the ideal case of the coal and ice dealer, the components will have opposite phases so as to be mutually canceling. Therefore, the firm which wishes to stabilize its time-profile of production cannot do so simply by growing in scale or by adding closely duplicating lines subject to the same timing of demand. It must branch out into new territories, take on new and different lines. Consequently, the fact that it grows in size need not entail a commensurate growth in its monopoly power. Monopoly power depends primarily upon a firm's relative importance in comparison with the total demand for each of its products. If it grows by branching out into new lines the firm is also spreading itself over wider areas of demand. To revert back to the coal and ice dealer, there is no special reason to believe that his monopoly power in either of the two markets is greater that that of two separate dealers each handling one line. His over-all efficiency may be greater; but that is a good thing rather than a bad.[31]

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[30] Workers in some lines of activity may prefer intermittent employment. To the extent that they value occasional periods of leisure, they need not receive a full annual wage. No doubt collective bargaining in such cases will have other goals than a guaranteed wage.

POOLING LABOR RESERVES THROUGH A WELL ORGANIZED MARKET

If we pursue the argument concerning the desirability of pooling the labor reserves of many lines of activity in order to minimize unnecessary idleness, we are confronted with the problem of the general labor market itself. We can conceive of a vastly improved labor exchange to which workers go for placement. In the fantastically extreme case where each day every person and every firm turn anew to the central labor exchange for reassignment, idle labor reserves would be at an absolute minimum, the whole being steadier than its parts.

Common sense tells us that there are insurmountable objections to such a fantastic case. In any factory this morning's production will depend upon yesterday's activity in such a way that entirely new men coming into the plant would be at a great disadvantage, however good their general experience and training. Moreover, even if the inefficiency of such an arrangement could be overcome, we must still reckon with the intrinsic properties of human nature; the worker would find it profoundly distasteful and disorganizing to move on to a new job at frequent intervals; man requires continuity in his working as well as in his home life.

We need not prolong the discussion of what is admittedly an extreme case. There is no reason why a proposal to pool all workers together into one organized market should not be perfectly compatible with job continuity for the great majority of workers, most turn-over being confined to the "marginal" workers as is now the case. But this discussion does high light the problem of reconciling job continuity for the individual with maximum national productivity.

Thus, if guaranteed wage plans were universally adopted prior to any successful attack upon the problems of stabilizing production, the effect might be to attach workers to a given firm when there was no useful work for them to do there, even though, at the same time, there was productive employment to be found elsewhere.[32] Boondoggling is boondoggling, and bad economic policy whether it is pursued by the Government or by private enterprise. Boondoggling is particularly costly during periods of high employment when productive employment opportunities are plentiful.

This illustrates that it is as necessary in thi chapter, as in the last one dealing with aggregat demand, to distinguish carefully between the different conditions of economic life upon whic guaranteed wage plans impinge—between hig employment and depression economies. There i a danger that guaranteed wage plans, not couple with effective stabilization planning, could immobilize men in such a way as to increase labor hoarding and the inefficient use of resources.

STABILIZATION AND DIFFERENTIA PRICING

Thus far we have been discussing the costs unavoidable idleness. Even if employment we not stabilized, guaranteeing steady wage inco might so improve labor productivity and tur over rates as to be, in effect, costless. This wou be all to the good. Of course, it would be bet still if in addition to making labor more prod tive while at work, it were also possible to fi useful continuous work to do.

Stabilization may, however, be costly at the o set. It takes effort and planning. Under e present wage contract, which permits the layi off of workers on short notice, there may be lit if any, counterbalancing savings of cost from steady operation.[33]

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[31] Those who regard "bigness" per se as an evil, without regard to its market consequences, may still object to the firm's growth.

[32] Because of the considerable difficulties and costs involv in workers going from one job to another in order to utilize eir special skills, there is also much to be said for mobility o he part of the employer in shifting between production lines r er than throwing the full burden of mobility upon the wor rs. This in no sense means that we minimize the importance of bo mobility between and within firms.

But under the more optimal system of pricing discussed in earlier sections, where each employer is made to pay full wages to all workers whom he withdraws from productive employment elsewhere, the costs of stabilization will often be lower than the costs of not using the workers whose ay goes on anyway. Accordingly, stabilization lans, under this procedure, might be promoted. Being available, such workers might as well be ised for whatever useful goods they could produce. nder high employment, the ingenuity exercised y an employer in financing odd jobs, or less than ully productive tasks, for his men to do in offeasons is highly commendable.

The construction industry provides an illustraive hypothetical case to show how guaranteed ages might give rise to a different system of ricing, leading to a more efficient and equitable se of our national resources.[34] Let us suppose at a house requires, say, 2,000 man-hours of labor build in the summertime and 4,000 in the winr. If labor can be hired and fired by the season the same hourly rates, say $2 per hour all year ound, no one would ever build in the winter, ecause by waiting until the following season, e buyer could save 50 percent in labor cost. onstruction workers would be out of jobs for, say, months of the year. Houses would be sold for ss than their true social cost, most of the differce coming out of the workers' loss of income.

Theoretically, it might be alleged that a way t of this situation would be for workers to acpt half wages in the winter. But in view of ion insistence on uniformity, and if it were asmed that similar workers on steady jobs elseere receive around $1.50 per hour, we may ret this suggestion as unrealistic.

Under a system of guaranteed wages the employer would realize that his summer contracts really involved more than the wage rates paid then. Moreover, during the winter his labor force would cost him nothing extra if he kept it at work. The result: He would produce houses all year around, selling them in all seasons at about the same price (based on the hourly wage times 3,000 man-hours, the average between winter and summer labor requirement). If the old hourly wage rate were retained, the labor cost of a house at the site would now be $6,000 summer and winter. This increase in price results from the product bearing its full economic costs.

However, if part of the $2 hourly rate represented a premium to compensate for the winter idleness, and if similar labor elsewhere received only $1.50 for steady jobs, then the hourly rate might now fall and workers would still be better off than under the old regime with a winter lay-off. Their annual take-home pay would be up by 50 percent. The labor cost (at the site) of houses, summer or winter, would now be about $4,500 (or 3,000 times $1.50), which is just where it should be.[35] Apart from the social desirability of subsidized low-cost housing, the price indicated would draw the right amount of resources into the building industry, and all of such resources would be efficiently used.

This is only a numerical example; it is meant to be illustrative rather than to describe an actual situation. Moreover, it assumes a condition of adequate aggregate demand and high over-all employment so that the excess labor in the unstable, seasonal industry could readily find jobs elsewhere, once the industry were stabilized.

Often a system of variable pricing may prove to be economically optimal. Such a system would mean high prices during peak demand seasons when (marginal) costs are high and output must be rationed; and lower prices during off-peak periods. In addition to price reduction, terms of sale and delivery may be made more agreeable in off periods and less agreeable in peak periods. Alternatively, a seller in peak seasons may offer a reward in terms of priority in delivery dates to

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One saving, mentioned earlier, results from the fact that less nt and capital equipment are necessary when loads are spread nly over time. Against this saving in interest and deprecia- (resulting from time rather than use) there is the fact that many industries the extra capacity serves as a standby; in of heavy sales, the busy season is lengthened. A plant oping near to capacity all the time cannot expand its production this way, but must depend on overtime or more intensive luction.

As indicated in ch. VI, we do not think that any union should ompelled to adopt guaranteed wages except through voluntary ective bargaining. However, the present hypothetical case of construction industry throws some light on the economic debility of collective bargaining taking one form rather than her.

[35] In a moment we shall consider the possibility of seasonal variations in demand, giving rise to different prices at different seasons.

those customers who have bought steadily in off periods. To be effective, and profitable, the process of stabilization may require something more than rewards to good customers; it may also be necessary to apply penalties to bad ones. And the firms may be compelled to refuse the casual business of new customers at the peak of a sales boom. Were our markets not so imperfectly competitive and characterized during normal times by "buyers' markets," businessmen would realize more keenly that peak-load, fair-weather customers are often very expensive customers who do not pay their way.

Most of the above patterns of price and market behavior have already been tried on a limited scale. Often they have later been abandoned because they were not economical. It might well prove to be otherwise in a world of guaranteed wages, where the penalties for unstable production would be considerably greater than at present.

VI. POLICY RECOMMENDATIONS

The analysis of previous chapters shows that there is much to be said for guaranteed wages, particularly for seasonally or otherwise unstable industries operating in an economy with relatively high and stable levels of aggregate demand. But it also suggests that guaranteed wages cannot be regarded as a cure-all for depressions. There are important limitations to the device as an anti-depression measure—especially in comparison with other economic policies such as fiscal policy and other full-employment programs. In view of these limitations, so long as our society suffers from rather wide fluctuations in business activity, guaranteed wage plans should be introduced only with proper safeguards.

This conclusion is so important that we think it worth restating in a slightly different form. We do not believe that the limitations referred to above warrant the conclusion that guaranteed wage plans are economically unsound and should be abandoned as goals. However, these reservations are sufficiently important to put us on guard against viewing the guaranteed wage as a solution for the problem of unemployment; and especially to warn us that it cannot and should not become a substitute for social security measures or a full-employment program. In this concluding chapter, we should like to put forward for discussion four policy recommendations.

Recommendation No. 1. *Guaranteed wages should be a matter for voluntary collective bargaining without legislative compulsion by the Government.*—Our analysis has not led to the conclusion that the Government should seek to intervene actively by legislation to require that industry introduce guaranteed wages. In the present state of our economy, this is a matter that should be left to voluntary free collective bargaining between management and labor.

Recommendation No. 2. *In many lines guaranteed wage plans may properly include limitations as to the employer's liability.*—From our previous analysis, and from a factual survey of earlier depressions, it appears that unqualified guaranteed-wage plans, indiscriminately applied to industries subject to wide cyclical swings of demand, might involve such extensive financial costs as to prevent industry from undertaking such programs; or if industry had nevertheless undertaken such programs, they might have t be prematurely abandoned in order to avoi insolvency.

Some sort of limitation is therefore necessary Existing guarantee plans provide for variou kinds of limitations: coverage of less than a workers; guarantee of work for a limited numbe of weeks per year (for example 40 weeks); gua antee of less than full-time weekly pay for week covered; provision for nonrenewal of the guara tee; and so forth. What is above all needed, ho ever, is a form of limitation which will in norm times give a maximum of security and protecti to the worker, and to the employer a maximu incentive to stabilization efforts; but which, emergency times, will come into effect to keep t firm's financial liability under the guarante wage within reasonable limits.

Because of the ever present danger of cycli slumps we tend to look with favor on some s of limitation on the percentage of the total gu anteed pay roll that the firm shall be liable for any year or contract period. So long as product declines are not too great, workers will receive percent of their full normal income. But if when deep depression years come along, and lay-offs from productive work involve more than, say, 10 percent (or some other suitable ratio) of the guaranteed payroll, then the workers may have to receive something less than the full guarantee.

The precise percentage liability is a matter for experimental determination over time, and would no doubt vary from industry to industry depending upon their differing degrees of cyclical variability.[36] For many lines of activity, 10 percent nay be a reasonable percentage limitation.

With such a limitation, it should not be necessary 'or private industry to accumulate unduly large eserve funds. Moderate reserve accumulation nay be considered necessary for prudent financial nanagement; and, if not excessive over the whole eriod of the cycle, the accumulation and subse-uent expenditure of the reserves may contribute o dampening the business cycle, helping to con-act excessive boom-time purchasing power and o expand it during depression. But if ever the uaranteed wage should be widely adopted, and if ubstantial private reserve funds were accumu-ted in addition to the continually accumulating overnmental reserves for old-age security and nemployment insurance (currently around 14 llion dollars) the problem of maintaining high mployment might be made more difficult.

Momentarily, the continued growth of these cial security trust funds is helpful as an anti-flationary device. Nevertheless, over the long ll we believe these programs should be placed ore nearly on a pay-as-you-go basis. Similarly, should not like to see a long-run accumulation large guaranted wage reserve funds. Whether social insurance or guaranteed wages, moderate erves that could be drawn on in the depression ase of the cycle would, however, not only be missible but desirable. They would help to ve as an automatic anticyclical compensatory chanism.

Within the collective-bargaining contract itself, re would probably have to be included certain cial stipulations further limiting and qualifying the guarantee of work. For example, there might be a stipulation that wages would not be payable to workers out on strike. Collective-bargaining clauses might be introduced into the guarantee also limiting wages of workers in the plant, not themselves on strike but rendered unable to work by virtue of strikes outside the plant—or for that matter inside the plant but in another department or craft. Thus a transportation strike might so impair the flow of supplies as to make a continued guarantee unbearably costly. All these are matters for free collective bargaining.

The primary purposes of guaranteed wages are to insure workers more security and promote stability of production. The device is not intended to create permanent quasi-feudal rights of a worker to a given job. Thus, if a sweeping technological change makes it no longer necessary to keep the previous number of workers attached to an industry or firm, or if there is a secular change in people's tastes and demands, then the guaranteed wage should not serve to freeze workers to their old jobs and techniques and to thwart our economy's increases in efficiency and responsiveness to demand, upon which the ever-rising standard of American living fundamentally depends.

Most changes are not introduced discontinuously and suddenly. The normal attrition of the labor force of a firm, through turn-over and separation, makes it possible to reduce gradually the number of workers without undue lay-offs. Where this is not the case, the guaranteed wage, together with severance pay, may perhaps be used to soften the impact of the socially-desirable process of change upon the workers directly involved. But we feel it necessary to point out the danger that, with guaranteed wages introducing length of tenure as a new variable in the collective-bargaining negotiation, the long-term flexibility of our economic system may be impaired unless organized labor is willing to waive or limit the scope of the guarantee in situations involving permanent changes in technology and demand.

Recommendation No. 3. *Corporate income tax law and practice should be changed so as to encourage guaranteed wage programs.*—Under present tax law and practice, corporations may for tax purposes deduct as an expense all payments made to workers under guaranteed wage programs, during the year when such payments are

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The Latimer Report on guaranteed wages presents data show-what the costs to a number of industries of an unqualified antee would have been in earlier years. See ch. VIII, pp. 70–
The report discusses the rather intricate problem of how guaranteed wage funds are to be allocated among the laid-off ers whenever the drop in production turns out to be great gh to bring the percentage limitation into effect.

made. Suppose, however, that a corporation wishes in good times to set aside a reserve fund in anticipation of the time when it will have to pay out guaranteed wages to the workers it is currently hiring. Such appropriations to guaranteed wage reserve funds—unlike retirement pension and profit-sharing programs—cannot now be treated as an expense to be deducted from taxable earnings in good times; only later, when actually paid out, can they be so treated.

The present tax situation is, therefore, in a sense discouraging to guaranteed wage plans. It is, however, easy to exaggerate the quantitative importance of this whole matter. A few years' delay in receiving a tax reduction or credit means primarily the loss of interest on the sums involved. This is all the more true to the extent that corporate income tax rates remain stable, and to the extent that a system of carry-forward (and carry-back) is in force so that the accounting period for tax purposes becomes longer than a year and variations in income are averaged over a longer period.

There seems to be no question that any change in existing practice would require new legislation by Congress. This might take at least two possible forms. First, Congress might specifically provide that any guaranteed-wage payments might be carried back over previous years as deductible expenses. In effect, the company would be reimbursed for its previously overpaid taxes, resulting from its previously overstated earnings—overstated because the accruing liability for guaranteed-wage payments had not been recognized as an expense of production at that time.

A second method of handling this problem would be to permit appropriations to the reserve fund to be deductible as expenses during the year when they are being set aside. Then, later when the reserve is being used to finance guaranteed wages, such outlays would not again be chargeable as an expense and as a tax deduction—for, otherwise, there would be an unwarranted tax loss to the Treasury and an unfair subsidy to the guaranteed-wage plan. So far this second plan seems simple enough; but under some circumstances difficulties may arise. What if more is appropriated to the reserve than is ever necessary to meet guaranteed wages, either because of good luck, or because of good stabilization planning by the employer, or because the employer deliberately builds up an excessive reserve? Certainly under these circumstances it would be wrong to permit the employer to recover the excess reserves, and to escape corporate income taxation completely on the sums involved. For this reason, it would be necessary to insist that the reserve be a "trust," created to provide guaranteed wages or other benefits for the workers. The trust would necessarily have to be irrevocable as far as the corporation was concerned.[37]

Our previous economic analysis and the specific accounting aspects of guaranteed wages justify, we believe, the recommendation that the present tax deterrents to guaranteed wages be removed by one or another of the above described methods: that is by a specific carry-back on guaranteed wage costs, or by tax deductibility (with safeguards) of appropriations to guaranteed wage reserve funds.

Recommendation No. 4. *Social security legislation should be altered so that guaranteed wage plans can be integrated with the unemploymen compensation system to the mutual advantag of each.*—Guaranteed wages should never be looke upon as a substitute for our existing unemployment-insurance system. This system admittedl needs substantial improvement and strengthenin And we believe that guaranteed-wage plans if integrated with social security could operate in th direction. Such integration would serve strengthen rather than weaken the system of u employment insurance.

The workers of employers who maintain wa payments under guarantee plans should be pe mitted to draw unemployment benefits, provid that they are unemployed in the sense that woul qualify them for unemployment compensation the absence of a guarantee.[38] If the employ had to pay only the difference between the f guaranteed wage and the amount paid by the u employment insurance system, then he might more willing to undertake such wage guarant and more willing to broaden the coverage and tend the duration of the guarantee.

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[37] Any excess reserve funds might be finally used up in all further appropriations to the reserve fund were curtailed. If even this does not meet the problem, the terms of the trust should stipulate that any remaining excess funds be used for the benefit of the workers through providing old-age pensions or for some other welfare provision now permissible from the tax standpoint.

[38] Some important technical and administrative problems are to be faced. These are discussed in Mr. Latimer's report.

Moreover, the employer would then be in the position of wishing to support the extension of Social Security instead of—as under the present system of merit rating—having a financial in- erest in keeping its benefits limited. The only lternative to the method of "integration" here roposed, that would tend to remedy the present iscrimination against the employer who volun- arily agrees to guarantee full incomes to his idle vorkers, would be the method of further extending erit rating—perhaps to the point where all em- loyers with effective guaranteed-wage plans ould be excluded completely from all unemploy- ent insurance taxation. We should consider the doption of such an alternative as something of a lamity, designed to divide and weaken the rces making for an effective social security sys- m.

The method of integrating social-insurance nefits with guaranteed-wage plans would have st the opposite effect, as we have already indi- ted. It would serve to strengthen rather than aken our social-insurance system. In addition, e integration with present unemployment com- nsation would have the further advantage of lucing the tendency for guaranteed wages to eeze workers to a given employment when it may socially desirable for them to transfer to other occupations. Under the integrated plan, in order to draw unemployment benefits, workers would have to be registered with the central employment exchange, and would be obliged to accept suitable alternative employment. This would lessen but not obliterate the tendency for 100 percent income maintainance to have deleterious effects upon the mobility of labor.

Important as these legislative changes are, we do not mean to imply that the growth of guaranteed-wage plans should wait upon the reforms here suggested. On the contrary, in some lines of industry the guaranteed wage can be economically introduced under present conditions to the advantage of all parties. As the number of such industries grows, both employers and employees would have an increasing incentive to press for the needed legislation.

These legislative reforms, especially the integration with social security, would make it possible to strengthen such guaranteed-wage plans as may in any event be developed without waiting for new legislation; and they would encourage the spread of plans to other industries which (even with some kind of limitation of employer liability) might otherwise find it difficult to set up adequate and satisfactory programs.

ADDENDUM—DEPRESSION POLICY AND THE GUARANTEED WAGE

Note: This Addendum is presented as a basis for further discussion. It does not constitute a part of our Recommendations.

The analysis of previous chapters points to the conclusion that the guaranteed wage would be a weak rod to lean upon, by itself alone, as an anti-depression measure. Taken in conjunction with other measures—especially fiscal policy and social security—it can serve a useful purpose as a supplementary device. The guaranteed wage is not a cure for depressions. However, as we have seen in chapter V, it could perhaps serve its most useful purpose by overcoming seasonal or other irregularities of employment in industries operating in an economy with relatively high and stable aggregate demand.

THE FEAR OF DEPRESSION

But industry cannot safely assume that we shall in fact achieve in future a continuing high and stable level of demand for goods and services. It is precisely the fear of recurring major depressions that makes management reluctant to undertake commitments under the guaranteed wage. So long as the prospect of serious depressions remains as a major but incalculable risk, guaranteed-wage commitments must be rather severely restricted with respect to the liability involved. Such restrictions could be eased somewhat by building up in good times guaranteed-wage reserve funds.

Guaranteed-wage plans, privately financed, could reasonably be regarded as a manageable risk in a society freed from the fear of major depression. And even though this danger of recurring depressions must be faced, plans can, we believe, be devised along the lines discussed in chapter VI, which are made as "cyclone-proof" as possible. It now remains to consider whether some direct Government financial support of guaranteed wages might not be justified from two standpoints: (1) as a means of encouraging, in an unstable world, more widespread adoption by private industry of guaranteed wage plans; and (2) as a part of a rounded governmental anti-depression program.

ECONOMIC ASPECTS OF GOVERNMENT AID

The purely economic aspects of such Government support deserves to be considered on its own merits. In terms of political realism, so long as we are not prepared to accept direct Governmen contributions to social insurance programs (a policy adopted at the very inception of social insurance in England a generation ago), there is n likelihood that governmental grants-in-aid t guaranteed-wage plans will be acceptable. Socia insurance should be first in line for governmenta contributions from general revenues. This is tru among many reasons, partly because social insu ance is of universal application (within limi legally established) and does not apply only to su individual firms as may voluntarily choose to ta advantage of Government aid; and partly because social insurance provides a lower minimum income than is contemplated in most guaranteed-wage plans. Virtual universal coverage, taken in conjunction with the principle of a national minimum, commends social insurance as a program deserving direct Government financial aid and support. The case is less strong for the guaranteed wage. Until direct Government contributions to social insurance become a reality, it is probably somewhat utopian to discuss such aid for guaranteed wages. We should ourselves wish first to see direct Federal contributions to social insurance, thereby diminishing the deflationary effect of the regressive pay-roll taxes.

Nevertheless, the economics (apart from the politics) of support for the guaranteed wage deserves study. In terms of employment and anti-depression policy, there is much to be said for governmental grants-in-aid to guaranteed-wage

rograms. Indeed, even with respect to social in-
urance, Government contributions commend
hemselves in large part by reason of their implica-
ions with respect to full employment policy. The
ore social insurance is financed from progressive
come taxation, the more expansionist will the
rogram be.

Our exploratory discussion, in this addendum,
f partial governmental aid to the guaranteed
age, contingent upon emergency depression con-
tions, is very much in the spirit of many of the
ss controversial Government programs in other
heres. Federal insurance of bank deposits and
e capital salvage activities of the Reconstruction
nance Corporation are more or less analogous
stances. A third and more venerable precedent
that of central banking (Bank of England, the
deral Reserve System, etc.) whose function has
g been recognized as that of providing succor
"last resort" in times of crisis and depression.

Accordingly, we wish to raise the question
ether the program of financing guaranteed-
ge plans might not, to a degree, be incorporated
a comprehensive antidepression program, such
the Government may find itself called upon
undertake in periods of substantial unemploy-
nt. We believe that there are few, if any, who
bt that we shall in fact encounter more or less
lent fluctuations in business activity. A slump
e started can cumulate, under modern condi-
s, with incredible speed. The Federal Gov-
ment will not be able to stand by without under-
ng some positive program of action. In such
ods, governmental intervention in various di-
ions will be required in any event. In such
ods of crisis, therefore, governmental support
existing guaranteed-wage plans might provide
additional compensatory mechanism, thereby
cing somewhat the danger of unplanned and
eshift depression projects which otherwise are
y to be undertaken.

e believe, as we have repeatedly stated, that
ker income security can best be promoted by
gthening our already established system of
l security and by a comprehensive full em-
ment program designed to maintain a high
stable level of demand, production and em-
nent. Within this pattern, the guaranteed
can be made a useful supplementary device.
not something upon which we should embark
with a view to making it carry the whole load. It is not and cannot, we believe, be made the basic foundation of worker income security. But it can be made a significant part of a larger program.

To this end we explore below two highly tentative suggestions. We present them, not because we believe them currently to be within the range of practical politics, but to round out our economic analysis of the guaranteed wage, and to provide a starting point for further discussion. We suggest, in line with the discussion in Chapter V, that guaranteed-wage programs shall be wholly privately financed except in abnormal emergency periods of serious depression. We consider governmental aid to such plans only as a last resort measure, and as a part of a comprehensive attack on depression. We therefore explore two criteria indicating at what point in the depression phase of the cycle governmental aid might be invoked. The first is based on the level of profits of the firm in question; the second is based on the broad general level of business activity in the nation as a whole.

GOVERNMENTAL GRANT-IN-AID BASED ON PROFIT LEVELS OF FIRMS

Precisely in a condition of serious mass unemployment, government support for the continuation of guaranteed wage plans may be far more sensible than ill-designed antidepression measures, which in the absence of adequate planning are likely to be improvised. If a firm were assured that, upon a fall in the annual profits of the company to a small fraction of, say, the previous 5-year average, the Government would come to its support, the guaranteed wage plan might be saved from extinction; and what is more, many firms might be induced to establish guaranteed wages in good times, if they were assured that the Government would bear part of the costs contingent upon a deep depression when profits are low and losses are likely to be sustained. While it is true that special conditions may cause low profits for an individual firm even though general business activity is high, nevertheless experience shows that the profits of most firms fluctuate in close correlation with the cycle. A more complicated formula than the one we suggest below might be designed so as to combine both the criteria of (*a*) the firm's profits and (*b*) the general state of business.

Using the more simplified formula, however, let us suppose that the firm's profits have fallen to 30 percent (or some other appropriate figure) of the previous 5-year average. The Government might now undertake to contribute a grant-in-aid on a sliding scale basis, and increasing at a specified rate as profits continue to fall. The scale might, by way of illustration, be somewhat as follows:

Percent profits of previous 5-year average:	*Government share of guaranteed wage cost*
30	10
25	20
20	30
15	40
10	50

According to this formula, the Government would make an outright grant-in-aid to the current cost of the guaranteed wage plan (that is, to the guaranteed wage payments for workers declared by the company to be totally unemployed) beginning at 10 percent of the cost when profits fall to 30 percent of the previous 5-year average. The grant-in-aid might rise on a step-up basis as profits fall, finally reaching a maximum of 50 percent of the cost when profits fall to 10 percent or less. (A more precise formula is given below.)

In the next section we wish to discuss an alternative grant-in-aid procedure, based not on the profits of the particular firm, but on more general employment and business conditions in the Nation as a whole.[39]

GOVERNMENTAL FINANCIAL AID BASED ON LEVEL OF GROSS NATIONAL PRODUCT

The feasibility of a guaranteed wage, financed by private business, depends in large measure upon the kind of economy we shall have in the future—how violent will the fluctuations in the gross national product (GNP), employment and business activity be? To the extent that we succeed in narrowing the over-all range of fluctuation in the gross national product, the guaranteed wage becomes more feasible as a practical proposition. It is not feasible for guaranteed wage plans to include any substantial proportion of the total labor force in a society in which the gross national product fluctuates from 100 billion dollars to 50 billion dollars and then up to 200 billion dollars, a it actually did from 1929 to 1944. If, however, w could narrow the range of fluctuations in the gros national product to within 15 to 20 percent, i would become feasible to include in guarantee wage plans a substantial percentage of the tot labor force.

Grants-in-aid to guaranteed wage plans, onc the gross national product had fallen to a ce tain level—for example, to 85 percent of a ful employment level—might well be included as part, however modest, of a general antidepressi program. There would indeed be no guarant that the gross national product might not fa far below the level at which grants-in-aid wou begin. The program would amount to no co mitment with respect to full employment. presumably would mean that the Federal Gove ment would seek to promote full employment such politically acceptable measures as were av able. If these were reasonably successful, t gross national product might not fall to the le at which the grants-in-aid program would beg Up to this point, private business would be clusively responsible for the financing of s guaranteed wage plans as had voluntarily b put in operation.

The grant-in-aid could be stepped up if the G should continue to fall to lower levels. It is suggested, by way of illustration, that at 85 cent of a full employment GNP the grant-in might equal 25 percent of the current cost of guaranteed wage plan, i. e., 25 percent of amount actually paid out in wages to workers ered by the plans over and above the wage re ceived by workers for productive employmen together with unemployment compensation, du the year or period covered. If the GNP sh fall to 80 percent of the full employment lev, o below, the grant-in-aid might be raised to 50 cent of the cost. (A more precise formula is below.)

The criterion has been stated in terms o gross national product (GNP). In poi fact, the statistical calculation of the GN neither sufficiently current nor sufficiently p to provide the basis for a legal determinati the point at which a grant-in-aid would be

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[39] Again it may be noted that a more complicated formula might be constructed which combines both criteria. On this basis, the governmental grant-in-aid would apply only when both general business conditions and the firm's profits had fallen to a certain level.

Some other statistical index which is precise and unequivocal, but which reflects fairly accurately the fluctuations in the gross national product, would have to be found. This is a matter which will require much careful study. Possibly the ratio of the number of workers receiving benefit payments under the unemployment insurance system to the total number of workers covered by the system might serve as an appropriate index. But the ratio should be applied so as to permit the entry of grants-in-aid (together with the step-up) as nearly as may be at some such points in the level of the gross national product as were indicated above.

It may be appropriate to note that the system of "compensatory payments" to farmers, advoated by some leading agricultural economists, ffers an interesting analogy to the suggestion to upport guaranteed wage plans at say 80 or 85 ercent of a "full employment" GNP or below. he agricultural "compensatory payments" plan, ery briefly, may be explained as follows:[40] The lan does not envisage any price controls or maret price supports. Assume that, as a result of depression, the market price of a given farm ommodity falls below 85 percent, say, of the preepression base. Assume the predepression price as $1 and it now falls to 60 cents. The Governent then undertakes to make compensatory payents to all farmers covering the difference tween the price actually received (60 cents) and cents, the guaranteed 85 percent of the predeession base. Such payments would provide nimum income security to farmers without inrfering with market forces. Prices would not raised. The commodity would not be "priced t of the market." But the farmer would be otected. And the compensatory payments uld be made by the Government at just the phase the cycle when it is important for the Governnt to find sensible, useful and justifiable outs for public expenditures—expenditures needed swell the diminishing income stream and stop cumulative collapse. As soon as recovery had ceeded to a point at which the price of the comdity had again reached 85 percent of the predepression base, the Government support would cease.

So also in the Government's support of the guaranteed wage; as soon as the GNP had recovered to 85 percent, say of the "full employment level," or the more specific and definitive index indicative of the degree of full employment (such as the ratio of current beneficiaries to the number of covered employees), the Government's support of established guaranteed wage plans would cease.

Our two suggestions involve one possible technical difficulty from which the agricultural compensatory payments plan is free. According to that plan, as farm prices drop from 86 percent of the predepression base down to 84 percent, nothing very drastic or discontinuous happens. Such a small change is accompanied by a commensurately small change in Government payments. All trouble of "discontinuous brackets" is avoided.

A MORE PRECISE FORMULA FOR EACH PROPOSAL

Our two suggestions seem to involve this technical difficulty. As a firm's profits suddenly fall to below the critical 30 percent level, or as GNP falls below the critical 85 percent level, suddenly and discontinuously the payments of the Federal Government go from nothing to the first bracket rates. This might give rise to troublesome litigation concerning the last decimal point of profits and GNP, and might even occasion deliberate efforts on the part of firms to cause their profits to fall!

These bracket difficulties can be avoided by making our grants-in-aid formula or table slightly more complex.

Thus, just as the Government financial share grows from 10 to 20 percent as profits fall from a 30 percent level to a 25 percent level, so we might arrange for the Government's share to rise gradually to the first 10 percent level, corresponding to the gradual fall in profits from 35 to 30 percent. Our exact formula might be something like the following:

(*a*) When percent of corporate profits to normal are above 35 percent—no Government aid.

(*b*) When percent of corporate profits to normal are less than 10 percent—Government aid equal to 50 percent of cost.

See Theodore W. Schultz, Agriculture in an Unstable Econ- (McGraw-Hill, 1945), pp. 220–235. This is a research study he Committee for Economic Development.

(*c*) Anywhere in between these two extremes we suggest the formula:

Percent of Government aid equals 70 minus (2 times the percent profits are of normal). This could be written as an equation as follows: $G=70-2P$, in which G is the percent of government aid and P is the percent which current profits are of normal profits.

This will be found to agree with the earlier table, and to avoid all bracket difficulty.

Similarly, our second formula based on GNP too might be as follows:

(a) Percent of GNP to full employment GNP above 90 percent—no Government aid.

(b) Percent of GNP to full employment GNP below 80 percent—Government aid equal to 50 percent of cost.

(c) Anywhere in between, the formula:

Percent of Government aid equals 450 minus (5 times the percent of GNP to full employment GNP). This could be written as an equation as follows: $G'=450-5P'$, in which G' is the percent of Government aid, and P' is the percent which the current GNP is of a full employment GNP.

VARIOUS ASPECTS OF THE GOVERNMENT AID PROGRAM

The two alternative grant-in-aid procedures which we have outlined would have a number of advantages. They would leave to collective bargaining, or to the employer alone in the absence of collective bargaining, the choice of whether or not to set up a guaranteed wage. Under the procedures here suggested, if a guaranteed wage plan is set up, the responsibility would devolve wholly upon private enterprise so long as (*a*) profits equalled 35 percent of the preceding 5 years, or (*b*) alternatively the gross national product did not fall below 90 (85 in the cruder formula) percent of a full employment product. The responsibility of the Government, up to this point, would not relate to the guaranteed wage, but rather to policies and programs that promote high business activity and high employment. Thus up to the point indicated the Government would not enter the picture at all with respect to the guaranteed wage programs so far as direct grants-in-aid are concerned.

Should, however, the situation with respect to individual businesses, or alternatively with respect to the economy as a whole, become serious, Government support in a variety of directions would sooner or later become necessary. Grants-in-aid for established guaranteed wage plans might well prove, in such circumstances, to be one measure which along with others might stop a deflationary spiral. There is increasingly general support for the thesis that early and vigorous support in many directions is less dangerous than delay, and is much to be preferred to risking all on any one policy. Reasonably early action may prevent a bad situation from getting worse.

Along with other antidepression measures, grants-in-aid to established guaranteed wage plans could help to put a cushion under a recession and prevent a further downward cumulative movement. The governmental grant-in-aid would involve the payment of funds into the income stream at a time when a Nation-wide depression is becoming really serious and needs to be stopped quickl and effectively. Planned public works and publi development projects can play an important role but many such projects cannot be timed quickl nor can they be adequate to check, without the ai of other measures, a cumulative downturn. Wha other programs may be necessary or desirable (in cluding tax adjustment) is not a matter whic properly comes under discussion here.

The plans discussed above would be automatica ly self-disciplinary. If the particular guarante wage plan introduced by an individual firm we overly cautious, it would be relatively ineffecti It would cost the firm very little, and by the sa token, it would cost the Government very littl and it would not satisfy labor. If the plan we overly ambitious, it would be costly to the fi up to the point at which the governmental gra in-aid would begin. This fact could be count upon to deter the company from setting up too a bitious a plan. If the firm had failed to m e good on its financial responsibilities under e plan, having dropped it entirely either in acco ance with the terms of the plan or in violation f these terms, the Government would have no e sponsibility to undertake the grant-in-aid. G ernment support would be accorded only s h plans as were actually in full operation at he point where grants-in-aid were scheduled to be in. As soon as the GNP again rose to a level above he oint indicated (or alternately profits rose) the Government support would cease.

On this basis every firm would know that any lan it might inaugurate would entail financial bligations to cover the entire cost of the guaran- eed wage for its covered employees only under easonably favorable conditions. In the event of nation-wide depression, it could rely upon Gov- rnment support. The business firm must indeed repare a plan which could reasonably be expected weather the storm up to the point at which gov- rnmental aid enters. And even then it must be repared to carry its share of the load. With such aranteed support, a firm could at least go farther th with respect to the proportion of its workers vered under the plan, and the percent of the full- ne wage guaranteed under the plan, than would the case without such support. How far each m is willing and able to go, under these condi- ns, is for it to determine for itself, either on its n volition or on the basis of collective bargain- with the union representing its employees. ere is no governmental compulsion. Any firm ich objects to a guaranteed wage is quite free go on without any plan. The governmental aid, ilable when conditions become difficult, is in- d an inducement, but it represents no compul- whatever to set up a guaranteed wage plan.

t will be noted that both of the suggested plans free of any element of unfair government e subsidization of one producer as compared to competitor. The Government contributes not nt toward the wage of any worker who is to degree productively employed.[41] Only after employer has declared a man completely unem- ed would the Government's aid be forthcom-

We do not wish to spell out the details, but umably such workers would be required to be stered with the unemployment insurance labor ange, and would be required to accept suitable native employment. Also, as discussed in ter VI, we suggest that unemployed workers ld be eligible for regular unemployment com- ation benefits, with the employer and government (under the guaranteed wage plan) making up the difference as specified in the guarantee.

To some extent these suggestions avoid the criticism that worker mobility will be adversely affected. The employer is still always left with an incentive—perhaps greater than that now existing under experience rating—to see that his laid-off workers accept suitable other employment. Nonetheless, we must expect that any system of almost 100-percent out-of-work compensation will weaken the employee's exertions to find another job and will make him more particular in accepting proffered alternative offers. This, however, is a basic difficulty of all guaranteed wages, whether completely privately financed or financed in part by the Government. Moreover, the loss of workers' incentives toward mobility is a much less serious economic problem at a time when there is widespread unemployment in all fields.

Since the Government comes in with financial aid when guaranteed workers are declared completely idle, there will always be some tendency for firms with guaranteed-wage plans to relax in their efforts to find low-productivity "fill-in" jobs for the workers to do in their own plants. As soon as the Government support came into operation, the costs incident to the guaranteed-wage plan in any firm would be carried in part by the Government and increasingly so as the depression deepened. There would thus be less incentive left for the firm to hold down costs by putting the largest possible number of covered employees to productive work or by securing work for them elsewhere. Nevertheless, there would always be some considerable incentive left, since the firm would cover at first all, then most, and finally at least 50 percent of, the cost.

The suggestion here made has the great merit that it could reasonably be expected that active full employment policies may be sufficiently successful so that the GNP would fall below 85 to 80 percent of the calculated "full employment" level only under relatively unusual circumstances, when the underlying factors were such as to threaten a really serious major depression. Under this suggestion one may hope that the Government guarantee would be invoked on any substantial scale only in periods of serious depression when vigorous measures to combat the downswing would, in any event, be necessary.

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might be objected that an element of discrimination and ty is involved in the respect that government aid to the enance of wage income is applied only to workers who to be employed by firms with a guaranteed wage. This, er, we should not regard as decisive. What is important is rms be encouraged to introduce the guaranteed wage, and ll firms doing so shall be accorded equal treatment.

If the GNP has fallen below 80 percent of the "full employment level," the labor market would already be flooded with a large excess of applicants. Accordingly, from the social viewpoint, it would relieve the situation somewhat if the employees covered in guaranteed wage plans did not come on the market at all. Moreover, it might not help the general situation, under conditions of falling and low aggregate demand, for firms having guaranteed wage plans to enter the market with competing sidelines to give productive employment to some of their covered workers. Such action, in a period when total demand was sharply restricted, would contribute little, if at all, toward an expansion of aggregate demand. In such periods, taking on new lines by one firm probably supplants jobs elsewhere rather than adding to the total. In contrast, in periods of brisk demand and full employment, the elimination of seasonal and frictional unemployment would represent a net gain in social efficiency and total real income. If all workers were given steadier employment throughout the year, there would be a net gain in total output and total real income.

Neither the payment of compensatory supplements to farmers nor the payment of wages to idle workers covered by guaranteed wage plans represent the ideal situation. The ideal situation is one of sustained aggregate demand and full or high employment. But if, in fact, full employment policies prove to be only partially effective; or if wholly abnormal and unexpected factors emerge which cannot, in the short run, be coped with adequately, then compensatory payments to farmers and wage payments to covered workers under guaranteed wage plans may be valid, justifiable and helpful under the circumstances. The situation is a temporary one in which unusual and rather drastic measures may become necessary.

Financial aid to guaranteed wage plans is one channel of depression Government spending. In terms of the encroachment of Government activity on the private sector of the economy, it is a relatively conservative measure, since it involves only "transfer payments" to individuals, who in turn spend this money as they wish on the products of private industry. Thus, it is neither competitive with private industry nor "socialistic" in the sense of expanding the productive or collective consumption role of Government.

The problem is one of spending wisely, effectively, and equitably. Giving one favored group of workers 100-percent unemployment insurance while others receive limited partial benefits for a limited time, or no insurance benefits at all but only relief, cannot be defended as equity. From this point of view it might well be desirable to confine Government aid to plans with some sort of time limitation with respect to the period in which any one worker could continue to draw guaranteed wage payments. As a first line of defense against depression, relatively generous treatment of certain workers for a limited period can be defended. But it would be more important still to strengthen our general social security, relief and public works and development programs during the next serious depression. In the fina analysis, productive and useful employmen should be the goal.

The primary purpose of the suggestions described is to contribute in some measure to th general insurance against the social plague of dee depression. These suggestions, like all insuranc measures, would serve their purpose best if it neve became necessary to invoke them—if the syste always remained at high levels of employment ar general profits did not decline to low levels as result of adverse business conditions.

To conclude: An adequate full employme program would make governmental grants-in-a to guaranteed wages quite irrelevant as an an- depression device. But in the event, as is not i- probable, that we shall at times face rather - rious unemployment, such grants-in-aid could b a useful "last resort" instrument, to be applied al g with other measures as one part of a many-si d antidepression program. But while it is necess y to be prepared with antidepression policies, e must never lose sight of the positive program e- signed to provide continuing and high levels of useful and productive employment. Guaran ed wage plans are not adequate substitutes for o er public and private economic policies, even tho gh they may provide supplementary protec on against instability of production, employment nd income.

JBADDENDUM—COMMENTS ON THE HANSEN-SAMUELSON REPORT

Prof. J. M. Clark, Columbia University; Prof. Edward . Mason, Harvard University; Prof. Sumner H. lichter, Harvard University, together with Final Comients by Professors Hansen and Samuelson

1. COMMENTS BY J. M. CLARK

n general, the writer is in hearty agreement h the actual recommendations of the report, approves of their cautious and realistic char- er. He has, however, a feeling that in the body he discussion this caution is not aways fully ntained; and here and there, by tone and im- ation, an impression is conveyed of promise greater results, both in extent of voluntary ption and in effect on stabilization of employ- t, than are wholly consistent with the cautious acter of the actual recommendations. The uent qualifications which are introduced do entirely offset this optimistic impression. A major and minor comments follow.

rhaps the chief aspect which seems insuffi- ly recognized is the probability that if a anteed-wage plan were installed, covering all ost of the employees in an industry, the hiring ditional workers might involve such a heavy itment on the part of the employer that he l go slow about such hiring in times of active nd, with the result that employment might imply be stabilized, but the total reduced. would place a heavier burden on the high- yment program which, it is assumed, goes he wage program. It might be replied that, the wage program is voluntary, employers not be likely to undertake commitments so as to have this effect. This seems not fully ncing, since the pressure of organized labor d such programs may be very strong, and even develop quasicompulsory effects, im- employers toward assuming heavier com- nts than caution would dictate, in the light possibility here considered.

A second point is that, in view of the voluntary nature of the proposals, more attention might be given to modified plans, even if they may not so far have been proposed by interested parties. For example, it might be regarded as a defect of a simple guarantee from the standpoint of workers' incentives, that under it the worker would get paid no more for working the guaranteed amount of time than for working less. This could be avoided, and the employer's commitment be at the same time lightened, by a plan under which the worker would be paid full wages for full-time work, and something less though presumably more than half wages for idle time, down to some absolute minimum. The guarantee should properly be so figured as to give the worker something more than his unemployment benefits under social security, but less than full pay for idle time. This would avoid asking him, in effect, to work part of the time for nothing.

Methods of financing reserves deserve more discussion than is given them. In voluntary private plans, the employer would be under strong pressure to invest them productively, in private securities. Then when they had to be drawn on, in bad times, if these securities were thrown on the market in order to realize funds, the effect might be to accentuate depression, offsetting the alleviating effects of the distribution of the proceeds to the workers. This dilemma seems to deserve consideration; it might be avoided by some credit arrangement.

A fourth point concerns the effect of stabilization on the productivity of workers. Here I agree with the general conclusion that the net effect is likely to be favorable, and my reservation is largely concerned with the timing of the effect. Experience seems to show that when bad times threaten, workers work harder, and increase their output. It is when a lay-off does not immediately impend that workers are urged to make their jobs last as long as possible, by restraining output. This is complicated by the effect of reduced output in increasing indirect costs per unit produced, so that total labor cost per unit of product may rise, or output per man-hour fall, on account of this latter factor, which has nothing to do with the attitude of the workers, or how well they work. Dr. Julius Hirsch, in a paper delivered before the American Economic Association, January 25, 1947, attempted to separate these two effects on productivity, and found that the kind that registers the efficiency of the workers behaved in the way I have indicated.

A fifth point concerns the incentive the employer has to make capital outlays in slack times, because of the lower prices then available. This is an incentive which must, in the nature of the case, stop far short of full stabilization, since it is only if demand is slack that prices are likely to come down. A single industry could get this gain, in an economy where the rest were still following the usual practice and concentrating their capital outlays in active times. But if capital-expansion in dull times became the standard practice, the price-incentive would be destroyed. Further, it is still true that, the longer the employer waits, before a revival is expected, the shorter is the time during which his capital is tied up, idle, and the risk he runs of installing equipment that does not embody the latest improvements. Therefore, this incentive seems to be subject to a much heavier discount than is indicated in the report.

The incentives of the employer, arising from the combination of a guaranteed wage with social security, seem to deserve some analysis. It seems to be implied that the employer could, at his option, limit his liability to the excess of the guaranteed wage above the regular unemployment-benefits, by declaring his worker unemployed, and leaving him to find another job if one is offered. It appears that this would, in practice, involve him in little likelihood of losing a worker through the worker's getting another job, because it seems only natural that the employment office would give priority to job-seekers who were not covered by guaranteed-wage plans—this on the assumption that such plans are voluntary, and have not become universal. Then if social security pays the worker, for example, 55 percent of his regular wages, it would pay the employer to let his worker go onto social security if the only work the employer could find for him to do were worth less than 55 percent of full wages. If it were worth more, it would pay the employer to keep him.

In this connection, the discussion of the loss, or cost, of unemployment, gives the impression that it is the worker's full wage, or its equivalent, that is lost, though elsewhere it is noted that the best employment that is available in depressed times is likely to be something that is not worth the full amount of the standard wage.

Other minor points might be mentioned. Th report suggests the maintenance of adequate tota demand as a goal, and takes the position that a fair approach to attainment of this goal is a prerequisite to any general successful adoption of guaranteed-wage plans. But no ways and means are suggested for a full employment program nor is any estimate made of the probable degree of success of any measures of the sort which might be adopted. This is perhaps a matter in the public view of the President's committee of advisers, set up under the Full Employment Act; but this committee does not seem as yet to have filled this gap.

In chapter II, section 1, the report states: "It is perhaps not too hard to imagine an economic system in which the wage contract with all employees was more nearly like that with executives and white-collar workers than like the present prevailing mode of wage payment and tenure." I agree that present modes of wage payment show a remarkable lack of imaginative adaptation to the facts of modern industry. But if this means that all workers could be put on a basis of fixed salary, it is hard for me to imagine this under a system of private enterprise, in view of what seems to be the admitted fact that private enterprise is inescapably subject to some degree of fluctuation, and probably a fairly substantial degree, even with the best that can be done toward stabilization. It is easier for me to imagine a system of cooperatives in which the workers are their own employers, and hire capital for a secure return; but in that case they would necessarily take the risks that now fall on equity capital. Their salaries might be fixed, but they would be combined with sharing of profits and losses.

In conclusion, let me repeat that the actual
ecommendations of the report appear to deserve
pproval.

2. COMMENTS BY EDWARD S. MASON

Messrs. Hansen and Samuelson rightly em-
hasize the wide range of variation in types of
uaranteed wage plans, and in employee coverage
nd employer commitments involved. Taking
is range into account it is possible to conceive a
tuation in which guaranteed wage plans would
widely used without any appreciable effect on
orker security or on the functioning of the econ-
ny. This would be so if the only workers cov-
ed were those the employer could reasonably ex-
ct to retain at the lowest expected rate of oper-
ions, and if his commitment were subject to fre-
ent revision. Under these circumstances the
ceptance of the plan would offer no special in-
cement to the employer to explore ways and
ans of stabilizing employment; it would offer
appreciable increase in the employees' security
tenure; and it is difficult to see how it would
any way significantly alter work incentives, in-
ne distribution, or, in general, the functioning
the economy. Even a wide acceptance of such
ranteed wage plans would have the same negli-
le effect as minimium-wage-rate legislation set-
g rates substantially below the market mini-
m.

he problem becomes interesting and important
y if plans are adopted committing the em-
yer to wage payments he would not otherwise
ume and offering a greater measure of security
employees than they would otherwise enjoy.
ler what circumstances would the employer be
ly voluntarily to accept such a commitment?
uaranteed wage plan might be adopted if it
nised to give the employer the pick of the labor
ket, if it were judged to offer new and import-
work incentives, and if possibilities existed for
ning the disadvantages of a new overhead com-
nent by stabilizing operations through diversi-
ion or otherwise.

ese are all real possibilities. But it must be
gnized (*a*) that the advantages of the plan
nd largely on its not being extensively
ted by competitors in the labor market, and
hat the stabilization effects are mainly
ed to the firm and have no appreciable advantages for business cycle stability in the whole economy. If all—or even a large number of—employers accepted additional commitments under guaranteed wage plans in the expectation that their selection of employees would be improved or that their operations could be stabilized by diversification, the expectations of a large percentage would be unavoidably disappointed. It must also be recognized that the advantages of a guaranteed wage plan, which may be real enough as long as the number of such plans is small, may create additional disadvantages for the firms not adapting to the scheme.

Some possibilities for improving efficiency or stabilizing employment, which are net for the economy as a whole, may exist, but these possibilities would seem to be slight. It is possible that the productivity of workers already employed may be increased by the additional security offered by a guaranteed wage plan. Hansen and Samuelson consider this possibility and, in my view, rightly discount its certainty or quantitative importance. There is also the possibility that the adoption of guaranteed wage plans might lead to the merging of operations which are complementary over time (e. g., coal and ice). Although this would make no contribution to over-all business cycle stability, it might lessen the number of necessary changes in employment. Again, however, the main effects of diversification by particular firms might often be to increase the instability of operations of other firms. All this is simply an elaboration of the point that the main influences on stability for the whole economy lie outside the control of single firms.

Recognizing this fact, the authors raise the question whether it is possible for employers in unstable industries by acting together to contribute to stability. Although this might be done independently of guaranteed wage plans, it is possible that the common introduction of such plans in an industry could provide an incentive for stabilization otherwise lacking. The question is whether the causes of instability lying outside the control of individual firms may be to some extent within the control of an industry acting as a unit. Commenting on the notorious instability of employment and output in the automobile industry, Hansen and Samuelson emphasize that, to the extent that this instability is cyclical, the search for remedies must look in other directions than toward guaranteed wage plans. "But," they say, " it is not too much to hope for, and to ask of management and labor, that measures be taken and practices be altered to moderate the incidence of irregular and seasonal employment and of economic idleness. This may require many far-sweeping changes in the organization of the industry; increases in inventories and storage facilities, limitations on undue coddling of consumers' desires with respect to modification of style and model changes, perhaps acceptance of lower hourly wage rates in exchange for higher annual earnings."

It is possible that action of this sort might make a substantial contribution to stability of employment in automobile production. It is probable that the suggested changes would increase costs and prices to consumers. It seems to me unlikely that standardization, for example, could be brought about without collusive action or a degree of cooperation among competitors beyond the limits permitted by present public policy. Perhaps existing policy should be changed. But this question raises issues of considerably greater importance than those involved in guaranteed wage plans. It seems doubtful whether the stabilization possibilities lying outside the control of individual firms, but within the control of the industry, are of sufficient importance, in themselves, to justify the degree of industry planning—with the concomitant necessity of Government supervision—it would be necessary to achieve in order to realize these possibilities. In any case the question opens vistas too broad for adequate consideration here.

If the scope of guaranteed wage plans is primarily determined by profit considerations and if industry-wide stabilization operations (which might broaden the opportunities for such plans) are excluded, it does not seem probable that a system of wage guarantees will be widely adopted, at least in an economy as unstable as the American economy has historically been. Yet the most important and interesting questions that Hansen and Samuelson discuss assume a substantial coverage of the economy by guaranteed wage plans. It is possible that, if accompanied by effective counter-cyclical stabilization measures, the coverage of wage guarantees would in fact be substantially increased. This will be discussed presently. The important questions referred to above have to do with the changes in aggregate demand and its stabilization over the cycle and with the effect of the increase in overhead costs involved in guaranteed wage plans on pricing policy.

With respect to the first question, the authors point out that the level of aggregate demand is not likely to be raised by guarantee of wages unless such guarantees transfer incomes from profits to wages and unless these transfers increase marginal propensities to consume. They are properly dubious about such effects. Even if wage guarantees clearly worked in this direction, it would still be difficult to see why employers would voluntarily accede to them unless we suppose a general understanding and agreement among businessmen tha their own long-run best interests are served by th higher and more stable level of employment tha the acceptance of a lower rate of profit might b supposed to entail. It seems probable that th "Keynesian revolution" has not yet been th successful.

The effect of guaranteed wages as a stabilizer aggregate demand over the cycle depends pr marily on the method of financing. If reserv accumulated in good times are paid out in ba some stabilizing effect will be produced. But u less firms can be supposed to undertake comm ments of a character and magnitude that wou substantially increase business risks this effect is bound to be small. The authors recognize this fully and their tentative support, in the append of Government grants-in-aid to guaranteed wage plans, stems from this recognition. In part the case for grants-in-aid depends on the expanded coverage by guaranteed wage plans that might be expected to follow from the adoption of grants-in part, the case rests in the familiar argument for deficit spending in depression. To the extent that deficit spending is the remedy, this type of spending has to be justified as against other claimants. The main advantage, stressed by Hansen and Samuelson—though not in these words—is that it can be "built in" to a functioning economic system rather than being hastily improvised as so many kinds of Government depression spending are. Although a number of practical difficulties (a ing to do mainly with inequality of treatme

ifferent firms and industries) are obvious, the
iggestion merits careful attention.

With respect to the consequences of guaranteed
age plans for price behavior, the conclusion of the
ithors appears to be that the conversion of vari-
le into overhead costs would probably have only
slight effect. While this conversion might, un-
r competitive pricing conditions, be expected to
ad to greater variation in prices over the cycle,
ey think that, in industries likely to adopt guar-
teed wage plans, market structures are such as to
vor the use of "full cost" pricing policies. If,
erefore, it can be shown that such plans increase
e "full cost" per unit of operations over the
cle, the effect on prices might be considerable.
gardless of the extent to which firms may or
y not undertake full cost pricing, it is clear
t any substantial increase in the relative im-
rtance of overhead costs will accentuate the dan-
to profits to be expected from competitive price
ting. The tendency to stabilize prices, by agree-
nt or otherwise, will thereby be encouraged.
ofar as the effects are limited to an increased
istance to price declines in depression, the
ter would agree with Hansen and Samuelson
t the weight of modern opinion considers
h effects to be contributory to stability in the
le economy. If "cooperation" among competi-
is seriously promoted through a widespread
ption of guaranteed wage plans, it is improb-
, however, that joint action would be limited
esistance against depression price declines. It
early possible that the substantial conversion
ariable into overhead cost inherent in these
s might, through the increased incentives it
s to industry-wide planning, considerably re-
the scope of desirable competitive adjustment
e economy. It must be admitted, however,
this question is highly speculative.

is the view of the authors of this report that
anteed wage plans are unlikely to play a sig-
nt role except within the framework of an
ive national policy directed toward the main-
ce of a high level of employment. In the un-
e American economy of the recent past, the
ntages to the employer of lay-offs on short
e are of such importance as to make it improb-
that more than a small number of firms will
such plans. Furthermore, as already em-
zed, the advantage of these plans to the firms adopting them are likely to be substantial only if the number remains small.

If an effective national employment policy can be assumed, the situation is different. Even under these circumstances, however, the authors caution against exaggerating the merits of a guaranteed wage program. They state explicitly that "if it ever had to come to a choice between guaranteed wages and other important depression and anticyclical public and private policies, * * * then it would be guaranteed wages that would have to be rejected." It is a great strength of the report, in the eyes of this reviewer, that the relative merits of guaranteed wages as against other reform programs are carefully weighed. In a situation in which the stimulus to reform is strictly limited it is important to establish a carefully considered priority of objectives.

If a high level of employment were expected to be maintained the coverage of voluntarily initiated guaranteed wage plans might, for a number of reasons, be very substantial. A much larger number of firms could apply such plans to a much larger percentage of their employees without an appreciable increase in business risk. Employers, faced with a continually serious problem of recruiting and maintaining a labor force would find that the relative merit of guaranteed wage plans as compared with the privilege of lay-off at short notice had measurably increased. Although the authors find, even in the recent past, little evidence that instability of employment is compensated by higher hourly earnings in unstable industries, it might be expected that with a high and sustained level of employment this condition would be rectified by competitive forces. If this were so, firms, even in unstable industries, would probably find it possible to adopt guaranteed wage plans without incurring a large increase in labor costs.

On the other hand, although the coverage might be much larger, the importance of worker insecurity under such circumstances would be much less. The authors, nevertheless, believe that guaranteed wages might make an important contribution to stabilizing "seasonal and other short rhythms in production and by equitably allocating the economic burden of the residual amount of unavoidable idleness and unemployment." By shifting the burden of seasonal and short-term unemployment to the shoulders of employers, the incentive to integrate operations having complementary time periods and to undertake industry-wide planning to increase stability of output would certainly be increased.

As we have seen, there are real disadvantages involved in this process that must be set off against the advantages. In addition the substantial lessening or disappearance of worker incentives to seek other employment during slack periods would handicap short-term adjustment. As so often is the case in the area of economic policy, there seems to be a real conflict between security and efficiency involved in this question of guaranteed wages. It is not obvious to the writer that, even if the maintenance of a high level of employment could be assumed, the probable disadvantages of a large-scale acceptance of guaranteed wages would not outweigh the advantages.

3. COMMENTS BY SUMNER H. SLICHTER

The guaranteed wage is a proposal to impose an additional liability upon business owners. Although the proposals vary substantially, they have one common characteristic—the liability to pay for labor which would not otherwise be used is one which would have to be met in the main, not in periods of expansion and optimism, but in periods of contraction and pessimism. Furthermore, the amount of the liability in most industries would be conjectural in the extreme because the severity of business cycles cannot be foreseen. This second characteristic could be altered somewhat by modifications in the plans. In fact some existing wage or employment guarantee plans provide ways for reducing the employer's liability in the event of severe depression. Finally, the liability is of such nature that it is increased in amount by the very conditions which decrease the business enterprise's ability to meet it out of current income.

Hansen and Samuelson consider two types of plans: (1) Pay-as-you-go plans, and (2) reserve plans in which, however, the liability is not limited to the amount in the reserve funds. I believe that a third type of plan should be examined, namely reserve plans with liability limited to the amount in the reserve fund. Hansen and Samuelson make a suggestion closely akin to this in their recommendations. They suggest that the liability of employers be limited. They do not, however, suggest that it be limited to the amount in the reserve funds.

Three basic questions are raised by wage guarantee plans: (1) Their effect upon the distribution of income; (2) their effect upon the utilization of resources; and (3) their effect upon the business cycle and the growth of industry. In general I agree with Hansen and Samuelson with respect to the effect of wage guarantees upon the distribution of income and the utilization of resources. With much of their analysis of the cyclical effects of wage guarantees I am in agreement. There are, however, some points of difference. Consequently, I have confined these notes to a discussion of the cyclical effects of wage guarantee plans.

Before I start this discussion I wish to cal attention to the fact that wage guarantee plan would require during boom times a larger sprea than would otherwise exist between the price o labor and the prices of goods. This would b necessary because of the risk that employers woul be compelled during slack periods to make wag payments which are not covered by the value the services rendered. The greater spread betwee wages and prices during boom times might accomplished either by a rise in prices or by slower rise in wages. It is uncertain which these ways would be more important in bringi about the greater spread between wages and pric If one assumes that the amplitude of boom a depression is unchanged, the distribution of i come over the period of the whole cycle would n be significantly changed. Wage earners and co sumers would fare worse than now during boo periods and better than now during depressio; business owners would fare better than now d ing booms and worse during depressions.

Pay-as-you-go wage guarantees

Pay-as-you-go wage guarantees would acc tuate business recessions. This result would oc for several reasons. One effect of pay-as-you plans would be to stimulate managements to strengthen the liquid position of their enterpr at the first signs of contraction in business. B ness concerns, of course, now do the same thi— especially enterprises which have short-term d or other important liabilities to meet. The efforts of business concerns to protect themse against the drop in business aggravate the dec he pursuit of liquidity by enterprises during riods of contraction ought to be discouraged ther than encouraged. Pay-as-you-go wage arantee plans, however, would encourage it. All this amounts to saying that most pay-as-you-go ins could not be kept strictly on a pay-as-you-go sis. Even if assets were not earmarked and led "reserve funds," they would be accumulated inst the liability imposed by the wage guaran- plans. Furthermore, under the so-called "pay- you-go plan," the accumulation would occur t when it would do the most harm.

second effect of wage guarantees (whether pay- ou-go or not) would be to make cost-price rela- ships during depressions more unfavorable n they would be in the absence of guaranteed es. Since workers would have to be paid ther they produced or not, managements would illing to produce goods which have to be sold rices which would not cover cost of production puted by conventional methods. Hence wage antees would depress prices and make prices lower relative to costs than they would other- be. The effects of wage guarantees upon pro- ion would not probably be very great in oligo- tic industries. It would, however, be an im- nt influence in industries where there are small competitors, particularly the "soft s" industries.

e unfavorable cost-price relationships thus ced by wage guarantees and the resulting on liquid assets would put managements un- reater pressure than ever to cut expenditures aintenance, replacement, research, and prod- evelopment. It would also discourage the ng of new enterprises. Even in severe de- ons there are many thousands of business each year and substantial expenditures on l goods for replacement, reduction of costs, pansion by established enterprises.

cial mention should be made of the effect -as-you-go plans upon the operation of the system during depressions. The liabilities ed by these plans would make banks more o reduce outstanding credits to enterprises to the liability and less inclined to extend edits. Thus, pay-as-you-go plans would be rful influence in enforcing a contraction in d deposits.

The effect of pay-as-you-go plans upon the demand for labor and upon wages would be unfavorable. Naturally enterprises which had wage guarantee plans that were about to expire would seek to anticipate their orders for goods after the expiration of the plans by making large quantities of goods before the expiration of the plans. Thus plans which were about to expire would build up inventories of partly manufactured and manufactured goods that would prove troublesome. Certainly the fact that this process was going on and that inventories were overhanging the market would discourage both the starting of new enterprises and the execution of many projects by existing concerns. The fact that employers who had built up large inventories under the stimulus of wage guarantees would be in an unusually strong bargaining position in negotiating renewals of their contracts with unions would introduce uncertainty into the whole wage structure of the industries affected.

These several difficulties might not be serious if the depression were mild, but the existence of a large number of pay-as-you-go plans would increase the difficulty of keeping depressions mild. If the depression were severe, pay-as-you-go wage guarantee plans would appear to be well designed to make it more severe and to weaken the bargaining position of unions in renewing contracts which expire during the depression.

Wage guarantee plans with liability not limited to the amount in the reserve funds

Wage guarantee plans financed out of reserve funds but with the liability not limited to the amounts in the reserve might mitigate depressions provided business managers felt quite confident that the depression would be mild and that the reserve funds would be more than adequate. The disbursement of the reserve funds by raising the propensity to consume would limit the effect of a given drop in investment upon incomes and upon employment. Furthermore, if businessmen were quite sure that reserve funds would be more than adequate, the disbursement of the funds would make managements less inclined to cut postponable expenditures, such as outlays for maintenance and replacements and some expenditures for expansion.

All of the above assumes that managements are governed by the belief that reserve funds would be ample. This would certainly not be true in severe or even moderately severe depressions. As it became apparent that the depression was going to be deeper than businessmen had anticipated, wage guarantee plans financed out of reserve funds would produce more and more the same unfortunate effects as pay-as-you-go plans. Furthermore, even in mild depressions wage guarantee plans with the liability of employers not limited to the amount in the reserve funds would produce some unfavorable effects. Some firms would be new and would have had no opportunity to accumulate reserve funds; some would have had a bad employment record. Hence, at least a few firms would be led by their liabilities under wage guarantees to strive for greater liquidity than they would otherwise have sought. Many more firms, as a result of their liabilities, would be viewed as unattractive credit risks by banks and would be forced by the reduction of their lines of credit to curtail expenditures on maintenance and replacements and possibly to liquidate inventories at distress prices.

Reserves with liability limited to the amount in the reserves

Guaranteed wage plans financed by reserves and with the employer's liability limited to the amount in the reserves would make a moderate, but nevertheless important, contribution to the stabilization of employment. The limitation of the employer's liability to the amount in the reserve fund would prevent the wage guarantee from stimulating employers to attempt to increase their liquid assets during periods of contraction. Thus wage guarantee plans of this third type would not have unfavorable effects upon the expenditures of business concerns for maintenance, replacements, and expansion. On the contrary, the reserves would have two favorable effects upon the level of employment. First, by increasing the propensity to consume it would diminish the unfavorable effect of a given drop in investment upon income and hence upon employment. Second, by limiting the losses of business enterprises and improving the terms on which they could liquidate their inventories, the disbursement of the reserve funds would make managements less inclined to cut expenditures on maintenance and replacements and to suspend the execution of plans for expansion.

Would not the favorable effects of the disbursement of reserves during periods of contraction be offset by deflationary effects from the accumulation of reserves during periods of expansion? I do not think so. In the first place, favorable effects of the disbursements of reserves during periods of depression would cause prospective investors to take a slightly more favorable view of investment opportunities. In the second place, the accumulation of reserves would make investment-seeking funds available on slightly more favorable terms.

Would not the accumulation of reserves during periods of expansion limit expansion by raising the propensity to save? There are some majo uncertainties in the effect of the accumulation o reserves during periods of expansion. It is quit conceivable, as I shall point out presently, that th accumulation of reserves would have inflationar repercussions on the credit system. More likel is the possibility that the accumulation of reserv would modify the character of booms by limitin the expansion of credit and the rise in price Booms are periods when incomes rise because t planned savings of individuals and business ente prises fail to meet the demand for investment-seeking funds. The impatient demand for investment-seeking funds causes the rise of income be accelerated by the expansion of credit and u ally by a rise in prices and often by speculation in inventories. The rise in prices limits the favorable effect upon employment from a given rise n expenditures. Furthermore, after this type of expansion has gone on for some time, it creates market conditions which discourage business enterprises from immediately executing long-term investment plans. Hence the nature of booms under the modern credit system limits the capacity of the economy to utilize investment opportunities created by technological change. Were expansions financed to some extent out of reserve funds rather than by the expansion of credit, the expansion would probably go farther and the expansion would consist to a greater extent in a rise in employment and to a lesser extent in a rise in prices. Hence, although the effect of the accumulation of reserve funds would be deflationary in terms of prices, it would not necessarily be deflationary in terms of employment.

There is a real possibility, however, that the ac-umulation of reserve funds will stimulate the xpansion of credit. The reserve funds would un-loubtedly be invested largely in the short-term bligations of the Government. The buying of hese obligations by the reserve funds would inter-ere with the ability of the banks to maintain the olume of their investments in short-term govern-ients. At times when the business outlook is re-irded as favorable, banks are averse to per-iitting a drop in their earning assets. Hence, ilure of banks to replace their short-term govern-ents would undoubtedly lead them to be more iterprising and aggressive in putting money to ork in commercial loans and term loans. As an termath to the unfortunate inflationary effects the expansion of bank credit during the boom, ould be the even more unfortunate deflationary ects produced by the repayment of these loans in riods of contraction.

This analysis of the probable effects of different pes of wage guarantees should not be concluded thout pointing out that the judgment of the obable effects of the plan must be predicated on estimates of the number of workers whom h plans may cover and to whom they might ke an important difference. About one-fourth the workforce would not be included because y are self-employed rather than employees. substantial proportion of the workforce, n if covered, would get no appreciable efit from guaranteed wage plans because y are virtually assured of indefinite tenure er present conditions. These include nearly employees in the public service, a substantial iber of employees in the industries and oc-itions with little seasonal or cyclical fluctua-s, and a substantial number of additional loyees who are protected from seasonal or ical lay-offs because of seniority rules. A third e group of employees work under conditions h would make a 12 months' guarantee (or a 6 months' and, in many cases, a 3 months' antee) impractical. These include people in mittent employments such as most people in onstruction industry, the amusement industry, acation industry, and the large number of le who enter the labor market for a few weeks during each year. As a very rough guess I would estimate that about one-fifth or one-fourth of the entire workforce are employed under such conditions that a guarantee would appreciably affect their annual income. This does not mean a guarantee might not be a useful device in the case of this fraction of the workforce. Nevertheless, it does indicate, however, that the possible favorable effects upon the total volume of consumer income from all sources would be quite limited. At the best, the incomes of people receiving only about one-sixth of all consumer incomes would be directly augmented to an appreciable extent by an annual wage guarantee.

4. FINAL COMMENTS

By Alvin H. Hansen and Paul A. Samuelson

The comments of Professors Clark, Mason, and Slichter are particularly welcome and valuable because the complex imponderable factors involved in an economic evaluation of guaranteed wages cannot definitively be appraised by one team of investigators. Accordingly, we wish to confine our reaction to their comments to a few of the more important points where there still remain some substantive difference in analysis and emphasis.

1. *Depressant effects upon investment due to higher wage costs.*—All three writers emphasize—as we do too (pp. 29–31)—that guaranteed wage commitments may act as an appreciable deterrent to business investment. Taken by itself, this is a damning consideration. But it should not be taken by itself, since there may also be a favorable effect upon income when wages are maintained.

There is a universal dilemma to be faced here, which goes far beyond the guaranteed wage. Compulsory workmen's compensation legislation, minimum wages and conditions of work, collective bargaining and pressure for higher wages, social security legislation—all of these can be thought of simply as a hampering drag upon "venture capital." But they each also have favorable aspects from the standpoint of social and individual welfare, equity, and income maintenance. Realistically, they are probably here to stay; our private enterprise system cannot shirk their challenge. Nor, taking the long view, is it likely that it can hold the line against their further extension over future decades.

Fortunately, the trend of economists' opinions over the last two decades does not appear to be definitely toward the view that the favorable income and purchasing power side of the wage question is overbalanced by the unfavorable investment effects. But to discuss this further would take us far afield.

2. *Anticyclical effects of reserve financing.*—Because of our stated belief that all reserve funds should be invested in Government bonds or equivalents, and because it is now definitely unfashionable to invest pension funds in the private securities of the employing company, we did not feel it necessary to discuss the problems raised by such private modes of financing. High-grade Government bonds tend to go to a premium in bad times. For this reason, and because the Federal Reserve authorities have ample powers to stabilize their marketability, such securities offer the ideal medium for reserve financing.

Professor Slichter expresses concern that guaranteed wage reserve funds will purchase Government securities at the expense of the banking system; in the process excess reserves would be created; thereby private loan expansion would be encouraged. This represents an instance of our statement (p. 33) that the deflationary impact of boom-time reserve accumulation may be partially offset by an easing of interest rates and capital availability. At worst, this could only be a partial offset: Partial because interest rates weaken only in consequence of a final decline in total income. Even this partial perversity can be easily offset by having the Federal Reserve authorities do what they always should do with respect to actual or potential excess reserves during inflationary boom times.

We cannot wholly acquiesce in Professor Slichter's appraisal of the absence of deflationary influences resulting from boom-time reserve accumulations. The reasoning of his preceding paragraph seems to hold that an increase of corporate saving—for that is precisely what reserve financing means—is, by itself, an "expansionary" factor. In our view it could be so only in the following inverted sense: A deliberate deflationary policy which successfully offsets an inflationary boom-time situation may prolong the duration of prosperity and full employment. Only in this sense, could a "deflationary" policy be "expansionary"; and this does not deny its deflationary character or differ with the accepted view that reserve financing is anticyclical. Moreover, only in those special boom periods where employment and purchasing power tend to be "more than full," would such a deflationary policy be desirable.

During depressions, replacement expenditures of corporations often fall below depreciatio charges; they often fall by more than the total o corporation losses. Consequently, there is a "run off" on fixed assets which will to some degree mod erate the need of the corporation to rely complete upon previously funded reserves. Guarantee wages may also be paid at the expense of depressio dividends. But as we pointed out (on p. 29), i the absence of funded reserves, there may still some harmful effects of guaranteed wage paymen upon the ability of the firm to maintain some of i depression gross investment, and this is in li with Professor Slichter's discussion.

3. *Guaranteed wage plans with alternati limitations.*—Professor Clark (p. 53) and Profe sor Slichter (p. 60) have each suggested a mo fied guaranteed wage plan. There are an infin range of such programs and it is useful to expl a variety of possibilities. In our Report we ha suggested the need in many fields of some limi tion upon employers' guaranteed wage liabilit In particular our recommendation No. 2 in cha VI suggested the advisability of the type of lim tion of liability developed in Mr. Latimer's fi report (whereby the liability of any employe a given period is limited to some agreed-upon centage of his total guaranted pay roll).

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UNITED STATES DEPARTMENT OF LABOR
L. B. Schwellenbach, *Secretary*

BUREAU OF LABOR STATISTICS
Ewan Clague, *Commissioner*

✦

Extent of Collective Bargaining and Union Recognition
1946

Bulletin No. 909

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Letter of Transmittal

United States Department of Labor,
Bureau of Labor Statistics,
Washington, D. C., June 24, 1947.

The Secretary of Labor:

I have the honor to transmit herewith the report on the extent of collective bargaining and union recognition for 1946. The study is based on an analysis of approximately 15,000 collective-bargaining agreements, as well as other source materials on employment, union membership, and other data available to the Bureau of Labor Statistics. The report was prepared by the staff of the Collective Bargaining Division, under the general supervision of Harold S. Roberts, in the Bureau's Industrial Relations Branch, Boris Stern, Chief. Philomena Marquardt was in immediate charge of assembling the information.

Ewan Clague, *Commissioner.*

Hon. L. B. Schwellenbach,
Secretary of Labor.

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Bulletin No. 909 of the
United States Bureau of Labor Statistics

Extent of Collective Bargaining and Union Recognition, 1946[1]

Union-Agreement Coverage

Approximately 14.8 million workers were employed under conditions determined by written collective-bargaining agreements in 1946, an increase of a million workers compared with 1945. The workers covered by agreement represent 48 percent of the 31 million[2] engaged in occupations in which the unions have been organizing and endeavoring to obtain written agreements. The percentage covered was the same in the previous year, but fewer workers—approximately 29 million—were eligible for agreement coverage in 1945. Nonmanufacturing industries accounted for much of the increase in employees eligible for agreement coverage.

About 7.9 million production workers in manufacturing were covered by union agreements in 1946 (69 percent of those employed) compared to 8 million (67 percent) a year earlier. In the nonmanufacturing industries 6.9 million workers, or 35 percent of the potentials were employed under union agreements. Part of the decrease in total coverage in the manufacturing industries can be accounted for by changes in employment in such industries as aircraft and shipbuilding, in which a large proportion of the workers are covered by union agreement. In the nonmanufacturing industries the increase in the number of workers can be accounted for by higher employment in such industries as construction, in which the proportion of workers covered by collective bargaining is very high.

The extent of union agreement coverage in the various manufacturing and nonmanufacturing industries is shown in table 1. Because each group covers a range of 20 percent, it is possible for the proportion of covered workers within an industry to increase several percent and still remain within the same group. During 1946 the percentage of workers covered by agreements in the dairy products industry increased enough to bring it from the 1–19 percent into the 20–39 percent category. Chemicals, excluding rayon yarn and the paper products industries moved from the 20–39 percent into the 40–59 percent group. Canning and preserving foods, dyeing and finishing textiles, and leather gloves increased in the proportion covered so that they shifted from the 40–59 percent to the 60–79 percent column. Moving from the 60–79 percent into the 80–100 percent group were the electrical machinery and the rayon yarn industries.

---

[1] For similar data for previous years, see Monthly Labor Review, April 1946, April 1945, April 1944, Feb- uary 1943, May 1942, and March 1939.

[2] This estimate of 31 million includes all wage and salary workers except those in executive, managerial, nd some professional positions, but excludes all self-employed, domestic workers, agricultural wage workers n farms employing less than six persons, Federal and State Government employees, teachers, and elected r appointed officials in local governments.

It should be noted that the number of workers covered by union agreements is not the same as union nembership. Except under closed or union-shop conditions, agreements cover nonmembers as well as nembers employed within the given bargaining unit. On the other hand, some union members may be orking in unorganized plants and many civil-service employees and teachers are members of unions but re not employed under the terms of bilateral written agreements.

TABLE 1.—*Proportion of wage earners under union agreements in 1946*

MANUFACTURING INDUSTRIES

80–100 percent	60–79 percent	40–59 percent	20–39 percent	1–19 percent
Agricultural equipment. Aircraft and parts. Aluminum. Automobiles and parts. Breweries. Carpets and rugs, wool. Cement. Clocks and watches. Clothing, men's. Clothing, women's. Electrical machinery. Furs and fur garments. Glass and glassware. Leather tanning. Meat packing. Newspaper printing and publishing. Nonferrous metals and products, except those listed. Rayon yarn. Rubber. Shipbuilding. Steel, basic. Sugar.	Book and job printing and publishing. Coal products. Canning and preserving foods. Dyeing and finishing textiles. Gloves, leather. Machinery, except agricultural equipment and electrical machinery. Millinery and hats. Paper and pulp. Petroleum refining. Railroad equipment. Steel products. Tobacco. Woolen and worsted textiles.	Baking. Chemicals, excluding rayon yarn. Flour and other grain products. Furniture. Hosiery. Jewelry and silverware. Knit goods. Leather, luggage, handbags, novelties. Lumber. Paper products. Pottery, including chinaware. Shoes, cut stock and findings. Stone and clay products, except pottery.	Beverages, nonalcoholic. Confectionery products. Cotton textiles. Dairy products. Silk and rayon textiles.	(None.)

NONMANUFACTURING INDUSTRIES

80–100 percent	60–79 percent	40–59 percent	20–39 percent	1–19 percent
Actors and musicians. Airline pilots and mechanics. Bus and streetcar, local. Coal mining. Construction. Longshoring. Maritime. Metal mining. Motion-picture production. Railroads. Telegraph. Trucking, local and intercity.	Radio technicians. Theater—stage hands, motion-picture operators.	Bus lines, intercity. Light and power. Newspaper offices. Telephone.	Barber shops. Building servicing and maintenance. Cleaning and dyeing. Crude petroleum and natural gas. Fishing. Hotels and restaurants. Laundries. Nonmetallic mining and quarrying. Taxicabs.	Agriculture.[1] Beauty shops. Clerical and pro fessional, exclud ing transport tion, commun cation, theater and newspaper Retail and whol sale trade.

[1] Less than 1 percent.

Types of Union Recognition

EXTENT OF COVERAGE

Approximately 4.8 million workers were covered by closed and union shop with preferential hiring provisions in 1946, compared to 4.25 millions in 1945. Union shop clauses, without preference in hiring, were specified for almost 2.6 million workers in 1946 and 2 million in 1945. The number of workers covered by maintenance of membership decreased from more than 3.9 million in 1945 to 3.6 million in 1946.

Table 2 indicates the changes in the proportion of workers under each type of union recognition from 1941 through 1946. During the war there was a major shift from sole bargaining and bargaining for members only to maintenance of membership. The 1946 figures indicate a trend away from the latter type, and to the union or closed shop.

TABLE 2.—*Changes in union recognition in the United States, 1941–46*

Item	1941	1942	1943	1944	1945	1946
Eligible for union-agreement coverage:						
Number (in millions)	[1] 35	31	31	30.25	29	31.2
Percentage under agreement	30	40	45	47	48	48
	Percentage distribution [2]					
Workers under agreements providing for—						
Closed shop	40	45	30	28	30	33
Union shop			20	18	15	17
Maintenance of membership	(3)	15	20	27	29	25
Preferential hiring	(3)	5	2	2	3	3
Other [4]	(3)	35	28	25	23	22
Total	--------	100	100	100	100	100

[1] This figure is not comparable with the number listed as eligible for other years since it includes all sal-ed workers and all government employees. The figure which would be comparable is 31 million.

[2] Percentages not strictly comparable, year by year, because of slight changes in volume of employment ring the period.

[3] No data.

[4] No membership or hiring requirements are mentioned in these agreements, which have clauses speci-ng sole bargaining, maintenance of union dues, and bargaining for members only.

Table 3 lists the industries in which at least half of the workers who e under agreement are covered by the type of union recognition ecified.

A few industries (such as shipbuilding and iron and steel products) ich were listed in the 1945 report do not appear this year because percent of the workers in those industries are no longer covered by y one type of recognition clause. Carpets and rugs and woolen d worsted were both listed under maintenance of membership in 45 but in 1946 over half of the workers in those industries who were ered by union agreements were under union-shop provisions.

The most marked change has taken place in the automobile industry. In 1945 over half of the covered workers had maintenance-of-membership provisions, in 1946 a little over 10 percent had such provisions, while a third were covered by union-shop requirements, a fourth by sole-bargaining arrangements, and another fourth by maintenance-of-union-dues requirements.

The proportion of workers under the different types of union security for a selected group of industries is shown in table 4, while the approximate number of workers in each of the major census groups for manufacturing and the totals for nonmanufacturing are given in table 5.

TABLE 3.—*Industries with 50 percent or more of the workers under agreement covered by specified types of clauses*

MANUFACTURING INDUSTRIES

Closed or union shop with preferential hiring	Union shop	Maintenance of membership	Preferential hiring	Sole bargaining
Baking. Breweries. Canning and preserving foods. Clothing, men's. Clothing, women's. Dyeing and finishing textiles. Gloves, leather. Glass containers. Hosiery. Printing and publishing. Shoes, cut stock and findings.	Carpets and rugs, wool. Flat glass. Knit goods. Paper and allied products. Sugar, beet. Woolen and worsted textiles.	Aircraft and parts. Cigarettes and tobacco. Chemicals. Cotton textiles. Electrical machinery. Machinery, except electrical. Meat packing. Nonferrous metals. Petroleum refining. Rubber. Steel, basic.	Pottery.	Cement. Sugar cane.

NONMANUFACTURING INDUSTRIES

Construction. Trucking and warehousing.	Coal mining.	Crude petroleum and natural gas. Metal mining. Public utilities, electric light and power, water and gas. Telegraph.	Longshoring. Maritime.	Railroads. Telephone.

DEFINITIONS

Closed shop

Under this type of union recognition all employees must be members of the union at the time of hiring and they must remain members in good standing during their period of employment. The following is the simplest form of a closed-shop provision:

> The employer shall employ none but members in good standing in the union. All employees shall remain members in good standing as a condition of continued employment.

Hiring through the union, unless it is unable to supply the required number of workers within a given period, is required under most o the closed-shop agreements and those employees who are hired through other procedures must join the union before they start to work.

Union shop

Workers employed under a union-shop agreement need not be union members when hired, but they must join the union within a specified time, usually 30 to 60 days, and remain members during the period of employment. A characteristic clause setting up a union shop generally reads:

> All present employees not on the excluded list (outside the bargaining unit) who are not now members of the union, must become members within 30 days after the signing of this agreement. All persons employed, after this date, must become members of the union within 30 days after date of their employment. All employees will remain members of the union in good standing as defined by the constitution and bylaws of the union as a condition of employment for the duration of this agreement.

Union shop with preferential hiring

When the union-shop agreement specifies that union members shall be given preference in hiring or that the hiring shall be done through the union, the effect is very much the same as the closed-shop agreement.

> When the company is in need of a new employee, the union shall have the first opportunity to supply such employee. If the union shall be unable to supply such employee within 1 week, or if the union waives the right to supply such employees, the company may hire any person it desires.
>
> Any new employees hired by the company who are not already members of the union, shall become members of the union within 2 weeks of the date of their employment. Only members in good standing of the union shall continue in the employ of the company.

Modified union shop

In some cases the union shop is modified so that those who were employed before the union shop was established are not required to become union members. This type of union security is sometimes referred to as a modified shop.

> (a) All employees hired after the date of execution of this agreement must, after a 6-week probationary period, become and remain members of the Union in ood standing as a condition of continued employment. In individual cases the mployer shall have the opportunity of negotiating with the union with respect to longer probationary period.
>
> (b) It is agreed that present employees, who have not and do not desire to join he union, need not do so as a condition to their continued employment with the ompany. It is agreed that all employees who are members of the union, or who ay become members of the union, shall remain members in good standing during e life of this agreement.

Maintenance of membership

This type of union security requires that all employees who are members of the union a specified time after the agreement is signed and all who later join the union, must remain members in good standing for the duration of the agreement. Following the pattern of the maintenance of membership clauses established by the National War Labor Board, most of the agreements with this type of union-security clause provide for a 15-day period during which members may withdraw from the union if they do not wish to remain members during the life of the agreement.

> It is agreed that all employees who, 15 days after the signing of this agreement, namely, [date] are members of the union in good standing in accordance with the constitution and bylaws of the union, and all employees who thereafter, become members of the union, shall, as a condition of employment, continue to remain members in good standing as long as the union specified above remains the collective bargaining agent.
>
> Members of the union who are delinquent in dues payments shall pay all dues before they shall be permitted to avail themselves of the 15-day escape period provided for above.
>
> Members of the union in good standing for the purpose of this provision shall be all persons who are members in good standing as of [date] or who subsequently become members and have not resigned or withdrawn and so notified the union in writing prior to [date].

Maintenance of union dues

During 1946 a few agreements covering workers employed by large companies which had specified maintenance of membership in 1945 were modified, to provide sole bargaining with the check-off of union dues for all union members as a condition of employment. Clauses of this type (which specify this form of irrevocable check-off) are found in agreements negotiated with the General Motors Corp., the Goodrich Tire and Rubber Co., Akron, the International Harvester Co., East Moline, Ill., the Western Electric Co., and Yale & Towne. An example of this maintenance of union-dues clause is as follows:

> All employees who, 15 days after the beginning of the first pay roll week following the date of this agreement [date], are members of the union in good standing in accordance with its constitution and bylaws, and all employees who become members after that date, shall, as a condition of employment authorize the company for the duration of this agreement to deduct from their pay and transmit to the union an amount equivalent to their union dues as currently established by the union in accordance with its constitution and bylaws.

Preferential hiring

No union membership is required under this type of clause but union members must be hired if available. When the union cannot supply workers, the employer may hire nonmembers and they are not required to join the union as a condition of employment.

Members of the union shall have all of the work pertaining to the rigging up of ships and the coaling of same, and the discharging and loading of all cargoes including mail, ships' stores and baggage. When the union cannot furnish a sufficient number of men to perform the work in a satisfactory manner, then the employer may employ such other men as are available.

Sole bargaining

Under some agreements no requirement for union membership or for hiring through the union is specified. The union is the sole bargaining agent for all employees and negotiates the agreement covering all workers in the bargaining unit whether they are members of the union or not.

The company recognizes union No. ——— as the exclusive bargaining agency for all production and maintenance employees of the company, exclusive of executive, administrative, office, clerical employees * * * and all supervisory employees with the authority to hire, discharge, discipline, or effectively recommend changes in the status of employees as to factory wage rates, hours, and working conditions.

TABLE 4.—*Proportion of workers under union agreement, by type of union security and by industry, 1946*

Industry	Total	Closed or union shop with preferential hiring	Union shop—no preferential hiring	Maintenance of membership	Preferential hiring	Other
Total, all industries	100	33	17	25	----------	25
Manufacturing	100	28	19	38	----------	15
Agricultural machinery	100	1	4	74	----------	21
Aircraft and parts	100	6	8	62	----------	24
Aluminum	100	5	14	79	----------	2
Automobiles and parts	100	1	35	12	----------	52
Canning and preserving foods	100	64	11	19	----------	6
Chemicals, excluding rayon yarn	100	3	34	52	----------	11
Cigarettes and tobacco	100	1	35	54	----------	10
Cigars	100	43	12	43	----------	2
Clothing, men's	100	90	6	----------	4	----------
Clothing, women's	100	97	3	----------	----------	----------
Cotton textiles	100	32	8	52	----------	8
Dyeing and finishing textiles	100	56	20	22	1	1
Electrical machinery	100	9	15	57	1	18
Furniture and finished lumber products	100	20	29	37	1	13
Hosiery	100	59	12	25	----------	4
Leather tanning	100	18	23	36	----------	23
Meat packing	100	11	12	75	----------	2
Paper	100	7	53	39	----------	1
Petroleum refining	100	1	7	57	----------	35
Rayon yarn	100	1	3	69	----------	27
Rubber	100	2	15	66	----------	17
Shipbuilding	100	32	11	48	----------	9
Shoes	100	50	5	42	----------	3
Silk and rayon textiles	100	37	26	23	----------	14
Steel, basic	100	----------	3	93	----------	4
Steel products	100	11	33	47	1	8
Woolen and worsted textiles	100	2	66	18	----------	14
nmanufacturing	100	38	16	9	----------	37
Coal mining	100	----------	100	----------	----------	----------
Construction	100	94	----------	----------	6	----------
Railroads	100	----------	----------	----------	----------	100
Telephone	100	3	1	28	----------	68

Members only

A few agreements stipulate that the union shall act as bargaining agent for its members only, and the agreement does not cover other workers.

> The employer recognizes the ——— union as the collective bargaining agency for its production and maintenance employees who are members of the union, at the employer's ——— works and mine.

TABLE 5.—*Approximate number of workers covered in 1946, by the type of union security listed*

Industry	Closed shop	Union shop with preferential hiring	Union shop	Membership maintenance
Manufacturing	1,275,000	950.000	1,506,000	3,031.000
Food	210,000	130,000	90.000	185.000
Tobacco	8,000	3,000	15,000	32,000
Textile	40,000	120,000	165,000	180,000
Apparel	515,000	320,000	50,000	8,000
Lumber	25,000	90.000	60,000	76,000
Furniture	20,000	20,000	55,000	70,000
Paper	----	15,000	126,000	70,000
Printing and publishing	250,000	----	----	----
Chemicals	1,000	4,000	60,000	125,000
Petroleum	----	5,000	15,000	50,000
Rubber	----	3,000	30,000	140,000
Leather	40,000	61,000	20,000	60,000
Stone, clay, and glass	5,000	45,000	75,000	35,000
Iron and steel	30,000	40,000	235.000	725,000
Nonferrous metals	30,000	15,000	40,000	185,000
Electrical machinery	15,000	25,000	70,000	260.000
Machinery, excluding electrical	15,000	15,000	90,000	460.000
Automobile	1,000	10,000	240,000	80.000
Transportation equipment	55,000	17,000	50,000	250,000
Miscellaneous	15,000	12,000	20,000	40,000
Nonmanufacturing: Total, all groups [1]	2,082,000	547,000	1,091,000	664,000

[1] Included in this group are employees in construction, trucking, warehousing, services, clerical, sales and professional occupations, mining, transportation, communications, and public utilities.

Check-Off Arrangements

EXTENT OF COVERAGE

Approximately 6 million workers (41 percent of all under union agreements) were covered by some form of check-off provisions in 1946. This is an increase of close to three-quarters of a million from the 1945 total. Automatic deduction of dues was specified for a little over half of these workers while the others specified check-off of union dues only for employees who give the employer an individual written authorization. Some of these may be withdrawn at any time; others remain in effect for the life of the agreement.

In the manufacturing industries 4.7 million workers (61 percent had their dues checked off compared to the 4 million (about 50 percent) in 1945 The number of nonmanufacturing workers covere by check-off arrangements remained at about 1.3 million for 194 but this was not quite 20 percent of the workers under agreement; i 1945 with only 13.8 million under agreement the same number workers covered brought the proportion to 24 percent.

Changes in check-off arrangements from 1942 through 1946 are given in table 6 and they show a gradual increase in the number of workers covered by such provisions. Table 7 lists the industries which have at least half of the workers under agreement covered by one type of check-off. A few industries listed for 1945, such as chemicals, steel products, and men's clothing, no longer have 50 percent of the covered workers under a single type of check-off.

The proportion of workers under agreement by type of check-off for selected industries is given in table 8, while the approximate number of workers covered by check-off in 1946 for the major manufacturing industries as for nonmanufacturing is shown in table 9. Table 8 also shows the proportion of workers under agreement by each type of check-off during 1946 for manufacturing and nonmanufacturing industries. Below are definitions of the two types of check-off and examples of union agreement clauses providing for each.

TABLE 6.—*Changes in check-off arrangements in the United States, 1941–46*

Item	1941	1942	1943	1944	1945	1946
Number under agreement (in millions)	10.3	12.5	13.8	14.3	13.8	14.8
	Percentage distribution [1]					
Workers under agreements providing for—						
Automatic check-off	(2)	12	18	21	23	24
Voluntary check-off	(2)	8	14	20	16	17
No check-off	(2)	80	68	59	61	59
Total		100	100	100	100	100

[1] Percentages not strictly comparable, year by year, because of slight changes in volume of employment during the period.
[2] No data.

TABLE 7.—*Industries with 50 percent or more of workers under agreement covered by specified type of check-off*

MANUFACTURING	
Voluntary	*Automatic*
Cement. Clocks and watches. Glass, flat. Petroleum and coal products. Sugar, cane. Textiles, except wool carpets and rugs, and hosiery.	Aircraft engines. Aluminum. Automobiles. Carpets and rugs (wool). Cigarettes and tobacco. Electrical machinery. Hosiery. Leather, except gloves and shoes. Meat packing and slaughtering. Nonferrous smelting and refining. Rubber tires and tubes. Steel, basic. Sugar, beet.
NONMANUFACTURING	
Crude petroleum and natural gas products. Telephone.	Coal mining. Iron mining. Telegraph.

TABLE 8.—*Proportion of workers under union agreement, by type of check-off in selected industries, 1946*

Industry	Percent of workers under agreement			
	Total	Voluntary check-off	Automatic check-off	No check-off
Total	100	17	24	59
Manufacturing	100	23	38	39
Agricultural machinery	100	13	41	46
Aircraft and parts	100	35	47	18
Aluminum	100	15	80	5
Automobiles and parts	100	6	59	35
Canning and preserving foods	100	26	11	63
Chemicals, excluding rayon yarn	100	46	22	32
Cigarettes and tobacco	100	1	84	15
Cigars	100	23	36	41
Clothing, men's	100	25	43	32
Clothing, women's	100	3	6	91
Cotton textiles	100	77	21	2
Dyeing and finishing textiles	100	67	20	13
Electrical machinery	100	19	65	16
Furniture and finished lumber products	100	32	28	40
Hosiery	100	30	63	7
Leather tanning	100	49	20	31
Meat packing	100	8	76	16
Paper	100	33	14	53
Petroleum refining	100	46	20	34
Rayon yarn	100	36	45	19
Rubber	100	32	44	24
Shipbuilding	100	17	43	40
Shoes	100	33	23	44
Silk and rayon textiles	100	83	14	3
Steel, basic	100	2	94	4
Steel products	100	21	43	36
Woolen and worsted textiles	100	68	20	12
Nonmanufacturing	100	10	9	81
Coal mining	100	----------	100	----------
Construction	100	----------	----------	100
Railroads	100	----------	----------	100
Telephone	100	66	----------	34

TABLE 9.—*Approximate number of workers covered in 1946, by type of check-off specified*

[In thousands]

Industry	Automatic	Voluntary
Total	3, 637	2. 503
Manufacturing	3, 032	1, 777
Food	160	84
Tobacco	43	6
Textiles	158	349
Apparel	240	133
Lumber	5	49
Furniture	53	60
Paper	33	63
Printing and publishing	----------	----------
Chemicals	61	97
Petroleum	19	53
Rubber	92	66
Leather	60	59
Stone, clay, and glass	43	88
Iron and steel	702	147
Nonferrous metals	142	91
Electrical machinery	297	87
Machinery, excluding electrical	251	177
Automobiles	415	41
Transportation equipment	219	103
Miscellaneous	39	24
Nonmanufacturing:		
Total, all groups [1]	605	726

---

[1] Included in this group are employees in construction, trucking, warehousing, services, clerical, sales and professional occupations, mining, transportation, communications, and public utilities.

DEFINITIONS

Automatic check-off

Many agreements specify that the employer shall deduct the union dues from the pay of all union members. In addition they may specify that initiation fees and assessments shall be checked off.

The company will deduct from the pay of each employee covered by this agreement all union initiation fees, dues, and assessments.

Voluntary check-off

A number of agreements specify that the employer shall check off union dues or assessments only for those employees who sign individual authorization. In most cases the employee may withdraw his authorization whenever he wishes.

The company agrees that any member of local——— may, upon written instructions to the company with a copy to local———, request the company to deduct his union dues from his pay check once each month and the company agrees that such collected dues will be turned over monthly to the financial secretary of local——— with full accounting thereof. It is understood that any union member may rescind such deduction instructions at any time, provided the company is given written 30 days' notice with a copy to local——— on a form provided for that purpose. Unless rescinded, authorization for deduction of all dues shall continue for the duration of this agreement.

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UNITED STATES DEPARTMENT OF LABOR
L. B. Schwellenbach, *Secretary*

BUREAU OF LABOR STATISTICS
Ewan Clague, *Commissioner*

Union Wages and Hours in the Building Trades
July 1, 1946

Bulletin No. 910

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Letter of Transmittal

United States Department of Labor,
Bureau of Labor Statistics,
Washington, D. C., May 4, 1947.

The Secretary of Labor:

I have the honor to transmit herewith the annual report on union wages and hours in the building trades, as of July 1, 1946.

This report was prepared in the Bureau's Wage Analysis Branch by Donald H. Gerrish assisted by James P. Corkery and Herbert M. Abowitz. The section on the Wage Adjustment Board was prepared by Dorothy K. Newman.

Ewan Clague, *Commissioner.*

Hon. L. B. Schwellenbach,
Secretary of Labor.

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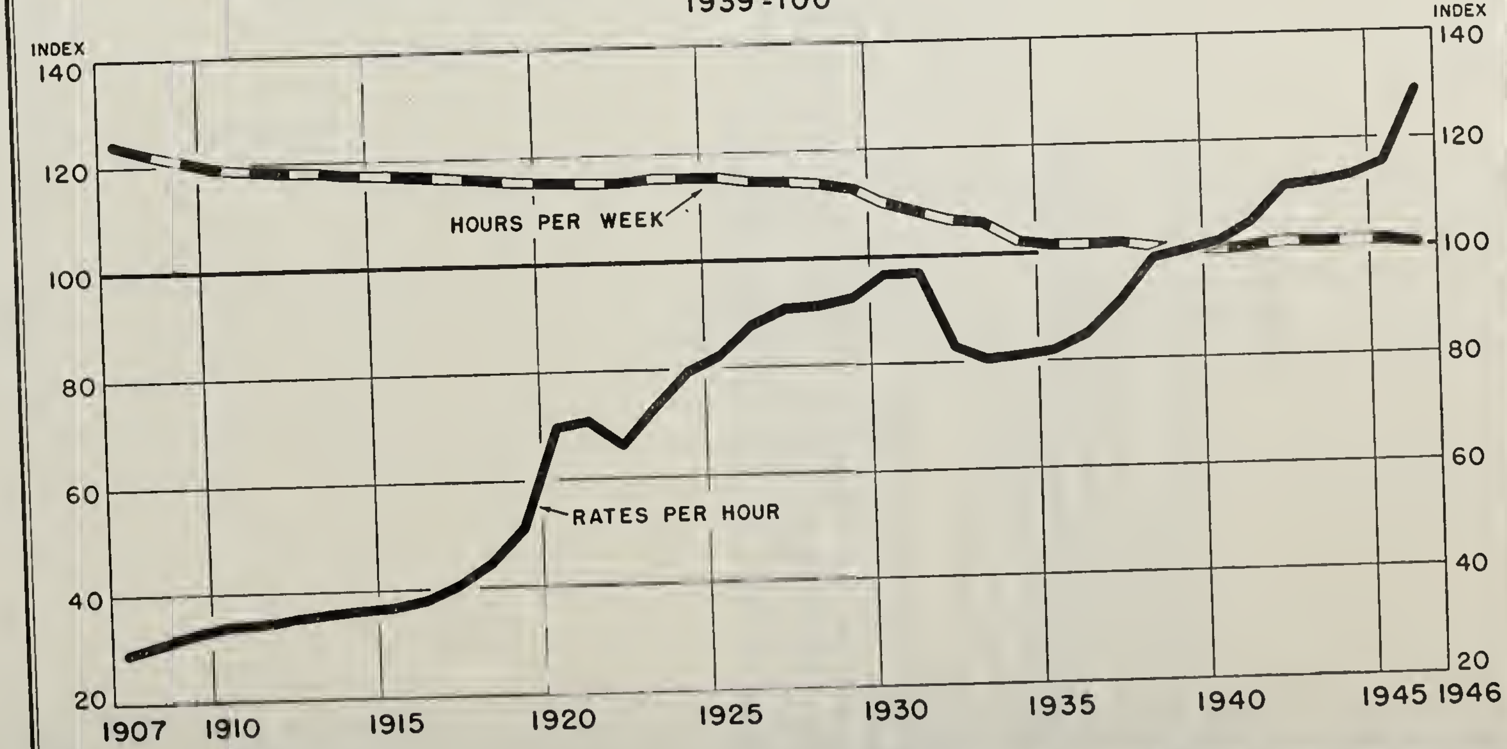
CHART 1

UNION WAGE RATES AND HOURS IN BUILDING TRADES

1939 = 100



UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS

Bulletin No. 910 of the
United States Bureau of Labor Statistics

[Reprinted from the MONTHLY LABOR REVIEW, January 1947, with additional data]

Union Wages and Hours in the Building Trades, July 1, 1946

Summary

HOURLY union wage rates for building-trades journeymen averaged $1.79 an hour on July 1, 1946, and for helpers and laborers $1.14. Bricklayers showed the highest average ($2.06 an hour). Between 1945 and 1946 over 95 percent of the workers received a wage-rate increase of at least 10 percent. Among the 75 cities studied, Charlotte, N. C., had the greatest average increase in journeyman rates (17 percent), and Charleston, S. C., had the most substantial advance for helpers and laborers (42 percent).

Straight-time weekly hours, averaging 39.1 for journeymen and 39.5 for helpers and laborers, represented about a 1-percent reduction during the year. Approximately three-fifths of the journeymen and one-fourth of the helpers received double-time rates for overtime; about 90 percent of both groups received double pay for Sunday work.

Scope and Method of Study

This article is based on effective union scales (as of July 1, 1946). These are defined as the minimum wage rates or maximum schedule of hours agreed upon through collective bargaining between employers and trade-unions. Rates in excess of the agreed minimum may be paid to union members because of long service, special qualifications, or for personal or other reasons. These premium rates were not used in the preparation of this report. Field representatives of the Bureau obtained 2,759 quotations of scales covering 509,331 journeymen and 117,290 helpers employed in 75 cities ranging in size from 40,000 to over 1,000,000.

The 1946 survey took place during the short interval when all wage and price controls were suspended by virtue of the Presidential veto of the bill extending the Price Control Act.[1] In general, the scales reported by the union officials as effective on July 1 had received prior approval of the Wage Adjustment Board for the building construction industry. For 64 cases in which higher rates were reported on July 1 than had been previously authorized, the subsequent restoration of controls legalized the higher rates in over 40 percent of the instances and rolled back the remainder to lower levels. Comparison of the last authorized rates with those reported on July 1 indicated that had wage controls been operative on the survey date, hourly average wage rates for journeymen and helpers would have been about 0.7 percent and 1.0 percent less, respectively. It is recognized, however, that the 64 cases are too few to permit any adequate generalization.

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[1] H. R. 6042 (79th Cong., 2d sess.) was vetoed June 29, 1946. This bill also provided for the extension of the Stabilization Act.

Union Hourly Wage Rates

TREND OF UNION WAGE RATES, 1907–46 [2]

The annual increase of more than 11 percent in rate of pay, shown on July 1, 1946, was the largest percentage change recorded over a single year since 1920 (table 1). Practically all this advance took place after VJ-day. During the war and the early reconversion period, the effectiveness of the Wage Adjustment Board in stabilizing wage rates for the building construction industry is evidenced by the following facts: Between 1941 and 1945 hourly rates in this industry increased only 10 percent (amounting to about 14 cents an hour), in contrast with a 35-percent rise (about 18 cents an hour) for a comparable period in World War I (1916–19). From the time wage controls were adopted in July 1942 until July 1945, building hourly rates rose only slightly less than 4 percent.

TABLE 1.—*Indexes of union hourly wage rates in all building trades, 1907–46*

[1939=100]

Year	All trades	Journeymen	Helpers and laborers	Year	All trades	Journeymen	Helpers and laborers
1907	29.3	29.7	27.3	1927	91.3	91.7	86.4
1908	31.2	31.6	28.5	1928	91.9	92.4	87.3
1909	32.7	33.2	29.5	1929	93.1	93.6	88.8
1910	34.0	34.6	30.5	1930	97.0	97.5	93.3
1911	34.5	35.2	30.6	1931	97.3	97.8	92.8
1912	35.3	36.0	30.9	1932	83.1	83.6	79.2
1913	36.1	36.9	31.8	1933	80.8	81.4	75.7
1914	36.9	37.7	32.1	1934	81.4	81.8	77.9
1915	37.2	38.0	32.4	1935	82.3	82.8	78.3
1916	38.4	39.3	33.5	1936	85.3	85.5	82.9
1917	40.8	41.5	36.8	1937	91.2	91.4	90.1
1918	45.3	45.9	42.6	1938	99.3	99.3	99.2
1919	51.9	52.4	49.3	1939	100.0	100.0	100.0
1920	70.0	70.1	71.5	1940	101.6	101.4	102.0
1921	71.3	71.4	72.2	1941	105.3	105.0	106.8
1922	66.9	67.3	65.7	1942	111.9	110.9	117.5
1923	73.9	74.2	69.7	1943	112.7	111.5	118.9
1924	79.8	80.1	75.4	1944	113.6	112.4	120.3
1925	82.9	83.1	77.9	1945	116.0	114.4	125.9
1926	88.3	88.7	84.9	1946	129.3	126.8	146.3

---

[2] The Bureau has computed an index series with the year 1939 as a base for measuring changes in scales from year to year. This index series, rather than the actual average of rates in this and previous reports, should be used to determine the trend of hourly wage rates because of changes in coverage and shifts in union membership between two periods.

TABLE 2.—*Indexes of union hourly wage rates in each building trade, 1907 to 1946*

[1939=100]

Year	Asbestos workers	Boilermakers	Bricklayers	Carpenters	Cement finishers	Electricians (inside wiremen)	Elevator constructors	Glaziers	Granite cutters
1907	--------	--------	37.7	29.8	34.5	27.9	--------	--------	37.5
1908	--------	--------	38.7	31.7	34.4	30.5	--------	--------	37.7
1909	--------	--------	39.5	33.4	35.4	31.5	--------	--------	38.3
1910	--------	--------	40.2	35.0	35.8	32.4	--------	--------	38.5
1911	--------	--------	40.2	35.5	37.2	32.8	--------	--------	38.6
1912	--------	--------	40.8	36.3	37.2	33.1	--------	--------	39.0
1913	--------	--------	41.5	36.8	38.0	33.8	--------	--------	41.0
1914	--------	--------	42.5	37.4	38.4	34.9	38.2	--------	41.2
1915	--------	--------	42.6	37.8	38.8	35.6	38.4	--------	41.5
1916	36.1	--------	43.0	39.0	39.1	36.3	39.4	--------	43.2
1917	38.0	--------	44.5	42.4	41.4	38.7	42.2	--------	44.8
1918	42.5	--------	47.8	47.1	45.7	43.0	44.9	40.6	53.4
1919	51.7	--------	53.1	54.2	41.2	49.3	52.3	43.4	63.1
1920	67.2	--------	72.4	72.5	69.6	65.0	67.2	62.8	77.8
1921	68.1	--------	71.9	73.1	71.9	67.3	70.7	63.9	85.7
1922	63.4	--------	70.0	67.7	66.7	63.5	66.1	64.0	85.5
1923	65.8	--------	79.2	75.5	73.0	65.9	70.2	67.9	87.1
1924	73.4	--------	83.8	80.8	80.7	73.6	78.8	71.6	87.8
1925	76.4	--------	88.7	82.5	81.1	77.4	82.6	79.6	88.8
1926	81.7	--------	94.1	88.5	86.6	81.5	87.0	80.7	100.0
1927	85.7	--------	96.4	91.4	90.4	84.9	90.2	86.2	99.4
1928	86.3	--------	97.2	91.7	89.5	85.7	91.1	87.2	100.5
1929	90.3	--------	99.4	93.2	89.5	89.3	91.3	88.5	102.4
1930	95.4	--------	101.8	96.9	95.4	90.9	95.6	92.6	107.6
1931	96.4	--------	101.6	97.1	95.8	92.1	96.1	93.2	107.7
1932	80.3	--------	87.0	79.6	83.6	87.9	89.4	78.0	96.4
1933	80.1	--------	84.7	79.4	81.6	80.3	83.1	77.9	92.8
1934	80.0	--------	85.0	80.8	82.4	80.4	83.3	82.5	92.7
1935	81.0	--------	83.7	81.8	82.9	84.3	83.4	83.3	92.6
1936	84.3	--------	84.2	86.0	85.0	86.5	84.4	84.5	92.6
1937	90.8	90.1	90.1	91.6	91.2	90.3	87.7	92.6	93.1
1938	99.5	99.4	99.5	99.8	99.6	99.5	98.4	99.3	98.6
1939	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1940	101.1	101.5	102.2	102.5	100.9	101.7	101.5	101.1	100.0
1941	104.8	103.4	104.6	104.8	104.5	106.3	103.8	104.3	103.5
1942	112.5	109.9	108.3	112.1	110.8	113.5	109.7	108.8	113.5
1943	112.8	110.1	108.7	112.5	112.0	113.8	110.7	109.6	113.6
1944	113.3	110.1	110.0	113.4	113.1	114.7	111.3	110.2	118.0
1945	114.5	111.2	112.7	115.4	114.2	116.9	112.0	112.2	118.0
1946	125.8	120.0	125.6	129.7	128.2	124.9	119.3	123.4	142.2

Year	Lathers	Machinists	Marble setters	Mosaic and terrazzo workers	Painters	Paperhangers	Plasterers	Plumbers and gas fitters	Rodmen
1907	--------	--------	37.1	--------	26.2	--------	37.3	33.3	--------
1908	--------	--------	37.5	--------	29.0	--------	37.2	33.7	--------
1909	--------	--------	37.7	--------	31.0	--------	37.5	34.2	--------
1910	--------	--------	38.2	--------	33.0	--------	37.9	34.5	--------
1911	--------	--------	38.6	--------	33.6	--------	38.1	36.5	--------
1912	33.8	--------	38.7	--------	34.0	--------	38.9	36.7	--------
1913	34.6	--------	41.3	--------	35.5	--------	39.3	37.9	--------
1914	35.2	--------	41.7	--------	36.7	--------	39.4	38.4	--------
1915	35.7	--------	42.1	--------	36.9	--------	39.6	38.7	--------
1916	36.7	--------	42.3	35.1	40.3	--------	41.0	39.0	--------
1917	38.1	--------	42.3	36.9	41.5	--------	42.2	40.4	--------
1918	41.2	--------	44.5	39.9	45.8	--------	44.5	44.6	--------
1919	45.8	--------	49.5	42.9	53.6	--------	51.3	50.4	--------
1920	65.3	--------	65.4	63.4	73.0	--------	67.0	65.2	--------
1921	66.3	--------	66.5	64.6	75.1	--------	70.7	68.2	--------
1922	62.3	--------	65.1	62.7	70.3	--------	67.9	63.4	--------
1923	68.8	--------	73.6	64.2	77.1	--------	75.6	70.0	--------
1924	74.2	--------	77.0	75.8	81.2	--------	84.7	76.3	--------
1925	80.9	--------	78.6	79.7	85.7	--------	86.1	77.9	--------
1926	83.0	--------	87.9	81.4	90.9	--------	92.4	83.9	--------

TABLE 2.—*Indexes of union hourly wage rates in each building trade, 1907 to 1946*—Con.

[1939=100]

Year	Lathers	Machinists	Marble setters	Mosaic and terrazzo workers	Painters	Paper-hangers	Plasterers	Plumbers and gas fitters	Rodmen
1927	86.3	---------	89.8	84.7	93.9	---------	94.4	85.6	---------
1928	86.6	---------	90.2	88.7	95.4	---------	94.6	87.4	---------
1929	85.9	---------	96.6	93.0	95.2	---------	93.5	88.1	---------
1930	89.6	---------	96.9	97.4	100.6	---------	98.1	91.5	---------
1931	89.1	---------	97.4	98.2	101.0	---------	97.9	92.6	---------
1932	80.0	---------	89.2	91.4	85.3	---------	81.4	80.5	---------
1933	77.1	---------	86.2	83.3	83.6	---------	78.2	79.8	---------
1934	79.1	---------	85.8	84.5	82.3	---------	79.1	80.5	---------
1935	80.0	---------	86.4	84.5	82.6	---------	80.0	81.8	---------
1936	82.0	---------	86.9	84.7	86.8	---------	80.5	83.9	---------
1937	87.5	93.7	91.9	88.7	93.0	97.8	88.7	88.5	90.2
1938	96.8	99.8	99.7	98.6	99.2	99.5	99.2	99.1	99.0
1939	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1940	100.7	100.4	101.6	100.5	100.2	100.8	100.5	101.6	101.2
1941	104.5	103.2	101.9	101.4	106.9	107.5	102.2	106.0	106.4
1942	109.1	108.5	103.8	104.6	110.5	112.3	105.0	110.5	111.0
1943	109.2	111.0	104.3	106.3	112.4	112.6	105.2	110.9	111.6
1944	110.0	111.6	105.4	107.8	113.5	114.1	105.9	111.5	112.1
1945	111.5	111.6	109.3	109.8	115.1	114.6	107.6	114.0	114.4
1946	124.2	124.4	121.4	124.2	127.3	127.4	119.0	123.2	126.3

Year	Roofers—composition	Roofers—slate and tile	Sheet-metal workers	Sign painters	Steam and sprinkler fitters	Stone-cutters	Stone-masons	Structural-iron workers[1]	Tile layers
1907	---------	---------	30.6	---------	30.1	39.5	33.9	27.9	---------
1908	---------	---------	31.3	---------	30.5	39.6	34.4	30.4	---------
1909	---------	---------	31.4	---------	34.7	39.6	34.5	32.6	---------
1910	---------	---------	32.3	---------	32.2	39.8	34.8	34.7	---------
1911	---------	---------	33.3	---------	33.2	39.9	35.2	35.5	---------
1912	---------	---------	34.1	---------	33.8	40.0	35.5	36.1	40.1
1913	---------	---------	35.6	40.8	35.0	41.0	36.7	37.3	42.1
1914	31.4	35.4	36.9	41.0	35.7	42.6	37.8	38.0	42.3
1915	32.3	36.8	37.4	41.0	36.5	42.9	38.2	38.0	42.5
1916	32.5	37.8	38.0	41.8	37.2	43.3	38.8	38.6	43.1
1917	34.3	40.3	39.7	43.6	38.6	45.4	40.2	40.9	45.3
1918	38.9	44.2	46.5	47.7	42.2	48.4	44.1	46.8	46.6
1919	43.2	50.3	51.3	57.3	47.4	57.5	49.5	52.7	50.8
1920	61.5	65.0	68.8	77.3	62.6	75.3	69.0	66.8	68.4
1921	64.4	70.8	71.3	80.2	63.4	77.4	70.7	68.1	67.8
1922	61.6	67.7	66.1	79.5	61.9	74.3	65.8	61.8	66.7
1923	62.4	75.5	71.2	85.8	65.0	81.0	77.8	65.9	72.9
1924	72.3	83.6	78.2	97.8	74.5	87.0	82.5	74.6	82.7
1925	74.5	87.5	80.8	98.8	78.4	90.7	84.1	75.4	84.7
1926	81.0	90.3	86.3	98.3	84.9	98.9	92.7	81.1	88.8
1927	83.3	94.6	88.9	101.0	87.3	98.6	93.9	86.8	93.0
1928	85.2	94.8	87.2	101.1	88.6	99.0	95.0	87.0	92.9
1929	86.8	95.8	90.6	102.2	89.1	103.6	97.7	87.7	93.9
1930	92.0	98.8	94.7	102.0	93.5	104.4	99.1	92.5	98.1
1931	92.6	99.1	96.2	101.9	94.0	104.7	99.6	93.4	99.2
1932	80.9	86.1	83.4	92.0	81.0	97.1	88.4	81.0	85.5
1933	79.2	84.0	81.0	85.0	78.6	87.8	82.5	80.1	82.9
1934	80.7	83.5	81.3	84.7	79.5	88.2	82.4	81.1	82.9
1935	83.0	85.7	81.9	87.4	80.8	88.2	82.2	81.8	83.6
1936	83.5	86.4	83.5	89.5	83.5	89.4	83.2	83.9	85.2
1937	90.0	92.8	89.6	98.9	88.1	91.5	91.9	91.6	91.2
1938	99.7	99.0	98.6	99.8	99.3	99.6	99.7	98.9	99.9
1939	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1940	102.3	101.7	101.8	100.2	100.3	100.3	99.5	100.4	100.2
1941	106.5	104.0	106.5	101.9	103.4	102.1	102.1	105.2	101.6
1942	116.1	113.1	116.0	106.7	109.3	103.0	108.0	108.7	106.6
1943	116.6	114.0	116.4	107.2	109.9	103.1	108.4	109.1	108.2
1944	117.3	114.6	117.2	108.9	110.5	112.4	109.0	109.8	109.2
1945	118.8	116.9	118.4	111.3	114.3	112.4	111.4	111.6	112.8
1946	132.3	127.1	133.0	125.3	124.6	127.7	126.5	121.4	127.7

[1] Included rodmen prior to 1940.

Table 2.—*Indexes of union hourly wage rates in each building trade, 1907 to 1946*—Con.

[1939=100]

Year	Bricklayers' tenders	Building laborers	Composition roofers' helpers	Plasterers' laborers	Plumbers' laborers	Steam and sprinkler fitters' helpers	Tile layers' helpers
1907	30.3	30.8	----------	31.3	----------	21.6	----------
1908	30.3	31.0	----------	32.7	----------	21.9	----------
1909	30.4	31.3	----------	33.0	----------	22.0	----------
1910	30.9	32.3	----------	33.2	----------	23.8	----------
1911	31.2	32.4	----------	33.2	----------	23.9	----------
1912	31.4	32.7	----------	33.6	----------	24.7	32.3
1913	31.8	34.2	----------	34.4	----------	25.3	32 9
1914	32.2	34.5	----------	35.1	----------	25.8	33.2
1915	32.4	34.7	----------	35.2	----------	26.5	34.3
1916	33.4	36.3	----------	36.2	----------	26.9	35.6
1917	37.2	40.1	----------	38.6	----------	28.7	36.5
1918	43.4	47.0	----------	44.5	----------	33.1	37.6
1919	50.8	53.3	----------	50.7	----------	39.7	45 6
1920	73.9	77.2	----------	73.5	----------	57.5	74.6
1921	74.2	77.6	----------	75.9	----------	58.9	75.4
1922	61.5	72.9	----------	66.6	----------	60.5	70.9
1923	67.2	74.3	----------	73.4	----------	64.2	72.5
1924	70.2	82.7	----------	78.9	----------	71.2	78.9
1925	78.4	79.0	----------	84.1	----------	73.2	81.1
1926	85.5	86.9	----------	89.1	----------	77.5	87.9
1927	87.5	87.2	----------	89.9	----------	81.1	88.9
1928	87.6	87.6	----------	91.4	----------	82.8	90.7
1929	91.4	88.0	----------	91.7	----------	81.6	89.4
1930	94.9	92.9	----------	97.2	----------	89.2	97.0
1931	94.6	91.5	----------	96.9	----------	89.2	97.0
1932	78.4	78.7	----------	80.4	----------	77.0	85.6
1933	77.4	74.1	----------	75.7	----------	74.8	81.7
1934	82.5	76.9	----------	77.8	----------	75.0	81.8
1935	79.9	78.0	----------	79.1	----------	75.9	84.5
1936	84.2	84.7	----------	80.7	----------	76.1	85.8
1937	90.6	92.7	93.9	87.9	----------	81.6	90.4
1938	99.7	99.4	99.7	99.2	97.2	99.4	99.7
1939	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1940	103.8	101.6	103.6	100.2	104.6	100.6	100.2
1941	107.3	107.6	107.5	102.5	110.4	102.2	102.5
1942	115.7	119.6	118.8	110.1	118.3	106.1	109.5
1943	116.4	121.3	119.5	110.8	119.0	109.9	110.6
1944	117.4	112.9	122.9	111.6	121.8	111.1	111.1
1945	121.8	129.9	122.9	115.7	124.8	112.6	112.6
1946	141.7	152.2	139.0	130.3	142.2	128.0	130.8

It is difficult to compare the gains of the past year with those realized immediately after World War I, because that war ended later in the year and the Bureau's study was then as of May 15, rather than as of July 1. However, by May 15, 1919, 6 months after the end of World War I, rates had risen about 15 percent over May 15, 1918, in comparison with an increase of over 11 percent recorded in the 11 months after World War II. In view of the removal of all wage controls following Executive Order 9081 of November 9, 1946, there may be substantial wage increases in the near future. During a comparable period after World War I (1919–20), when there was also a great construction program, union scales advanced 35 percent.

The 11-percent wage increase for journeymen between 1945 and 1946 was slightly less than that for all trades combined, although the gain for helpers and laborers was substantially more (16 percent). Of the 27 journeymen trades studied 18 reported average increases exceeding 10 percent (table 3). Foremost among these were trades essential in all types of construction: Carpenters, bricklayers, composition roofers, painters, and plasterers. Larger increases were recorded for such trades as granite cutters, but these trades were relatively unimportant in the current construction program or had relatively few workers compared to the carpenters and bricklayers.

TABLE 3.—*Percent of increase in union building-trades wage rates, by trades, July 1, 1945, to July 1, 1946*

Trade	Percent of increase
All trades	11.5
Journeymen	10.8
Asbestos workers	9.9
Boilermakers	7.9
Bricklayers	11.4
Carpenters	12.4
Cement finishers	12.3
Electricians (inside wiremen)	6.9
Elevator constructors	6.5
Glaziers	9.9
Granite cutters	20.5
Lathers	11.4
Machinists	11.5
Marble setters	11.1
Mosaic and terrazzo workers	13.1
Painters	10.6
Paperhangers	11.1
Plasterers	10.6
Plumbers and gas fitters	8.1
Rodmen	10.4
Roofers, composition	11.4
Journeymen—Continued.	
Roofers, slate and tile	8.7
Sheet-metal workers	12.3
Sign painters	12.6
Steam and sprinkler fitters	9.1
Stonecutters	13.6
Stonemasons	13.6
Structural-iron workers	8.8
Tile layers	13.2
Helpers and laborers	16.2
Bricklayers' tenders	16.3
Building laborers	17.2
Composition roofers' helpers	13.1
Elevator constructors' helpers	6.3
Marble setters' helpers	15.4
Plasterers' laborers	12.7
Plumbers' laborers	13.9
Steam and sprinkler fitters' helpers	13.7
Terrazzo workers' helpers	17.4
Tile layers' helpers	16.2

Electricians and plumbers—critical groups in the current construction program—had comparatively small gains owing primarily to the fact that large unions of plumbers and electricians in New York City maintained their wartime hourly rate of $2.00. Most other New York City unions obtained increases of about 25 cents an hour.

AVERAGE HOURLY WAGE RATES, JULY 1, 1946

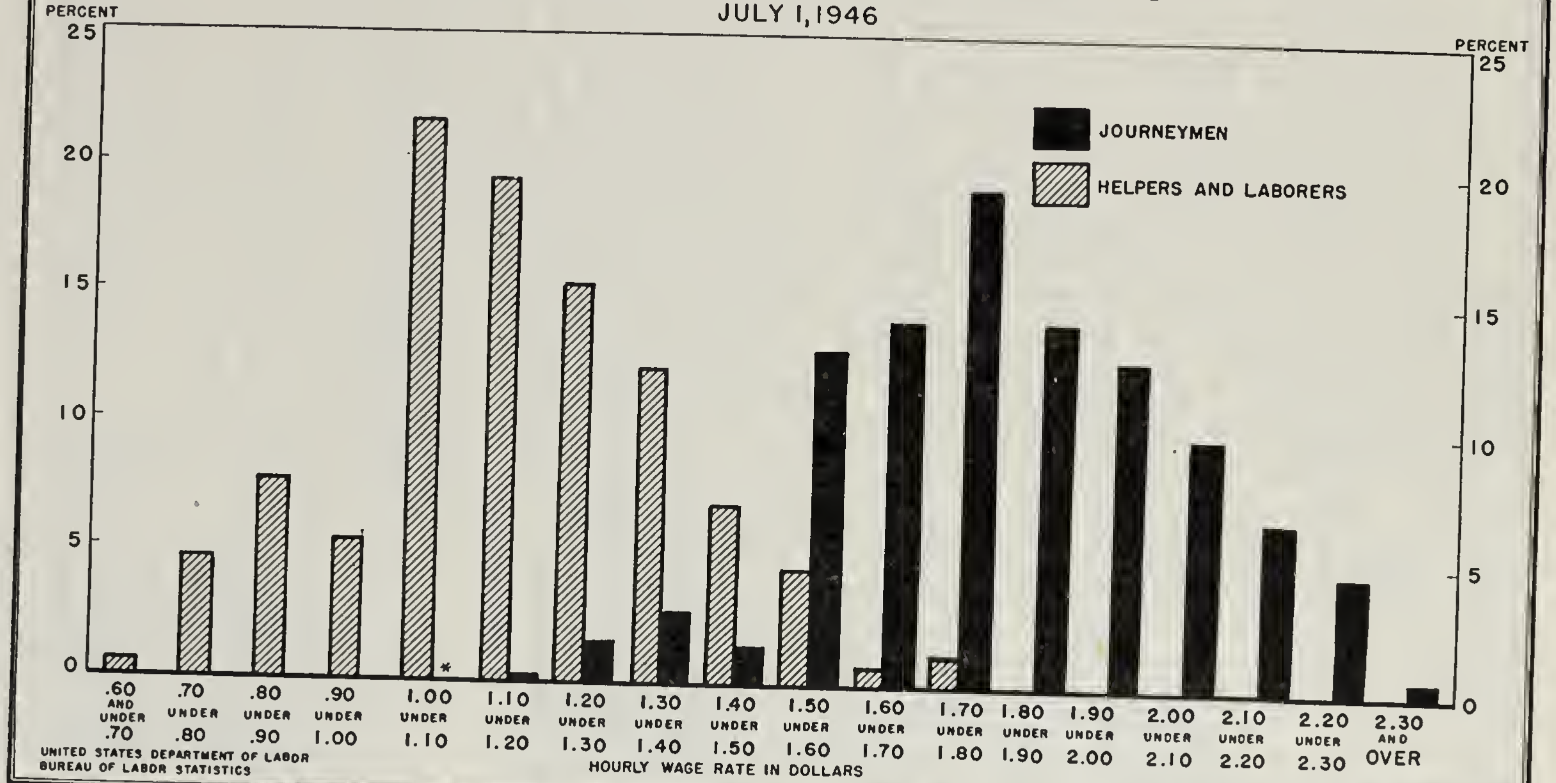
Building-trades workers surveyed on July 1, 1946, averaged $1.67 an hour, as a whole; journeymen made $1.79 and helpers and laborers $1.14 (table 4). The serious shortage of bricklayers in some areas may account in some degree for their ability to negotiate rates well above a number of the other trades. Stonecutters, a trade with very little work in the current construction program, had a rate nearly as high, however. Stonemasons, with the third highest average, in most instances belong to the bricklayers' union and generally receive the same scale as bricklayers. Lathers, plasterers, and plumbers likewise had averages exceeding $1.90 an hour. Paperhangers, on the other hand, had the lowest rate among journeymen ($1.60).

Almost half of the journeymen received between $1.60 and $1.90 an hour and over a fifth $2.00 or more, whereas less than 6 percent fell below $1.50. The most frequently reported rate was $1.75.

CHART 2

DISTRIBUTION OF UNION BUILDING TRADES WORKERS ACCORDING TO HOURLY WAGE RATES

JULY 1, 1946



UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS

* LESS THAN ONE TENTH OF ONE PERCENT

Table 4.—*Distribution of union members in the building trades, by hourly wage rates, July 1, 1946*

Trade	Average rate per hour	Percent of union journeymen whose rates (in cents) per hour were—												
		Under 120 [1]	120 and under 130	130 and under 140	140 and under 150	150 and under 160	160 and under 170	170 and under 180	180 and under 190	190 and under 200	200 and under 210	210 and under 220	220 and under 230	230 and over [2]
Journeymen	$1.792	0.1	1.5	2.7	1.4	12.9	14.0	19.3	14.1	12.7	9.7	6.5	4.6	0.5
Asbestos workers	1.799	3.0	1.1	1.1	3.0	2.7	11.9	29.0	16.0	18.6	3.5	-----	10.1	-----
Boilermakers	1.867	-----	-----	-----	-----	-----	2.0	61.3	4.5	12.2	2.9	-----	17.1	-----
Bricklayers	2.058	-----	-----	-----	-----	-----	1.3	4.1	10.2	13.0	31.1	5.7	34.6	-----
Carpenters	1.730	.1	2.2	3.3	1.8	22.3	19.2	17.3	5.5	11.3	2.6	13.3	-----	1.1
Cement finishers	1.746	.1	2.4	1.0	.4	13.1	23.3	28.2	7.8	12.4	.6	8.7	2.0	-----
Electricians, inside wiremen	1.853	-----	.3	2.7	.5	2.4	8.0	22.4	19.4	13.6	28.0	1.1	1.6	-----
Elevator constructors	1.838	-----	-----	.3	.6	4.1	16.7	23.3	13.1	26.1	9.2	-----	6.6	-----
Glaziers	1.682	1.4	3.3	15.5	6.6	19.9	13.6	9.5	4.6	1.6	-----	24.0	-----	-----
Granite cutters	1.793	-----	-----	-----	-----	28.0	34.9	-----	-----	1.5	-----	24.5	11.1	-----
Lathers	1.941	-----	.3	-----	-----	2.3	3.6	20.3	20.2	7.0	22.7	17.9	-----	5.7
Machinists	1.800	-----	-----	-----	-----	9.2	14.8	7.5	53.6	.6	14.3	-----	-----	-----
Marble setters	1.823	-----	-----	-----	.3	2.0	13.8	33.2	19.1	20.1	.8	10.7	-----	-----
Mosaic and terrazzo workers	1.806	-----	-----	.2	2.0	4.3	14.1	30.7	18.1	4.1	26.5	-----	-----	-----
Painters	1.705	.1	2.4	4.8	2.2	15.5	18.2	18.0	19.3	18.0	1.5	(3)	-----	-----
Paperhangers	1.600	.1	3.7	7.1	5.2	12.5	55.2	15.2	1.0	-----	-----	-----	-----	-----
Plasterers	1.951	-----	-----	.2	-----	.1	6.3	12.3	16.9	10.1	38.1	-----	16.0	-----
Plumbers and gas fitters	1.906	-----	-----	.2	-----	1.0	3.9	17.5	28.4	13.3	28.7	-----	7.0	-----
Roofers, composition	1.616	2.4	6.5	12.9	7.6	11.9	17.2	20.1	9.9	3.3	8.0	.2	-----	-----
Roofers, slate and tile	1.723	3.0	6.1	8.7	6.6	9.0	20.7	7.3	9.7	.9	14.9	2.5	2.9	7.7
Sheet-metal workers	1.809	-----	-----	1.5	2.4	8.9	11.5	31.7	19.7	8.9	3.0	-----	12.4	-----
Sign painters	1.884	.9	-----	1.4	1.0	11.5	4.5	15.1	13.1	10.8	36.9	.2	-----	4.6
Steam and sprinkler fitters	1.879	-----	-----	.1	-----	2.3	3.1	19.8	39.7	21.1	7.2	-----	6.7	-----
Stonecutters	1.974	-----	3.1	1.9	4.2	3.9	.8	18.5	-----	1.5	8.1	58.0	-----	-----
Stonemasons	1.964	-----	-----	-----	-----	-----	1.1	7.6	46.4	11.6	9.5	-----	23.8	-----
Structural-iron workers	1.888	-----	-----	-----	-----	2.2	4.5	34.9	15.6	7.7	19.2	6.5	9.4	-----
Rodmen	1.749	-----	1.4	4.4	.7	11.6	23.4	24.7	11.1	7.4	7.4	4.9	3.0	-----
Tile layers	1.808	-----	-----	.8	.4	2.4	6.1	24.9	42.1	22.7	.6	-----	-----	-----

Trade	Average rate per hour	Percent of union helpers and laborers whose rates (in cents) per hour were—											
		60 and under 70 [4]	70 and under 80	80 and under 90	90 and under 100	100 and under 110	110 and under 120	120 and under 130	130 and under 140	140 and under 150	150 and under 160	160 and under 170	170 and under 180 [5]
Helpers and laborers	$1.138	0.6	4.6	7.7	5.4	21.6	19.4	15.4	12.1	6.9	4.4	0.7	1.2
Bricklayers' tenders	1.242	-----	.5	6.8	1.3	15.2	14.3	8.0	31.6	4.0	18.3	-----	-----
Building laborers	1.065	.9	6.4	8.9	7.0	27.2	23.5	18.2	4.4	3.5	(3)	-----	-----
Composition roofers' helpers	.989	-----	33.6	4.7	11.9	1.3	27.2	21.3	-----	-----	-----	-----	-----
Elevator constructors' helpers	1.285	-----	-----	-----	.1	4.1	19.6	29.5	39.0	2.1	-----	5.6	-----
Marble setters' helpers	1.283	-----	1.4	-----	1.4	15.7	12.4	37.1	15.2	-----	.3	-----	16.5
Pasterers' laborers	1.347	-----	.7	4.6	1.3	8.7	4.8	5.8	14.5	38.0	11.7	7.4	2.5
Plumbers' laborers	1.147	.9	4.1	7.1	10.3	10.1	20.6	14.6	28.6	2.1	1.6	-----	-----
Steam and sprinkler fitters' helpers	1.517	-----	.6	.8	1.2	1.2	6.4	11.1	22.2	-----	-----	-----	56.5
Terrazzo workers' helpers	1.360	-----	-----	.6	.3	6.0	7.5	14.7	23.0	32.7	13.1	2.1	-----
Tile layers' helpers	1.271	-----	.3	1.8	3.3	9.2	7.3	28.5	26.9	22.6	.1	-----	-----

[1] Minimum rate $1 per hour.
[2] Maximum rate $2.79 per hour.
[3] Less than a tenth of 1 percent.
[4] Minimum rate $0.600 per hour.
[5] Maximum rate $1.750 per hour.

Among journeymen, only boilermakers, bricklayers, and stonemasons had no members working for less than $1.60 an hour, and each of these trades had a substantial number of workers above $2.00. In 9 trades, a third or more of the workers were rated at $2.00 or more, including 70 percent of all bricklayers. The lowest rate, $1.00 an hour, generally covered either roofers or glaziers and included only 228 workers. The highest rate was $2.79, paid to sign painters on outdoor advertising in New York City.

Steam and sprinkler fitters' helpers had the highest average rate among the helpers' and laborers' groups, which was explained by the very heavy membership in New York City, where the union rate was $1.73.[3] The composition roofers' helpers had the lowest average. The building-laborer classification was most important as it included about 65 percent of all helpers and laborers studied.

Over two-thirds of all helpers and laborers received between $1.00 and $1.40 an hour. About a fifth had rates between 60 cents and $1.00, and an eighth received between $1.40 and $1.80. The lowest hourly rate scale (60 cents) applied to building laborers in Jackson, Miss., the highest ($1.75) to plasterers' laborers in San Francisco.

CHANGES IN UNION WAGE RATES BETWEEN 1945 AND 1946

The 12-month interval between the surveys of July 1, 1945 and 1946, witnessed the cessation of hostilities, an advance in the cost of living, a tremendous building-construction program, acute shortages in numerous commodities (including building materials), and intense union activity to secure improvements in basic wage rates. The forces at work manifested themselves in the current study particularly by the marked shifts in ratios revealing the extent and magnitude of rate changes.

On July 1, 1945, a third of the building-trades members for whom comparable quotations were received reported wage increases since the prior study date. By July 1, 1946, almost 89 percent of the comparable quotations tabulated, embracing all but 4 percent of the comparable membership, showed wage boosts. Whereas advances of 10 percent and over affected less than 6 percent of all members on July 1, 1945, the proportion so benefiting rose to almost 70 percent on July 1, 1946.

Principal trades which led both in the proportions of quotations howing increases and the percentage of members benefiting by rate aises were the bricklayers, carpenters, and building laborers.

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[3] These workers will probably be excluded in future reports, as the helper system is being eliminated by ne Plumbers and Steamfitters' International Union (United Association of Journeymen Plumbers and teamfitters of the United States and Canada, AFL).

A majority of the journeymen and of the helpers benefited by rate gains of 10 to 20 percent.[3] The helper group predominated in the categories with increases of 20 percent or more, 34 percent of their members falling therein,[4] as contrasted with 4 percent of the journeymen.

TABLE 5.—*Percent of union members affected by wage rate changes and extent of increases, July 1, 1946, compared with July 1, 1945*

Trade	Percent of union members affected by—		Percent of total members affected by increase of—					
	No change	Increase	Less than 5 percent	5 and under 10 percent	10 and under 15 percent	15 and under 20 percent	20 and under 25 percent	25 percent and over
All building trades	4.3	95.7	2.5	23.7	40.9	18.7	6.4	3.5
Journeymen	4.7	95.3	3.0	26.5	44.0	17.5	3.7	.7
Asbestos workers	4.4	95.6	4.0	53.2	18.2	15.8	------	4.4
Boilermakers	10.1	89.9	6.5	51.0	22.5	9.9	------	------
Bricklayers	.1	99.9	.4	26.8	54.6	14.0	4.1	------
Carpenters	.4	99.6	------	16.4	57.5	23.1	2.3	.3
Cement finishers	3.9	96.1	2.3	31.4	28.2	23.5	6.2	4.5
Electricians, inside wiremen	18.3	81.7	8.6	44.1	23.1	5.5	.3	.1
Elevators constructors	18.7	81.3	6.3	55.8	16.2	2.9	.1	------
Glaziers	7.1	92.9	1.6	35.0	40.6	8.7	6.0	1.0
Granite cutters	------	100.0	------	------	26.7	12.6	25.4	35.3
Lathers	9.7	90.3	------	29.0	31.2	25.8	2.2	2.1
Machinists	9.3	90.7	------	43.9	21.7	15.2	9.9	------
Marble setters	5.8	94.2	3.5	22.2	40.7	22.4	3.1	2.3
Mosaic and terrazzo workers	3.6	96.4	.5	28.3	41.0	15.0	4.3	7.3
Painters	3.1	96.9	12.7	20.3	35.0	17.2	11.3	.4
Paperhangers	2.5	97.5	1.3	42.1	27.5	20.3	6.0	.3
Plasterers	8.3	91.7	.1	36.3	37.5	15.7	.3	1.8
Plumbers and gas fitters	19.7	80.3	------	33.5	41.6	5.2	------	------
Roofers, composition	2.9	97.1	3.3	40.1	33.1	9.8	6.3	4.5
Roofers, slate and tile	10.3	89.7	.5	49.2	34.7	1.0	2.9	1.4
Sheet-metal workers	4.9	95.1	.4	16.9	42.8	30.7	4.3	------
Sign painters	13.9	86.1	------	21.5	14.4	32.6	8.4	9.2
Steam and sprinkler fitters	2.4	97.6	------	53.1	36.0	7.3	1.0	.2
Stonecutters	2.7	97.3	------	------	73.0	18.1	2.3	3.9
Stonemasons	2.3	97.7	2.2	17.3	45.5	7.5	5.5	19.7
Structural-iron workers	9.7	90.3	2.9	44.2	34.1	8.5	.6	------
Rodmen	5.0	95.0	4.0	36.0	32.8	20.2	1.8	.2
Tile layers	5.8	94.2	.5	19.2	32.2	14.2	12.3	15.8
Helpers and laborers	2.4	97.6	.3	11.5	27.5	24.3	18.4	15.6
Bricklayers' tenders	2.2	97.8	------	22.3	19.4	15.8	31.4	8.9
Building laborers	.8	99.2	.1	6.3	30.0	26.7	17.0	19.1
Composition roofers' helpers	18.4	81.6	9.0	9.0	11.7	9.0	27.2	15.7
Elevator constructors' helpers	25.0	75.0	4.6	50.5	11.4	8.2	.3	------
Marble setters' helpers	9.6	90.4	------	8.0	26.2	34.2	8.0	14.0
Plasterers' laborers	4.0	96.0	2.0	29.0	32.6	12.6	12.2	7.6
Plumbers' laborers	15.0	85.0	------	5.5	25.6	28.0	15.1	10.8
Steam and sprinkler fitters' helpers	5.3	94.7	------	1.2	7.3	85.4	.8	------
Terrazzo workers' helpers	2.0	98.0	------	8.6	17.6	44.5	7.6	19.7
Tile layers' helpers	7.8	92.2	------	14.2	29.6	12.9	9.0	26.5

Considerable segments of important trades registered gains between 10 and 20 percent, notably bricklayers (68.6 percent), carpenters (80.6), sheet-metal workers (73.5), painters (52.2), plasterers (53.2), and building laborers (56.7).

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[4] This was the result, in the main, of increases up to 37½ cents an hour to helpers in cities with low basic scales and/or high membership concentration.

Elevator constructors and their helpers, plumbers, and electricians ranked highest in membership proportions working under quotations involving no wage changes. No decreases in wage rates during the year were reported in any of the 75 cities surveyed.

POST SURVEY RATE CHANGES

From July 2 until November 9, 1946 (the termination date of wage controls), the Wage Adjustment Board approved increases benefiting almost a fourth of the workers included in the July study. These raises, not reflected in any of the tables appearing in this report, averaged 15 cents an hour, and lifted the general average to $1.71 on November 9, a gain of approximately 2 percent for each of the two groups. Inclusion of these later increases would advance the index of union hourly wage rates for all workers to 132.0 on November 9 (journeymen, 129.5; helpers, 149.5). During the period from the end of the war to the end of wage controls, union building-construction wage rates advanced about 14 percent.

UNION WAGE RATES BY CITY AND REGION

As in previous years, the highest city averages[5] for journeymen were found in the New York metropolitan area (table 6). The average for the adjacent city of Newark was slightly above that for New York, which may have been caused by the higher electricians' scale in Newark, as other important trades have about the same scales in these two cities. Chicago ranked third with respect to journeymen workers. Butte, Mont., one of the smallest cities surveyed, was highest among the cities of 40,000 to 100,000 population and ranked eleventh among the 75 cities studied. For journeymen, Charlotte, N. C., and Jackson, Miss., had the lowest city averages.

In 52 of the 75 cities studied the average increases for journeymen etween 1945 and 1946 were over 10 percent.[6] Charlotte, N. C., nd Houston, Tex., with increases of approximately 17 percent each, ad the largest average gains for this group, Charleston, S. C., the mallest (less than 6 percent).

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[5] The averages presented were weighted according to the number of members in each local union covered y the reported rates and, in many cases, may be lower than a simple average of specific rates owing to the rge memberships in the less-skilled trades carrying the lower rates.

[6] These net changes were based on the specific rates for 1945 and 1946, weighted by the membership for ch union in 1946. Only those quotations showing comparable data for both years were included. As uilding-trades hourly wage rates in normal years tend to be changed by additions of either 12½ or 10 cents, ecific increases for 1946 will reflect larger percentage changes among those trades with comparatively low ales. For this reason cities which have lower scales tend to show the greatest percentage increases.

TABLE 6.—*Average union hourly wage rates in the building trades, by cities and population groups, July 1, 1946*

City and population group	Average hourly rate
Journeymen	
Population group I (over 1,000,000):	
New York, N. Y	$2.087
Chicago, Ill	1.949
Average for group I	*1.902*
Philadelphia, Pa	1.849
Detroit, Mich	1.825
Los Angeles, Calif	1.609
Population group II (500,000 to 1,000,000):	
Washington, D. C	1.929
Pittsburgh, Pa	1.928
Buffalo, N. Y	1.904
St. Louis, Mo	1.856
Average for group II	*1.815*
San Francisco, Calif	1.797
Cleveland, Ohio	1.784
Baltimore, Md	1.747
Boston, Mass	1.743
Milwaukee, Wis	1.637
Population group III (250,000 to 500,000):	
Newark, N. J	2.138
Toledo, Ohio	1.823
Cincinnati, Ohio	1.799
Kansas City, Mo	1.783
Seattle, Wash	1.760
Rochester, N. Y	1.755
Denver, Colo	1.738
Indianapolis, Ind	1.711
Average for group III	*1.702*
Houston, Tex	1.696
St. Paul, Minn	1.694
Minneapolis, Minn	1.686
Columbus, Ohio	1.661
Louisville, Ky	1.625
Portland, Oreg	1.615
Birmingham, Ala	1.601
Memphis, Tenn	1.593
Dallas, Tex	1.559
Providence, R. I	1.554
San Antonio, Tex	1.543
New Orleans, La	1.535
Atlanta, Ga	1.494
Population group IV (100,000 to 250,000):	
Dayton, Ohio	1.786
Youngstown, Ohio	1.782
Peoria, Ill	1.769
South Bend, Ind	1.726
New Haven, Conn	1.679
Spokane, Wash	1.676
Springfield, Mass	1.670
Rock Island (Ill.) district [1]	1.651
Omaha, Nebr	1.627
Des Moines, Iowa	1.619
Erie, Pa	1.616
Oklahoma City, Okla	1.615
Reading, Pa	1.602
Average for group IV	*1.593*
Worcester, Mass	1.562
Grand Rapids, Mich	1.555
Salt Lake City, Utah	1.549
Scranton, Pa	1.542
Duluth, Minn	1.518
Nashville, Tenn	1.503
Wichita, Kans	1.474
Richmond, Va	1.470
Norfolk, Va	1.457
Jacksonville, Fla	1.436
Tampa, Fla	1.413
Charlotte, N. C	1.366
Journeymen—Continued	
Population group V (40,000 to 100,000):	
Butte, Mont	$1.811
Charleston, W. Va	1.690
Phoenix, Ariz	1.659
Mobile, Ala	1.552
Madison, Wis	1.540
Binghamton, N. Y	1.535
Average for group V	*1.532*
El Paso, Tex	1.510
Little Rock, Ark	1.479
Manchester, N. H	1.449
Portland, Maine	1.416
Charleston, S. C	1.409
York, Pa	1.374
Jackson, Miss	1.368
Helpers and laborers	
Population group I (over 1,000,000):	
New York, N. Y	1.442
Chicago, Ill	1.322
Average for group I	*1.245*
Detroit, Mich	1.201
Los Angeles, Calif	1.141
Philadelphia, Pa	1.036
Population group II (500,000 to 1,000,000):	
San Francisco, Calif	1.318
Buffalo, N. Y	1.276
Cleveland, Ohio	1.266
Pittsburgh, Pa	1.255
St. Louis, Mo	1.233
Milwaukee, Wis	1.227
Average for group II	*1.207*
Boston, Mass	1.183
Washington, D. C	1.073
Baltimore, Md	.986
Population group III (250,000 to 500,000):	
Newark, N. J	1.393
Seattle, Wash	1.296
Kansas City, Mo	1.234
Denver, Colo	1.220
Minneapolis, Minn	1.183
St. Paul, Minn	1.174
Portland, Oreg	1.174
Toledo, Ohio	1.155
Cincinnati, Ohio	1.137
Rochester, N. Y	1.127
Average for group III	*1.048*
Indianapolis, Ind	1.017
Providence, R. I	1.012
Columbus, Ohio	.961
Louisville, Ky	.944
Houston, Tex	.883
Dallas, Tex	.870
New Orleans, La	.813
Birmingham, Ala	.810
Memphis, Tenn	.804
Atlanta, Ga	.792
San Antonio, Tex	.776
Population group IV (100,000 to 250,000):	
Spokane, Wash	1.197
South Bend, Ind	1.197
Richmond, Va	1.160
New Haven, Conn	1.140
Peoria, Ill	1.133
Springfield, Mass	1.084
Youngstown, Ohio	1.077
Salt Lake City, Utah	1.072
Dayton, Ohio	1.069
Rock Island (Ill.) district [1]	1.066
Des Moines, Iowa	1.062
Worcester, Mass	1.053
Erie, Pa	1.038
Duluth, Minn	1.021

[1] Includes Rock Island and Moline, Ill., and Davenport, Iowa.

Table 6.—*Average union hourly wage rates in the building trades, by cities and population groups, July 1, 1946*—Continued

City and population group	Average hourly rate
Helpers and laborers—Continued	
Population group IV—continued	
Charlotte, N. C	$1.015
Average for group IV	*1.013*
Reading, Pa	1.005
Grand Rapids, Mich	.983
Scranton, Pa	.951
Wichita, Kans	.932
Oklahoma City, Okla	.897
Omaha, Nebr	.838
Norfolk, Va	.826
Tampa, Fla	.783
Jacksonville, Fla	.768
Nashville, Tenn	.765
Helpers and laborers—Continued	
Population group V (40,000 to 100,000):	
Butte, Mont	$1.169
Phoenix, Ariz	1.062
Madison, Wis	1.056
Portland, Maine	1.038
Charleston, W. Va	.951
Manchester, N. H	.921
Average for group V	*.912*
York, Pa	.859
Charleston, S. C	.773
Little Rock, Ark	.716
Mobile, Ala	.680
Jackson, Miss	.664

Table 7.—*Percent of change in union building trades wage rates in each city, July 1, 1945, to July 1, 1946*

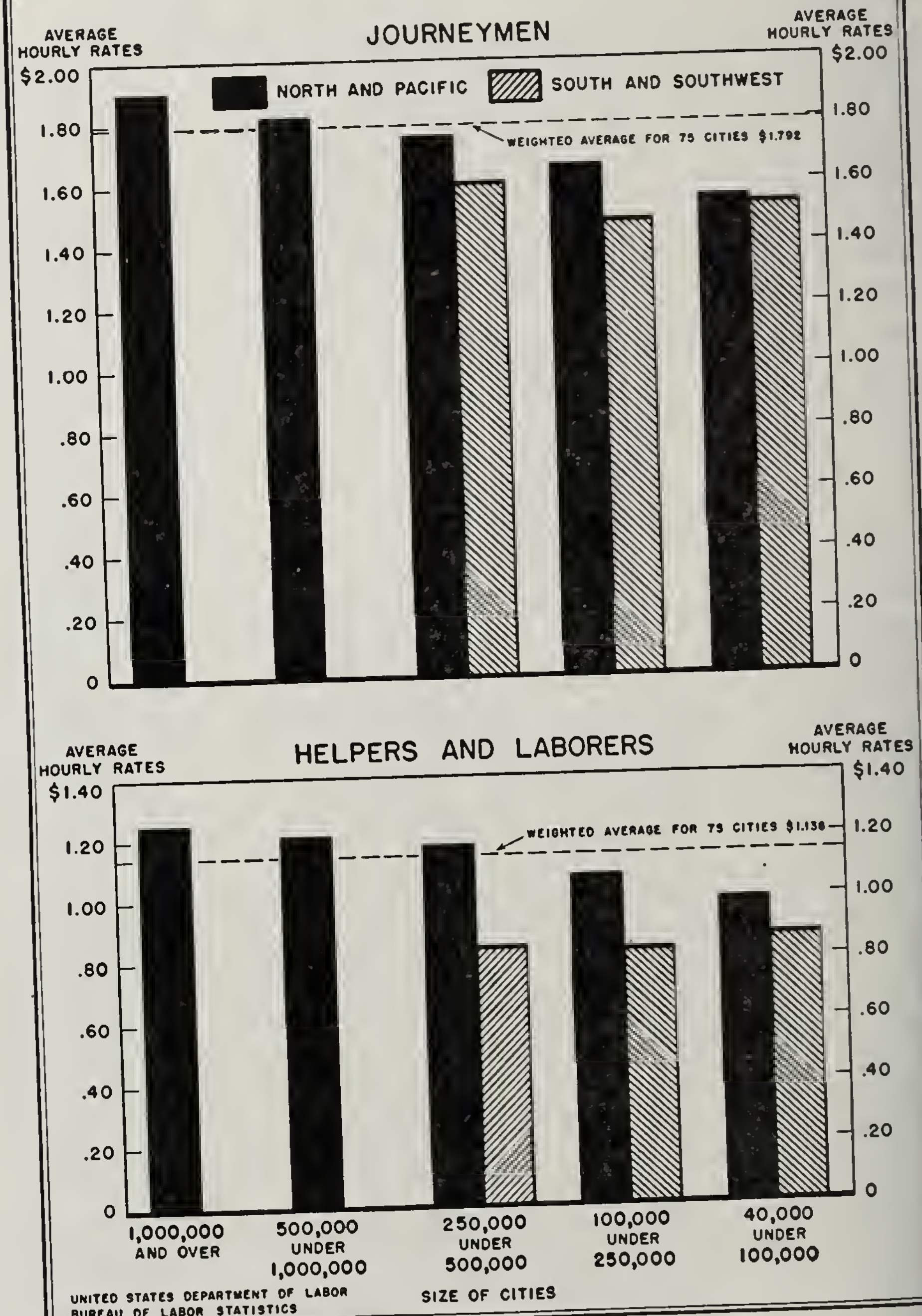
City	Percent of increase		
	All trades	Journeymen	Helpers and laborers
All cities	11.5	10.8	16.2
Atlanta, Ga	10.6	10.2	14.4
altimore, Md	13.2	12.5	16.5
inghamton, N. Y	9.6	9.6	----------
irmingham, Ala	15.2	13.9	22.7
oston, Mass	9.4	9.0	12.8
uffalo, N. Y	16.5	14.8	24.6
utte, Mont	14.4	13.1	18.0
harleston, S. C	14.6	5.6	41.7
harleston, W. Va	10.0	8.9	19.7
harlotte, N. C	17.3	17.3	10.7
hicago, Ill	8.6	8.7	8.3
incinnati, Ohio	12.4	10.8	21.1
leveland, Ohio	7.0	6.6	10.9
olumbus, Ohio	10.1	10.0	12.3
allas, Tex	12.4	11.3	22.7
ayton, Ohio	10.5	10.3	12.7
enver, Colo	11.7	12.7	9.3
es Moines, Iowa	15.8	14.0	23.3
etroit, Mich	14.3	14.2	16.1
uluth, Minn	14.3	12.2	28.2
Paso, Tex	10.4	10.4	----------
rie, Pa	10.2	9.1	18.4
rand Rapids, Mich	10.4	10.4	11.1
ouston, Tex	18.0	17.0	32.9
dianapolis, Ind	12.9	13.8	8.0
ckson, Miss	9.3	9.3	----------
cksonville, Fla	12.4	11.5	25.7
ansas City, Mo	14.2	13.6	20.3
ttle Rock, Ark	11.5	10.8	17.6
s Angeles, Calif	11.9	11.5	15.8
uisville, Ky	9.0	7.5	23.0
adison, Wis	16.7	16.7	16.9
anchester, N. H	12.9	12.4	19.4
emphis, Tenn	16.6	14.0	27.7
lwaukee, Wis	13.0	12.4	17.7
inneapolis, Minn	14.3	13.0	20.6
Mobile, Ala	7.6	8.5	0
Nashville, Tenn	11.2	9.8	24.9
Newark, N. J	12.1	12.2	11.9
New Haven, Conn	12.2	11.6	15.2
New Orleans, La	10.3	9.0	13.9
New York, N. Y	10.2	9.6	16.6
Norfolk, Va	9.6	9.6	3.6
Oklahoma City, Okla	13.8	11.0	25.8
Omaha, Nebr	13.8	15.6	.3
Peoria, Ill	11.7	11.6	12.4
Philadelphia, Pa	14.1	13.1	17.5
Phoenix, Ariz	16.4	16.8	15.1
Pittsburgh, Pa	10.0	9.5	13.1
Portland, Maine	14.5	14.8	12.7
Portland, Oreg	12.6	12.0	19.3
Providence, R. I	10.9	9.9	17.0
Reading, Pa	9.1	8.1	16.8
Richmond, Va	11.3	11.3	8.4
Rochester, N. Y	10.8	10.4	12.9
Rock Island (Ill.) district [1]	13.0	12.0	18.0
St. Louis, Mo	10.9	8.9	17.4
St. Paul, Minn	15.6	13.5	20.6
Salt Lake City, Utah	10.9	10.3	13.0
San Antonio, Tex	15.5	14.9	22.6
San Francisco, Calif	16.4	15.5	22.1
Scranton, Pa	11.8	11.9	11.4
Seattle, Wash	8.0	7.8	11.0
South Bend, Ind	12.1	11.4	14.2
Spokane, Wash	11.4	10.6	11.5
Springfield, Mass	9.5	9.1	11.5
Tampa, Fla	12.7	11.4	26.7
Toledo, Ohio	11.7	11.3	12.9
Washington, D. C	8.2	7.4	15.8
Wichita, Kans	12.4	11.9	15.3
Worcester, Mass	8.8	8.7	10.4
York, Pa	11.8	12.3	10.1
Youngstown, Ohio	14.3	12.4	26.1

Includes Rock Island and Moline, Ill., and Davenport, Iowa.

CHART 3

AVERAGE UNION WAGE RATES IN BUILDING TRADES ACCORDING TO SIZE OF CITY AND REGION

JULY 1, 1946



UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS

New York and Newark, as in the case of journeymen, also had the highest average rates for helpers and laborers; Mobile, Ala., and Jackson, Miss., were the lowest for helpers and laborers. With few exceptions (generally the highest-wage cities), there seemed to be little relationship between the level of rates for journeymen and helpers. Washington, D. C., for example, had the highest average for journeymen among cities of 500,000 to 1,000,000 population but next to the lowest for helpers and laborers.

In many cities substantial percentage increases were recorded during the year for the helper and laborer groups. The rise of 42 percent in Charleston, S. C., was due to the advance in building laborers' rates from 50 to 75 cents. In Houston, the increase of about 33 percent resulted from changes in rates for building laborers (from 60 to 80 cents an hour) and for other trades (from 75 cents to $1.00). Other increases of over 25 percent were found in Jacksonville, Memphis, Oklahoma City, Tampa, and Youngstown. The only city showing no increase in the helper and laborer group was Mobile.

Wage rates for building construction workers as a whole were consistently higher in the larger cities. Substantially higher averages were recorded for most building-trades workers in the North and Pacific region as compared with the South and Southwest area (chart 3). The differential for all journeymen trades combined amounted to about 15 cents in group III cities, 18 cents in group IV cities, and about 2 cents in the smallest or group V cities. The largest differences were found in the helper and laborer group, where the averages shown for the North and Pacific region were almost 34 cents higher in group III cities, 24 cents in group IV cities, and 12 cents in group V cities.

Cities in the North and Pacific area had higher journeymen averages than cities in the South and Southwest region in 62 of 74 possible comparisons. With the single exception of elevator constructors' helpers in the group V cities, all 19 comparable averages for helpers and laborers were also substantially higher in the North and Pacific section than in the South and Southwest. The higher average for elevator constructors' helpers among group V cities in the South and Southwest was due to a rate of $1.38 an hour in Phoenix compared with a rate of $1.02 in Portland, Maine.

TABLE 8.—*Average union wage rate in each building trade by regional and population group, July 1, 1946*

Trade	Cities in population group [1]										
	Group I [2]	Group II [2]	Group III			Group IV			Group V		
	North and Pacific	North and Pacific	All cities	North and Pacific	South and Southwest	All cities	North and Pacific	South and Southwest	All cities	North and Pacific	South and Southwest
All building trades	$1.801	$1.690	$1.563	$1.635	$1.419	$1.474	$1.516	$1.379	$1.385	$1.441	$1.345
Journeymen	1.902	1.815	1.702	1.750	1.602	1.593	1.651	1.473	1.532	1.543	1.524
Asbestos workers	1.862	1.803	1.728	1.735	1.718	1.775	1.812	1.642	1.703	1.755	1.657
Boilermakers	1.938	1.784	1.819	1.833	1.750	1.772	1.806	1.625	1.730	1.754	1.717
Bricklayers	2.158	2.027	1.939	1.974	1.873	1.856	1.881	1.801	1.866	1.883	1.846
Carpenters	1.838	1.791	1.642	1.698	1.527	1.496	1.598	1.329	1.454	1.488	1.427
Cement finishers	1.868	1.788	1.693	1.752	1.591	1.547	1.625	1.396	1.560	1.597	1.549
Electricians, inside wiremen	1.919	1.880	1.836	1.862	1.768	1.715	1.732	1.680	1.576	1.528	1.620
Elevator constructors	1.962	1.884	1.753	1.780	1.718	1.650	1.651	1.647	1.621	1.617	1.628
Glaziers	1.886	1.665	1.542	1.572	1.466	1.373	1.424	1.197	1.364	1.407	1.320
Granite cutters	1.618	1.517	1.503	1.503	----	----	----	----	----	----	----
Lathers	2.033	1.924	1.844	1.871	1.771	1.714	1.761	1.632	1.606	1.649	1.590
Machinists	1.879	1.753	1.780	1.809	1.644	1.619	1.620	(3)	1.701	(3)	(3)
Marble setters	1.916	1.808	1.753	1.759	1.740	1.690	1.692	1.683	1.844	1.769	1.944
Mosaic and terrazzo workers	1.907	1.786	1.692	1.692	1.693	1.668	1.678	1.644	1.845	1.758	1.950
Painters	1.811	1.714	1.598	1.662	1.449	1.476	1.510	1.400	1.427	1.392	1.462
Paperhangers	1.670	1.683	1.572	1.624	1.413	1.476	1.486	1.434	1.415	1.419	1.406
Plasterers	2.059	1.949	1.860	1.939	1.731	1.776	1.825	1.721	1.764	1.734	1.781
Plumbers and gas fitters	2.021	1.866	1.822	1.838	1.786	1.704	1.710	1.693	1.717	1.704	1.726
Roofers, composition	1.770	1.682	1.530	1.659	1.328	1.431	1.483	1.240	1.335	1.269	1.397
Roofers, slate and tile	2.090	1.853	1.618	1.691	1.394	1.391	1.524	1.193	1.424	1.434	1.407
Sheet-metal workers	1.970	1.786	1.725	1.754	1.642	1.558	1.599	1.462	1.520	1.546	1.505
Sign painters	2.103	1.825	1.778	1.835	1.631	1.578	1.594	1.498	1.664	1.574	1.712
Steam and sprinkler fitters	1.983	1.828	1.829	1.843	1.801	1.704	1.709	1.692	1.737	1.739	1.734
Stonecutters	(3)	1.801	1.379	1.403	1.365	(3)	(3)	----	----	----	----
Stonemasons	2.050	1.878	1.919	1.923	1.909	1.811	1.827	1.736	1.883	1.766	1.992
Structural-iron workers	1.986	1.902	1.820	1.880	1.749	1.781	1.817	1.672	1.653	1.689	1.629
Rodmen	1.828	1.830	1.694	1.789	1.540	1.689	1.765	1.467	1.520	1.700	1.392
Tile layers	1.881	1.788	1.754	1.778	1.715	1.630	1.645	1.608	1.845	1.764	1.914
Helpers and laborers	1.245	1.207	1.048	1.175	.837	1.013	1.066	.826	.912	.994	.871
Bricklayers' tenders	1.368	1.256	1.143	1.242	.957	1.080	1.103	.930	1.025	1.084	.986
Building laborers	1.126	1.161	.999	1.131	.796	.976	1.038	.790	.878	.952	.845
Composition roofers' helpers	----	1.159	.934	1.093	.758	1.101	1.149	(3)	.750	(3)	.750
Elevator constructors' helpers	1.373	1.307	1.236	1.252	1.209	1.161	1.164	1.145	1.132	1.088	1.218
Marble setters' helpers	1.471	1.202	1.131	1.158	1.000	1.121	1.121	----	.893	1.250	(3)
Plasterers' laborers	1.484	1.381	1.234	1.330	.959	1.103	1.171	.901	1.104	1.234	1.052
Plumbers' laborers	1.210	1.266	1.097	1.238	.895	.966	.999	.888	.866	1.010	.750
Steam and sprinkler fitters' helpers	1.584	1.122	1.242	1.242	----	----	----	----	.926	1.017	(3)
Terrazzo workers' helpers	1.456	1.345	1.188	1.255	1.006	1.198	1.198	----	1.238	1.238	----
Tile layers' helpers	1.353	1.269	1.175	1.256	.978	1.027	1.031	(3)	.988	1.067	(3)

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[1] Group 1 includes cities over 1,000,000 population; group II, 500,000 to 1,000,000; group III, 250,000 to 500,000; group IV, 100,000 to 250,000; and group V, 40,000 to 100,000.
[2] No city of this size in the South or Southwest.
[3] Insufficient quotations to compute an average.

Overtime and Sunday Rates

After the war most building-trades unions returned to prewar standards regarding overtime and Sunday rates. During the war, time and a half for overtime was the general practice as a result of the wartime stabilization agreement between the contracting agencies of the Federal Government and the Building and Construction Trades Department of the American Federation of Labor.

Table 9.—*Distribution of union members in the building trades by overtime and Sunday rates, July 1, 1946*

Trade	Percent of union members receiving overtime rates of—			Percent of union members receiving Sunday rates of—		
	No information	Time and one-half	Double time	No information	Time and one-half	Double time
All building trades	0.1	37.6	62.3	0.4	10.9	88.7
Journeymen	.1	29.5	70.4	.4	11.8	87.8
Asbestos workers	.4	21.5	78.1	.8	15.4	83.8
Boilermakers	----------	1.5	98.5	----------	----------	100.0
Bricklayers	----------	7.2	92.8	.3	.5	99.2
Carpenters	----------	20.3	79.7	.6	3.2	96.2
Cement finishers	----------	54.2	45.8	----------	7.7	92.3
Electricians, inside wiremen	----------	34.3	65.7	----------	21.7	78.3
Elevator constructors	----------	5.3	94.7	----------	.5	99.5
Glaziers	----------	54.1	45.9	1.9	15.4	82.7
Granite cutters	----------	99.6	.4	----------	53.8	46.2
Lathers	6.2	19.9	73.9	2.1	1.1	96.8
Machinists	----------	29.8	70.2	----------	5.7	94.3
Marble setters	.5	33.6	65.9	1.3	3.3	95.4
Mosaic and terrazzo workers	.5	51.9	47.6	7.9	6.3	85.8
Painters	----------	61.8	38.2	----------	40.4	59.6
Paperhangers	2.6	74.3	23.1	2.6	23.7	73.7
Plasterers	----------	6.9	93.1	----------	2.8	97.2
Plumbers and gas fitters	----------	29.5	70.5	.6	10.6	88.8
Roofers, composition	----------	62.5	37.5	----------	17.5	82.5
Roofers, slate and tile	7.7	39.1	53.2	7.7	11.8	80.5
Sheet-metal workers	----------	42.7	57.3	----------	5.1	94.9
Sign painters	----------	81.3	18.7	----------	19.6	80.4
Steam and sprinkler fitters	----------	30.0	70.0	.5	21.6	77.9
Stonecutters	5.8	6.2	88.0	5.8	2.3	91.9
Stonemasons	----------	8.5	91.5	1.2	.2	98.6
Structural-iron workers	----------	1.9	98.1	.3	.6	99.1
Rodmen	----------	9.8	90.2	.7	.3	99.0
Tile layers	.9	47.8	51.3	1.5	3.2	95.3
Helpers and laborers	(1)	72.8	27.2	.6	7.1	92.3
Bricklayers' tenders	----------	81.1	18.9	----------	9.0	91.0
Building laborers	----------	77.0	23.0	.8	6.3	92.9
Composition roofers' helpers	5.7	67.3	27.0	5.7	28.5	65.8
Elevator constructors' helpers	----------	4.9	95.1	----------	.4	99.6
Marble setters' helpers	----------	54.0	46.0	2.2	1.4	96.4
Plasterers' laborers	----------	57.6	42.4	----------	9.8	90.2
Plumbers' laborers	----------	53.8	46.2	----------	6.0	94.0
Steam and sprinkler fitters' helpers	----------	8.1	91.9	----------	7.3	92.7
Terrazzo workers' helpers	----------	56.3	43.7	1.6	1.6	96.8
Tile layers' helpers	----------	48.2	51.8	.2	6.0	93.8

[1] Less than a tenth of 1 percent.

In July 1946, over three-fifths of the journeymen received double he basic rate if they were required to work other than regular hours. n this industry, this generally means after 8 hours per day, 40 hours er week, on Saturdays, or beyond specified daily hours such as after p. m. or before 8 a. m. Only 8 trades had a majority of their members covered by an overtime rate of time and a half. In 7 trades, over

90 percent of the membership was included under double-time rates. About 9 of every 10 journeymen received double time if required to work on Sunday.

The situation was different for helpers and laborers, as only about a fourth of the workers received double pay for work at other than regular hours; about three-fourths received time and a half. If required to work on Sunday, however, 9 out of 10 helpers and laborers received double time, their proportion equaling that of journeymen.

Weekly Hours

TREND OF STRAIGHT-TIME WEEKLY HOURS, 1946

On July 1, 1946, straight-time weekly hours averaged 39.2 for all building-trades workers; journeymen averaged 39.1 hours and helpers and laborers 39.5 (table 12). Over four-fifths of the journeymen were on the standard 40-hour week; most of the others had a 35-hour week. Electricians, plasterers, and plumbers were the only trades with a substantial percentage of members on the 30-hour week, largely owing to the 30-hour straight-time week for these trades in New York City. Nine out of every 10 helpers and laborers were covered by the 40-hour week.

TABLE 10.—*Indexes of union weekly hours in all building trades, 1907–46*

[1939=100]

Year	All trades	Journeymen	Helpers and laborers	Year	All trades	Journeymen	Helpers and laborers
1907	124.3	123.8	126.1	1927	114.7	114.8	113.9
1908	122.4	122.0	123.5	1928	114.0	114.0	113.8
1909	120.7	120.5	121.0	1929	113.0	113.3	111.5
1910	119.2	119.1	118.8	1930	109.8	110.0	109.0
1911	118.8	118.7	118.6	1931	108.5	108.5	108.1
1912	118.4	118.3	118.3	1932	106.5	106.6	105.7
1913	118.2	118.0	118.3	1933	106.2	106.2	105.2
1914	117.7	117.7	117.6	1934	102.3	102.3	101.9
1915	117.6	117.6	117.5	1935	101.5	101.5	101.2
1916	117.2	117.1	117.2	1936	101.5	101.5	101.4
1917	116.9	116.9	116.7	1937	101.9	101.9	101.8
1918	116.3	116.2	116.3	1938	100.2	100.1	100.2
1919	115.7	115.7	115.2	1939	100.0	100.0	100.0
1920	115.1	115.2	114.5	1940	99.9	100.0	99.4
1921	115.0	115.1	114.5	1941	100.3	100.5	99.7
1922	115.0	115.2	114.2	1942	101.1	101.8	98.8
1923	115.1	115.3	114.4	1943	101.0	102.0	98.1
1924	115.1	115.3	114.4	1944	101.2	102.2	98.1
1925	115.1	115.3	114.2	1945	101.2	102.2	98.1
1926	114.9	115.1	113.9	1946	100.2	101.1	97.4

Straight-time weekly hours for all building-trades workers declined about 1 percent during the year, bringing the index to 100.2—very close to the 1941 figure (table 10). This reduction was caused by the termination of the agreement between the unions and the Government which established the 40-hour week,[7] and by the transfer of workers from Government to private projects. Prior to the war, many unions had straight-time workweeks of less than 40 hours and in general did not require overtime pay for hours up to 40 per week on either Federal or private work during the war. Because of the large volume of work available at the present time, some of these unions continued their 40-hour week agreements.

TABLE 11.—*Indexes of union weekly hours in each building trade, 1907 to 1946*

[1939=100]

Year	Asbestos workers	Boilermakers	Bricklayers	Carpenters	Cement finishers	Electricians (inside wiremen)	Elevator constructors	Glaziers	Granite cutters
1907	---------	---------	122.9	121.0	122.7	124.2	---------	---------	120.2
1908	---------	---------	120.3	119.2	121.6	123.3	---------	---------	119.9
1909	---------	---------	117.8	117.8	122.5	122.5	---------	---------	119.9
1910	---------	---------	115.6	116.4	122.3	121.8	---------	---------	119.5
1911	---------	---------	115.1	115.8	121.1	121.6	---------	---------	119.1
1912	---------	---------	115.1	115.7	121.1	121.2	---------	---------	118.6
1913	---------	---------	114.9	115.6	119.8	120.7	---------	---------	117.2
1914	---------	---------	114.4	115.1	119.0	120.3	114.7	---------	117.7
1915	---------	---------	114.3	115.1	119.0	119.6	114.2	---------	117.7
1916	115.1	---------	114.0	115.1	117.2	118.6	114.1	---------	117.6
1917	114.6	---------	113.7	115.1	115.9	118.1	113.5	---------	117.6
1918	114.0	---------	113.7	113.9	115.3	117.3	113.5	118.0	117.6
1919	112.8	---------	113.5	113.2	114.4	116.3	112.7	118.0	117.6
1920	112.7	---------	113.4	113.3	113.8	116.0	112.6	117.5	117.6
1921	113.0	---------	113.4	113.2	113.8	116.0	112.5	118.0	117.3
1922	113.0	---------	113.4	113.3	113.7	116.0	112.2	118.1	116.4
1923	112.7	---------	113.4	113.7	113.7	116.0	112.3	117.5	117.1
1924	112.8	---------	113.3	113.5	113.7	115.9	112.3	117.5	117.5
1925	112.8	---------	113.2	113.5	113.4	115.9	112.2	117.1	117.6
1926	112.8	---------	113.3	113.5	113.4	115.9	112.2	117.5	117.3
1927	112.7	---------	112.7	113.5	113.0	115.9	112.2	117.9	117.6
1928	112.7	---------	112.7	112.9	112.4	115.3	112.2	117.4	117.6
1929	111.7	---------	109.8	112.9	112.5	112.6	111.7	116.1	117.2
1930	107.6	---------	107.1	109.4	108.1	109.9	108.2	112.4	111.6
1931	105.0	---------	105.5	107.7	106.9	108.8	106.1	110.4	110.7
1932	103.7	---------	103.1	105.0	105.6	106.2	106.1	107.9	111.1
1933	102.6	---------	104.2	103.4	107.6	106.2	103.9	107.9	109.7
1934	102.5	---------	102.4	102.5	103.7	99.9	103.0	102.3	108.0
1935	101.7	---------	102.3	102.0	103.5	95.8	102.7	101.6	108.0
1936	102.0	---------	102.3	102.1	103.0	96.2	103.5	102.0	107.3
1937	101.7	105.3	103.3	101.9	103.1	100.9	103.2	102.1	107.7
1938	100.0	100.0	99.9	100.0	100.0	100.3	102.5	100.2	100.0
1939	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1940	99.4	100.0	99.7	100.0	100.2	100.0	99.6	100.0	100.0
1941	100.0	100.5	99.9	100.6	100.7	100.6	99.3	100.6	100.0
1942	100.1	100.6	100.8	100.8	100.6	104.6	99.0	102.0	100.0
1943	100.1	100.6	100.8	100.8	100.6	104.6	99.0	102.0	100.0
1944	100.1	100.6	100.8	101.1	100.6	104.6	99.0	102.0	100.0
1945	100.1	100.6	100.8	101.1	100.6	104.6	99.0	102.0	100.0
1946	101.2	98.6	100.3	100.3	100.4	100.5	99.0	102.0	100.0

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[7] An agreement between the Building and Construction Trades Department of the American Federation of Labor and the Contracting Agencies of the United States Government, dated May 22, 1942, and effective July 1 of that year, stabilized wages and established the straight-time 40-hour week on all Government projects.

TABLE 11.—*Indexes of union weekly hours in each building trade, 1907 to 1946*—Con.

[1939=100]

Year	Lathers	Machinists	Marble setters	Mosaic and terrazzo workers	Painters	Paperhangers	Plasterers	Plumbers and gas fitters	Rodmen
1907	---------	---------	113.0	---------	133.1	---------	125.8	120.6	---------
1908	---------	---------	113.0	---------	131.0	---------	125.2	120.7	---------
1909	---------	---------	111.8	---------	129.2	---------	125.2	120.7	---------
1910	---------	---------	111.6	---------	127.5	---------	125.1	120.5	---------
1911	---------	---------	111.1	---------	126.7	---------	125.8	120.2	---------
1912	121.8	---------	111.1	---------	126.6	---------	124.3	119.2	---------
1913	121.8	---------	111.1	---------	125.9	---------	124.3	119.2	---------
1914	121.8	---------	110.9	---------	125.6	---------	124.2	118.8	---------
1915	121.2	---------	110.9	---------	125.6	---------	123.6	118.8	---------
1916	121.2	---------	110.7	118.5	124.7	---------	122.3	118.2	---------
1917	120.6	---------	110.6	118.5	124.6	---------	122.2	118.1	---------
1918	120.6	---------	110.6	114.3	124.0	---------	121.9	117.1	---------
1919	120.3	---------	110.1	114.3	123.8	---------	121.9	116.7	---------
1920	119.6	---------	110.1	114.3	120.2	---------	121.6	116.7	---------
1921	119.3	---------	110.2	114.3	120.3	---------	121.3	116.5	---------
1922	119.4	---------	110.2	114.3	121.2	---------	121.4	116.5	---------
1923	119.8	---------	110.2	114.3	120.9	---------	122.0	116.5	---------
1924	119.6	---------	110.2	114.4	120.8	---------	122.1	116.5	---------
1925	119.2	---------	110.2	114.3	121.1	---------	121.7	116.5	---------
1926	118.9	---------	110.2	114.3	120.7	---------	118.2	116.5	---------
1927	118.3	---------	110.1	113.9	120.2	---------	117.7	116.2	---------
1928	117.7	---------	110.1	113.9	117.0	---------	116.7	116.2	---------
1929	117.1	---------	110.1	114.0	116.7	---------	115.6	115.2	---------
1930	110.4	---------	104.3	107.8	115.4	---------	113.0	109.9	---------
1931	109.8	---------	102.4	106.7	114.4	---------	112.1	108.4	---------
1932	109.3	---------	101.3	102.4	114.2	---------	110.1	108.0	---------
1933	108.8	---------	101.2	103.8	114.0	---------	112.4	107.5	---------
1934	102.5	---------	100.1	103.7	99.9	---------	107.6	106.5	---------
1935	102.3	---------	100.1	103.0	99.8	---------	105.9	105.8	---------
1936	101.3	---------	100.0	101.9	100.2	---------	104.2	104.4	---------
1937	102.7	100.7	102.0	102.6	100.2	100.5	104.3	105.0	100.1
1938	100.8	100.1	100.0	100.0	100.4	99.8	100.0	99.7	100.1
1939	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1940	99.8	100.0	95.5	100.0	100.5	100.3	99.8	99.0	100.0
1941	100.7	99.8	95.7	100.3	100.7	100.8	100.1	99.4	100.9
1942	102.5	99.8	95.7	100.3	106.5	108.0	102.0	99.9	101.9
1943	103.4	99.8	95.7	100.3	106.5	108.0	106.0	101.8	101.0
1944	103.0	99.8	95.7	100.3	106.8	108.9	106.1	101.8	101.0
1945	103.6	99.8	95.7	100.3	106.8	108.9	106.1	101.8	101.0
1946	102.2	99.3	95.7	100.3	106.1	108.7	104.1	98.3	100.4

Year	Roofers—composition	Roofers—slate and tile	Sheet-metal workers	Sign painters	Steam and sprinkler fitters	Stonecutters	Stonemasons	Structural-iron workers[1]	Tile layers
1907	---------	---------	117.0	---------	120.3	110.2	118.4	121.3	---------
1908	---------	---------	116.9	---------	120.3	110.2	118.4	118.9	---------
1909	---------	---------	116.9	---------	120.0	110.2	118.4	117.3	---------
1910	---------	---------	116.9	---------	119.3	110.2	116.6	116.0	---------
1911	---------	---------	116.6	---------	119.2	110.2	115.8	115.8	---------
1912	---------	---------	115.1	---------	118.4	109.9	115.8	114.6	111.5
1913	---------	---------	114.9	116.1	118.0	109.8	115.7	114.1	113.9
1914	113.2	112.8	114.8	115.7	116.5	109.8	115.7	113.9	113.9
1915	113.2	112.8	114.6	115.3	116.5	109.8	115.6	113.9	113.5
1916	113.2	112.4	114.1	115.5	116.1	109.4	115.4	113.6	112.9
1917	112.4	110.4	114.0	114.9	116.0	109.3	115.3	113.4	112.6
1918	111.9	110.4	112.8	114.8	114.9	109.3	115.3	113.0	112.6
1919	111.9	110.1	112.3	114.7	114.8	109.3	114.6	112.8	112.1
1920	111.9	110.1	111.9	114.6	114.7	109.1	114.6	112.8	111.8
1921	109.8	110.0	111.9	114.7	114.6	109.1	114.7	112.8	111.9
1922	109.8	109.9	111.8	114.7	114.6	109.1	114.6	112.8	111.7
1923	109.8	110.2	111.8	112.5	114.6	109.0	114.6	112.8	112.0
1924	109.8	109.8	111.8	110.6	114.6	109.0	114.3	112.8	112.0
1925	109.8	109.8	111.8	110.6	114.6	109.3	114.3	112.5	112.0
1926	109.8	109.8	111.8	112.8	114.4	109.0	114.5	112.8	112.0

[1] Included rodmen prior to 1940.

TABLE 11.—*Indexes of union weekly hours in each building trade, 1907 to 1946*—Con.

[1939=100]

Year	Roofers—composition	Roofers—slate and tile	Sheet-metal workers	Sign painters	Steam and sprinkler fitters	Stonecutters	Stonemasons	Structural iron workers [1]	Tile layers
1927	109.8	109.8	111.4	110.8	114.2	109.0	114.3	112.8	111.9
1928	109.7	109.8	111.1	110.7	114 2	109.1	114.2	112.7	111.6
1929	109.2	108.5	111.0	108.8	113.6	108.9	110.9	112.2	111.4
1930	104.9	103.8	106.9	107.8	108.5	105.6	107.1	108.8	105.6
1931	103.6	102.1	105.1	106.8	107.4	105.0	105.2	107.5	104.2
1932	102.5	102.1	103.6	106.2	106.4	102.7	104.8	104.8	103.1
1933	103.8	102.1	103.5	106.4	105.8	102.7	104.0	104.5	102.9
1934	101.1	101.7	102.0	103.5	105.1	101.3	103.5	103.0	96.0
1935	101.0	100.4	102.1	101.3	104.8	101.0	103.4	101.8	96.0
1936	101.6	101.3	102.0	101.1	105.0	101.1	103.4	101.7	95.9
1937	101.7	101.2	102.1	101.1	105.1	101.1	103.4	101.2	100.0
1938	99.9	100.0	100.0	100.1	99.6	99.9	100.0	100.1	100.0
1939	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1940	99.6	99.9	100.0	100.2	100.0	99.9	99.9	100.0	100.0
1941	100.3	99.9	100.8	100.2	100.6	98.3	100.0	100.4	100.4
1942	100.4	101.3	100.9	100.0	102.2	98.4	100.2	101.1	100.7
1943	100.3	101.1	100.9	100.2	102.2	98.4	100.2	101.1	100.7
1944	100.2	101.1	100.9	100.2	102.2	98.4	100.2	101.1	100.7
1945	100.2	101.1	100.9	100.2	102.2	98.4	100.2	101.1	100.7
1946	99.9	101.1	100.8	99.4	101.3	98.4	100.0	101.1	100.7

Year	Bricklayers' tenders	Building laborers	Composition roofers' helpers	Plasterers' laborers	Plumbers' laborers	Steam and sprinkler fitters' helpers	Tile layers' helpers
1907	118.9	121.6	------------	125.7	------------	125.4	------------
1908	118.9	121.6	------------	125.2	------------	125.3	------------
1909	118.5	121.2	------------	124.9	------------	125.1	------------
1910	117.5	118.3	------------	124.9	------------	123.8	------------
1911	116.9	118.3	------------	124.8	------------	123.7	------------
1912	116.0	118.3	------------	124.2	------------	123.6	126.2
1913	116.0	118.3	------------	124.2	------------	123.3	125.6
1914	114.5	117.9	------------	124.3	------------	124.1	125.6
1915	114.5	117.9	------------	124.3	------------	124.1	123.7
1916	114.5	117.3	------------	123.1	------------	123.7	123.3
1917	114.4	116.0	------------	122.9	------------	123.7	122.3
1918	114.4	115.5	------------	122.9	------------	122.0	122.3
1919	114.0	113.3	------------	122.4	------------	121.9	121.9
1920	113.8	112.1	------------	122.4	------------	121.9	121.9
1921	113.8	112.1	------------	121.9	------------	121.9	122.1
1922	114.0	111.3	------------	121.9	------------	122.0	122.1
1923	114.0	112.1	------------	122.0	------------	122.0	123.2
1924	113.9	111.8	------------	121.9	------------	122.0	123.2
925	113.8	111.9	------------	121.8	------------	122.0	123.2
926	113.9	112.1	------------	117.8	------------	121.9	123.2
927	113.9	112.3	------------	117.7	------------	122.1	123.2
928	113.9	112.2	------------	118.0	------------	121.7	123.2
929	107.6	112.1	------------	117.9	------------	121.7	122.6
930	106.9	110.0	------------	114.9	------------	112.0	114.7
931	106.3	108.7	------------	113.9	------------	111.7	113.5
932	104.0	104.9	------------	113.6	------------	111.6	112.0
933	103.4	104.5	------------	111.7	------------	111.4	112.1
934	101.5	99.9	------------	108.3	------------	110.8	107.4
935	101.4	99.8	------------	107.0	------------	110.8	93.5
936	101.2	100.3	------------	105.2	------------	111.3	93.5
937	101.5	100.6	100.0	105.2	------------	111.7	100.0
938	100.3	100.1	100.0	100.3	100.0	100.1	100.0
939	100.0	100.0	100.0	100.0	100.0	100.0	100.0
940	99.9	99.4	99.7	99.6	96.9	100.0	100.0
941	99.8	99.7	100.3	100.0	96.6	100.0	100.4
942	98.6	98.8	100.6	100.1	96.4	100.2	100.4
943	98.4	97.4	100.1	100.7	99.8	110.6	100.4
944	98.4	97.4	100.1	100.7	99.7	110.6	100.4
945	98.4	97.4	100.1	100.7	99.7	110.5	100.4
946	96.9	97.2	100.1	100.0	96.9	102.7	100.4

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[1] Including rodmen prior to 1940.

TABLE 12.—*Distribution of union members in building trades, by straight-time weekly hours, July 1, 1946*

Trade	Average hours per week	Percent of union members having workweeks of—				
		30 hours	35 hours	40 hours	44 hours	48 hours
All building trades	39.2	---	---	---	---	---
Journeymen	39.1	2.5	13.0	84.4	(1)	0.1
Asbestos workers	39.4	---	11.1	88.9	---	---
Boilermakers	39.2	---	15.7	84.3	---	---
Bricklayers	38.3	.9	32.9	66.2	---	---
Carpenters	39.3	.1	13.3	86.6	---	---
Cement finishers	39.9	---	8.7	87.3	---	4.0
Electricians, inside wiremen	38.4	14.4	2.7	82.9	---	---
Elevator constructors	40.0	---	---	100.0	---	---
Glaziers	39.3	---	13.5	86.5	---	---
Granite cutters	38.7	---	26.3	73.7	---	---
Lathers	38.5	6.4	17.5	76.1	---	---
Machinists	39.7	---	6.0	94.0	---	---
Marble setters	39.7	3.3	---	96.7	---	---
Mosaic and terrazzo workers	38.7	---	25.9	74.1	---	---
Painters	39.0	---	20.6	79.4	(1)	---
Paperhangers	39.7	---	5.5	94.1	.4	---
Plasterers	37.9	20.9	.2	78.9	---	---
Plumbers and gas fitters	38.0	16.6	7.0	76.4	---	---
Roofers, composition	39.5	---	9.4	90.4	---	.2
Roofers, slate and tile	40.0	---	---	100.0	---	---
Sheet-metal workers	39.5	---	10.5	89.5	---	---
Sign painters	38.7	---	27.6	71.4	1.0	---
Steam and sprinkler fitters	39.7	.1	6.7	93.2	---	---
Stonecutters	37.1	---	57.9	42.1	---	---
Stonemasons	38.8	.9	22.2	76.9	---	---
Structural-iron workers	39.9	---	2.9	97.1	---	---
Rodmen	39.8	---	4.9	95.1	---	---
Tile layers	40.0	---	---	100.0	---	---

Trade	Average hours per week	Percent of union members having workweeks of—					
		30 hours	32.5 hours	35 hours	40 hours	45 hours	48 hours
All helpers and laborers	39.5	1.1	0.4	6.8	91.2	0.3	0.2
Bricklayers' tenders	39.0	(1)	1.2	18.6	79.2	1.0	---
Building laborers	39.8	(1)	---	3.5	96.2	---	.3
Composition roofers' helpers	39.8	---	---	3.8	96.2	---	---
Elevator constructors' helpers	40.0	---	---	---	100.0	---	---
Marble setters' helpers	40.0	.3	---	---	99.7	---	---
Plasterers' laborers	39.0	7.5	2.5	1.6	87.5	.9	---
Plumbers' laborers	38.9	10.9	---	---	89.1	---	---
Steam and sprinkler fitters' helpers	37.2	---	---	56.4	43.6	---	---
Terrazzo workers' helpers	38.6	.3	---	28.0	71.7	---	---
Tile layers' helpers	40.0	.1	---	---	99.9	---	---

[1] Less than a tenth of 1 percent.

Straight-time hours for journeymen fell somewhat more than for helpers and laborers, because very little adjustment was necessary in 1942 to bring the helpers to a 40-hour week, whereas greater adjustment was necessary for the journeymen. The greatest hourly reduction recorded (7 percent for steam and sprinkler fitters' helpers) resulted from a decrease in hours (from 40 to 35) in New York City.

Apprentices

Typical of the significant changes brought about by the postwar boom in the construction industry was the indication (by more than 1,050 building-trades locals in the cities surveyed) that there were approximately 9 active journeymen for each apprentice in July 1946, contrasted with a ratio of almost 34 to 1 a year earlier. Proportions of apprentices to journeymen ranged from less than 2 percent for stonecutters and stonemasons to 23 percent for asbestos workers. Exceeding the over-all average of 9 to 1 were the electricians, cement finishers and plasterers, and sheet-metal workers, with about 5 journeymen to each apprentice. A low ratio was recorded for painters and paperhangers—1 apprentice to more than 20 journeymen. Significant increases in the apprentice labor force were reported by the carpenters, bricklayers, cement finishers, lathers, plasterers, and sign painters.

Trade practices, labor-market conditions, and custom exert far greater influence on apprentice-journeymen ratios than size of trade membership. Carpenters, with the largest membership tabulated, had about 1 apprentice for each 10 journeymen, whereas asbestos workers, with about 2 percent as many members as the carpenters, reported about 1 apprentice for every 4 journeymen.

Over two-fifths of the locals queried reported that union regulations permitted further expansion of the apprentice force over the number employed July 1, 1946. This group included virtually all of the granite and the stonecutters' locals, about two-thirds of the cement inishers' and plasterers', and half of the lathers' and roofers' unions. Among the 22 cities in which at least 50 percent of the building-rades locals indicated that opportunity for expansion existed were Chicago, New York, Philadelphia, Pittsburgh, and San Francisco. On the other hand, more than three-fifths of the locals of boilermakers, bricklayers, electricians, glaziers, plumbers, and sheet-metal workers eported that apprentice membership could not be further increased. Two-thirds of the locals contacted stated that they would not favor mploying more apprentices than their existing ratios permitted. n contrast, significant proportions (although in no case a majority) f the bricklayers', cement finishers' and plasterers', lathers', and oofers' locals favored the employment of more apprentices than llowed by present ratio. Two of the numerically small trades had majority of the locals on record as favoring an expansion of the pprentice ratios.

Better than 7 of every 10 locals tabulated have established appren- ce programs in cooperation with employers or their associations and ave registered these programs with either a State or Federal ap- rentice agency. About two-thirds of the locals reported that the erage apprentice rate, considered as a percentage of the journeyman te, was higher in July 1946 than in 1939.

Union Participation in Residential Construction

Seventy-three percent of the building-trades locals reported that they negotiated agreements covering most of the residential construction work in their areas. At least 8 out of 10 locals of building laborers, painters and paperhangers, electricians, carpenters, and plumbers, and a slightly lower proportion of bricklayers, cement finishers and plasterers, glaziers, and sheet-metal locals indicated that they controlled the bulk of residential work in their territory. On a geographical basis, more than half of the unions in 60 cities (44 in the North and Pacific region, 16 in the South and Southwest) had jurisdiction over the major portion of residential work in their localities. In only 8 cities did all of the unions claim to control a majority of this branch of the work.

Almost all the locals reported that their agreements make no provision for lower scales for residential work. According to union officials contacted in the 75 cities surveyed, over 250,000 organized building-trades workers were engaged on residential construction on July 1, 1946, of whom about 89 percent were working under union agreement; the remainder were employed with union sanction. Substantial majorities of the locals asserted that residential work not under union agreement on July 1, 1946, did not generally command lower scales than either union or nonunion commercial work or union residential work.

In two cities (in Pennsylvania), however, all the locals maintained that residential work not under union agreement commanded lower scales than nonunion commercial work. All of the locals in 7 cities reported that such scales were lower than union commercial rates, and in 9 cities each of the locals claimed that lower scales generally prevailed for nonunion residential work than for such work under union agreement.

A Digest of The Development and Activity of The Wage Adjustment Board for The Building Construction Industry

The Wage Adjustment Board for the building and construction industry was originally set up in May 1942, several months before wage controls for other industries were introduced. The Board was established in the Department of Labor as a result of the voluntary agreement entered into on May 22, 1942, between the Building Trades Department of the American Federation of Labor and the Government agencies in charge of building and construction work essential to th prosecution of the war. It was agreed at this time to stabilize wage on Federal projects as of July 1, 1942, for the duration of the war, a rates in effect under collective bargaining agreements. Wage ad justments were to be permitted on the recommendation of a wage adjustment board, if the wages (a) were fixed at a time so long before July 1, 1942, as to be out of line with the general wages prevailing; (b) were applicable in a locality where changing conditions in the building construction industry require a revision of wage rates; or (c) do not sufficiently take into account any abnormal change in conditions.

Immediately following the agreement, the administrative order establishing a Wage Adjustment Board for the Building Construction Industry was issued by the Secretary of Labor, with the President's approval. The Board was composed of two officials of the Labor Department, three representatives of Federal contracting agencies and three representatives of labor organizations in the building and construction industry.

When the Emergency Price Control Act of October 2, 1942 was passed and Executive Order 9250, October 3, 1942, was issued provid-ng for the stabilization of the national economy, responsibility for over-all wage stabilization and for approval of wage changes was placed in the National War Labor Board. The Wage Adjustment Board, however, was to continue to function under the War Labor Board as a distinct part of the stabilization program. Moreover, on October 13, 1943 all non-Federal as well as Federal construction wage ases were turned over to the Wage Adjustment Board, and the oard was reconstituted into a tripartite body with three members rom the public, three from labor, and three from industry.

According to General Order No. 13 setting up the tripartite Board, he Wage Adjustment Board would be subject both to the provisions f the Wage Stabilization Agreement of May 22, 1942, and to the re-uirements of the National Wage Stabilization Policy. It was stated rther that (a) "brackets of sound and tested going rates" could not e used in appraising adjustments in the rates of workers on building onstruction projects; (b) the benefits of the "Little Steel" formula ould be available to employees in the construction industry; (c) the age Adjustment Board may approve adjustments necessary to rrect substandards of living; and (d) all adjustments not permis-ble in the above principles but which, in the opinion of the Wage djustment Board, are necessary to the successful prosecution of the r, should be submitted for approval to the National War Labor oard and the Economic Stabilization Director.

The fundamental procedures and policies for adjusting construction ge rates remained substantially unchanged up to November 9, 1946, hough the principles and procedures by which wages in other dustries were adjusted changed materially right after VJ-day. hereas during the war, all wage adjustments were subject to direct control, Executive Order No. 9599, issued August 18, 1945, permitted all but construction employers to make wage increases of any amount without governmental approval, provided the increases were not used as a basis for price increases or increase in the cost of goods or services furnished the United States under procurement agency contracts. All decreases continued under control. By Executive Order No. 9651 (October 30, 1945) the Price Administrator was authorized to take even unapproved wage or salary increases into account for price purposes, after such increases had been in effect for at least 6 months. Wage adjustments which would be used immediately as bases for applying for price relief remained subject to control under certain regulations and standards set forth by the President or by the Stabilization Administrator. The National War Labor Board was succeeded, on its termination December 31, 1945, by the National Wage Stabilization Board, which took over all of the duties and responsibilities of the NWLB, including those relating to the Wage Adjustment Board.

The question was inevitably posed as to why it was necessary to obtain approval for all wage-rate increases in construction when other industries had been partially relieved of this necessity. The answer was that Government wage policy was construed actually to be the same for all industries, but that in adapting the new stabilization policy to construction, the conclusion was reached by Government stabilization officials that any wage increase in construction would result in an actual or potential price increase. It was, therefore, concluded that control over all wage changes should remain in force. Labor costs are of course a large part of construction costs and it was reasoned that job estimates, which invariably reflect prevailing wage rates, would rise as wage rates rose.

In applying the principles of stabilization to the building industry, the Wage Adjustment Board steered a moderate course. Until general wage controls were relaxed after VJ-day, wage increases on construction were kept within the bounds of the Little Steel formula—15 percent of the January 1, 1941 wage rate—except in rare cases vitally affecting war production, and such cases were subject to review and approval of the Director of Economic Stabilization. After August 1945, the principal criterion applied in determining the validity of construction wage increases was the equalizing of intercraft and interarea inequities. Adjustments were also authorized to eliminate substandard wages and to compensate for the rise in cos of living.

Between expiration of the Stabilization Act, June 30, 1946, and approval of the Price-Control Extension Act on July 25, 1946, wage as well as prices were not legally subject to Government control

During this interim period, while awaiting congressional action and Presidential approval of a stabilization policy, the Wage Adjustment Board recommended a hold-the-line policy. As soon as the Price-Control Extension Act was passed, the Board issued a statement requiring a roll-back of construction wages to the June 30, 1946, level, making August 10, 1946, the deadline for the roll-back, and suggesting that applications for increases which had been made during the interim period be filed immediately. The result was an avalanche of an average of 225 cases a week during the 6 weeks ending September 6, 1946. The weekly number of cases received in the Board was even greater, however, during the spring period, when new contracts are usually negotiated, so that the number stood at well over 250 a week during late April and the first half of May. In October, cases were received at the rate of 100 to 175 a week.

The requests made of the Board were, in most instances, for area rates. Authorizations for adjustment by the Wage Adjustment Board were generally of two types. First, an individual adjustment in response to an application, affecting only those employers signatory to the application, and, second, an adjustment of an area rate which has general application and may be adopted by any contractor in the area, regardless of his previous wage rate history. The policy reflected in the latter type of authorization was of comparatively recent origin, having been adopted by the Board in May 1946.

All wage and salary controls, including those in building construc-ion, were removed on November 9, 1946, by Executive Order 9801 and the Wage Adjustment Board has since ceased operations.

Union Scales of Wages and Hours by Cities and Trades

Table 13 lists the union rates of wages per hour and hours per week n effect on July 1, 1946, and July 1, 1945, for each building trade for which there was an effective union scale in each of the 75 cities included n the survey.

Where two or more union rates for the same occupation in the same ity were shown, this was due to the presence of more than one union, ach having different scales or to the fact that a particular union had several agreements with different employers. In some cases both of hese situations were found simultaneously. Where more than one nion rate was effective all were listed, and the letters, A, B, C, etc., ere used to designate the different quotations. The sequence of e letters does not indicate the relative importance of the quotations unions so designated.

Table 14 gives the rate changes between July 1, 1946, and January , 1947.

TABLE 13.—*Union scales of wages for building trades in 75 cities, July 1, 1946, and July 1, 1945*

ATLANTA, GA.

[Hours per week, 40, unless otherwise indicated]

Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945
Journeymen		
Asbestos workers	$1.625	$1.500
Bricklayers [1]	1.750	1.580
Carpenters [1]	1.375	1.250
Cement finishers	1.625	1.500
Electricians (inside wiremen)[1]	1.650	1.500
Elevator constructors	1.655	1.525
Engineers—power equipment operators:		
Air compressors	1.350	1.150
Bulldozers	1.350	1.150
Cranes, derricks, and draglines	1.600	1.500
Graders, motor	1.350	1.150
Hoists:		
1 drum	1.350	1.150
2 or more drums	1.600	1.500
Mixers:		
10S or smaller	1.350	.800
Larger than 10S	1.350	1.150
Pumps	1.350	.800
Rollers	1.350	1.150
Scrapers	1.350	1.150
Shovels	1.600	1.500
Tractors	1.350	1.150
Trenching machines	1.600	1.500
Glaziers	1.375	1.250
Journeymen—Continued		
Lathers:		
Metal	$1.625	$1.500
Wood	1.375	1.125
Marble setters	1.675	1.580
Mosaic and terrazzo workers	1.675	1.580
Painters [1]	1.375	1.250
Paperhangers [1]	1.375	1.250
Plasterers [1]	1.625	1.500
Plumbers [1]	1.750	1.550
Roofers:		
Composition	1.125	1.125
Slate and tile	1.125	1.125
Sheet-metal workers	1.400	1.250
Sign painters	1.500	1.500
Steam fitters	1.750	1.550
Stonemasons [1]	1.750	1.580
Structural-iron workers [1]	1.625	1.500
Rodmen [1]	1.375	1.250
Tile layers	1.675	1.580
Helpers and laborers		
Bricklayers' tenders	.850	.750
Building laborers [1]	.750	.650
Elevator constructors' helpers	1.160	1.060
Plasterers' laborers	.850	.750
Plumbers' laborers	.750	.650

BALTIMORE, MD.

Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945
Journeymen		
Asbestos workers	$1.850	$1.688
Boilermakers	1.750	1.750
Bricklayers [1]	1.900	1.750
Carpenters [1]	1.675	1.438
Cement finishers	1.725	1.500
Electricians (inside wiremen)	1.850	1.650
Elevator constructors [1]	1.810	1.720
Engineers—power equipment operators:		
Air compressors	1.625	1.500
When used in banks comprising a plant	1.950	1.800
Bulldozers	1.425	1.375
Cranes, derricks, and draglines	1.950	1.800
Graders:		
Road	1.625	1.500
Elevating	1.950	1.800
Hoists:		
1 drum	1.625	1.500
2 drums	1.950	1.800
Mixers	1.625	1.500
Pumps	1.625	1.500
Rollers:		
On hot asphalt	1.950	1.800
Excluding hot asphalt	1.625	1.500
Shovels	1.950	1.800
Tractors	1.425	1.375
Without mechanical attachments	1.100	1.000
Trenching machines	1.950	1.800
Glaziers	1.600	1.440
Journeymen—Continued		
Lathers	$1.875	$1.725
Machinists	1.840	1.500
Marble setters	1.500	1.500
Mosaic and terrazzo workers	1.750	1.580
Painters	1.500	1.300
Structural steel	1.625	1.425
Paperhangers	1.500	1.300
Plasterers [1]	1.725	1.725
Plumbers	1.850	1.650
Roofers:		
Composition	1.500	1.375
Foremen	1.625	1.500
Slate and tile	1.705	1.580
Sheeters	1.850	1.750
Sheet-metal workers	1.850	1.625
Sign painters	1.525	1.400
Steam fitters	1.850	1.650
Stonemasons	1.900	1.750
Structural-iron workers [1]	1.900	1.800
Rodmen [1]	1.600	1.500
Tile layers	1.750	1.580
Helpers and laborers		
Bricklayers' tenders	1.050	.950
Building laborers	.950	.800
Elevator constructors' helpers [1]	1.270	1.200
Marble setters' helpers	1.250	.93
Plasterers' laborers	1.050	.95
Plumbers' laborers	.950	.80
Terrazzo workers' helpers	1.125	1.05
Tile layers' helpers	1.250	.93

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[1] For changes since July 1, 1946, see appendix.

TABLE 13.—*Union scales of wages for building trades in 75 cities, July 1, 1946, and July 1, 1945*—Continued

BINGHAMTON, N. Y.

Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945
Journeymen		
Asbestos workers	$1.800	$1.625
Bricklayers [1]	1.800	1.650
Carpenters	1.500	1.375
Cement finishers [1]	1.800	1.650
Electricians (inside wiremen)	1.500	1.375
Engineers—power equipment operators:		
Air compressors	1.500	1.375
Bulldozers [1]	1.375	1.250
Cranes, derricks, and draglines	1.875	1.750
Graders, power	1.375	1.250
Hoists	1.625	1.500
Mixers	1.375	1.250
Pumps:		
Under 4-inch and not more than 3 in battery	1.375	1.250
4-inch and over and not more than 3 in battery	1.500	1.375
Rollers	1.375	1.250
Scrapers	1.625	1.500
Shovels	1.875	1.750
Journeymen—Continued		
Engineers—power equipment operators—Continued		
Trenching machines:		
Barber Greene	$1.625	$1.500
Large type	1.875	1.750
Lathers	1.500	1.500
Marble setters	1.800	1.650
Mosaic and terrazzo workers	1.800	1.650
Painters	1.313	1.125
Scaffold [2]	1.438	1.250
Steel or spray	1.500	1.250
Paperhangers	1.313	1.125
Plasterers [1]	1.800	1.650
Plumbers and gas fitters [1]	1.700	1.500
Roofers:		
Composition	1.438	1.438
Slate and tile	1.438	1.438
Sheet-metal workers	1.600	1.438
Sign painters	1.750	1.500
Steam fitters	1.700	1.500
Stonemasons	1.800	1.650
Structural-iron workers	1.500	1.500
Rodmen	1.500	1.500
Tile layers	1.800	1.650

BIRMINGHAM, ALA.

Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945
Journeymen		
sbestos workers	$1.625	$1.500
ricklayers	1.938	1.750
arpenters	1.500	1.250
ement finishers	1.750	1.500
lectricians (inside wiremen) [1]	1.750	1.650
levator constructors [1]	1.685	1.630
ngineers—power equipment operators:		
Air compressors	1.500	1.375
Bulldozers	1.500	1.375
Cranes, derricks, and draglines	1.750	1.625
Graders	1.500	1.375
Hoists:		
1 drum	1.500	1.375
2 drums	1.750	1.625
LeTourneau	1.750	1.625
Mixers:		
5 bags or under	1.500	1.375
Over 5 bags	1.750	1.625
Pumps	1.500	1.375
Rollers	1.500	1.375
Scrapers	1.750	1.625
Shovels	1.750	1.625
Tractors	1.500	1.375
Trenching machines	1.750	1.625
aziers	1.500	1.375
thers	1.625	1.375
Journeymen—Continued		
Marble setters	$1.938	$1.750
Mosaic and terrazzo workers	1.750	1.500
Painters [1]	1.500	1.375
Structural steel and swing stage	1.625	1.500
Spray	2.500	2.375
Paperhangers	1.500	1.375
Plasterers	1.875	1.650
Plumbers	1.875	1.750
Roofers:		
Composition	1.300	1.125
Slate and tile [1]	1.450	1.250
Sheet-metal workers	1.600	1.400
Sign painters	1.750	1.500
Steam fitters	1.875	1.750
Stonemasons	1.938	1.750
Structural-iron workers	1.750	1.625
Rodmen	1.500	1.450
Tile layers	1.750	1.500
Helpers and laborers		
Bricklayers' tenders	.850	.700
Building laborers [1]	.750	.600
Plasterers' laborers	.850	.700
Plumbers' laborers	.850	.700
Terrazzo workers' helpers	.850	.700
Tile layers' helpers	.850	.700

For changes since July 1, 1946, see appendix.
Scaffold painters received $1.563 per hour for swing work above 50 feet or 4 stories.

TABLE 13.—*Union scales of wages for building trades in 75 cities, July 1, 1946, and July 1, 1945*—Continued

BOSTON, MASS.

Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945
Journeymen		
Asbestos workers [1]	$1.725	$1.675
Boilermakers	1.750	1.650
Bricklayers	1.995	1.725
Carpenters [1]	1.600	1.500
Cement finishers [1]	1.668	1.625
Electricians (inside wiremen)	1.900	1.725
Elevator constructors [1]	1.740	1.650
Engineers—power equipment operators:		
Air compressors	1.650	1.500
Bulldozers	1.650	1.500
Cranes, derricks, and draglines	2.025	1.875
Graders	1.650	1.500
Hoists:		
1 or 2 drums	1.650	1.500
3 drums	2.025	1.875
Mixers	1.650	1.500
Pumps	1.650	1.500
Rollers	1.650	1.500
Scrapers	1.650	1.500
Shovels	2.025	1.875
Tractors	1.650	1.500
Trenching machines	1.650	1.500
Glaziers	1.580	1.500
Lathers [1]	1.800	1.667
Machinists	1.750	1.500
Marble setters	1.875	1.725
Mosaic and terrazzo workers	1.875	1.725
Painters	1.625	1.438
Plasterers	2.000	1.677
Plumbers and gas fitters [1]	1.875	1.675

Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945
Journeymen—Continued		
Roofers:		
Composition [1]	$1.650	$1.600
Waterproof and damp-proof	1.650	1.500
Slate and tile	1.500	1.500
Sheet-metal workers [1]	1.725	1.725
Sign painters	1.500	1.315
Letterers	1.470	1.470
Pictorial	1.800	1.615
Steam fitters	1.725	1.650
Sprinkler fitters	1.750	1.580
Stonecutters:		
Inside	1.575	1.375
Outside	1.725	1.500
Carvers:		
Inside	1.725	1.500
Outside	1.925	1.725
Artificial stone patchers:		
Inside	1.375	1.050
Outside	1.725	1.250
Stonemasons	1.995	1.725
Structural-iron workers	1.850	1.725
Rodmen	1.850	1.725
Tile layers	1.875	1.625
Helpers and laborers		
Bricklayers' tenders [1]	1.150	1.000
Building laborers [1]	1.150	1.000
Composition roofers' helpers [1]	1.100	1.050
Elevator constructors' helpers [1]	1.220	1.150
Marble setters' helpers	1.250	1.150
Plasterers' laborers	1.400	1.250
Sprinkler fitters' helpers	1.100	.950
Terrazzo workers' helpers [1]	1.250	1.150
Tile layers' helpers	1.250	1.150

BUFFALO, N. Y.

Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945
Journeymen		
Asbestos workers	$2.000	$1.750
Boilermakers	2.000	1.750
Bricklayers	2.075	1.750
Carpenters	1.850	1.600
Millwrights	1.950	1.700
Cement finishers	1.830	1.580
Swing scaffold	2.080	1.750
Machine operators	2.013	1.650
Swing scaffold	2.288	1.900
Electricians (inside wiremen)	2.000	1.750
Elevator constructors	1.925	1.750
Engineers—power equipment operators:		
Air compressors	1.625	1.375
Bulldozers	1.500	1.250
Cranes, derricks, and draglines	2.000	1.750
Graders, power	1.875	1.625
Hoists	1.835	1.585
LeTourneau	1.875	1.625
Mixers, ½ cu. yd. or over	1.750	1.500
Pumps	1.750	--------
Rollers	1.875	1.625
Shovels	2.000	1.750
Tractors	1.500	1.250
Trenching machines	1.875	1.625
Glaziers	1.550	1.550
Lathers [1]	2.000	1.750
Marble setters [1]	1.875	1.500
Mosaic and terrazzo workers	1.825	1.375

Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945
Journeymen—Continued		
Painters	$1.750	$1.500
Spray and structural steel	2.000	2.000
Swing stage	2.000	1.750
Paperhangers	1.750	1.500
Plasterers	2.000	1.750
Plumbers and gas fitters	2.000	1.750
Roofers:		
Composition	1.750	1.450
Residential	1.700	1.400
Slate and tile	1.900	1.600
Sheet-metal workers	1.850	1.600
Sign painters	1.725	1.500
Pictorial	1.840	1.600
Steam fitters	2.000	1.750
Sprinkler fitters	1.750	1.580
Stonecutters	1.750	1.500
Building fitting	2.000	1.750
Stonemasons	2.075	1.750
Structural-iron workers	2.000	1.750
Rodmen	2.000	1.750
Sheeters—iron workers	2.250	2.000
Tile layers	1.825	1.375
Helpers and laborers		
Bricklayers' tenders	1.250	1.000
Building laborers	1.250	1.000
Elevator constructors' helpers	1.350	1.225
Marble setters' helpers	1.275	.900
Plasterers' laborers	1.350	1.100
Terrazzo workers' helpers	1.275	.900
Tile layers' helpers	1.275	.900

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[1] For changes since July 1, 1946, see appendix.

TABLE 13.—*Union scales of wages for building trades in 75 cities, July 1, 1946, and July 1, 1945*—Continued

BUTTE, MONT.

Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945
Journeymen		
Asbestos workers	[2] $2.000	[2] $2.000
Bricklayers [1]	[2] 1.850	[2] 1.850
Carpenters	[2] 1.833	[2] 1.500
Cement finishers	[2] 2.000	[2] 2.000
Electricians (inside wiremen) [2]	[2] 1.833	[2] 1.833
Elevator constructors	1.880	1.600
Engineers—power equipment operators:		
Air compressors	1.400	1.125
Bulldozers	1.700	1.500
Cranes, derricks, and draglines	1.650	1.500
Graders	1.650	1.500
Hoists:		
1 drum	1.650	1.250
2 drums or more	1.650	1.500
LeTourneau:		
Single	1.700	1.500
In tandem	1.850	1.750
Mixers:		
Less than 4 bags	1.400	1.250
4 bags or over	1.650	1.500
Pumps:		
6 inches or less	1.150	1.000
Over 6 inches	1.400	1.250
Rollers	1.650	1.250
On all types of finishing	1.650	1.500
Scrapers	1.700	1.500
Shovels	1.850	1.500
¾ yd. or less	1.650	1.500
Journeymen—Continued		
Engineers—power equipment operators—Continued		
Tractors	$1.700	$1.500
Trenching machines	1.700	1.500
Glaziers	1.625	1.500
Lathers	[2] 2.000	[2] 2.000
Marble setters	1.850	1.850
Mosaic and terrazzo workers	1.850	1.850
Painters	1.625	1.500
Paperhangers	1.625	1.500
Plasterers	[2] 2.000	[2] 2.000
Plumbers and gas fitters [1]	[2] 2.083	[2] 2.083
Roofers, composition	[3] 1.375	[3] 1.250
Sheet-metal workers	1.750	1.500
Sign painters	1.625	1.500
Steam fitters [1]	[2] 2.083	[2] 2.083
Stonemasons	[2] 1.850	[2] 1.850
Structural-iron workers [1]	1.500	1.500
Rodmen	1.500	1.500
Tile layers	1.850	1.850
Helpers and laborers		
Bricklayers' tenders	[2] 1.500	[2] 1.333
Building laborers	[3] 1.100	[3] .919
Elevator constructors' helpers	1.320	1.120
Marble setters' helpers	[2] 1.500	1.333
Plasterers' laborers	[2] 1.500	1.333
Terrazzo workers' helpers	[2] 1.500	1.333
Tile layers' helpers	[2] 1.500	1.333

CHARLESTON, S. C.

Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945
Journeymen		
sbestos workers	$1.625	$1.500
oilermakers	1.625	1.500
icklayers [1]	1.650	1.500
arpenters [1]	1.250	1.250
ment finishers	1.250	1.150
ectricians (inside wiremen) [1]	1.650	1.500
evator constructors	1.525	1.250
aziers	1.375	1.125
inters	1.375	1.125
Spray	1.625	1.375
Stage	1.500	1.375
Steel	1.500	1.250
perhangers	1.375	1.150
asterers [1]	1.650	1.500
umbers [1]	1.750	1.750
ofers:		
Composition	1.250	1.250
Slate and tile	1.500	1.250
Journeymen—Continued		
Sheet-metal workers	$1.500	$1.250
Metal cutters	1.500	1.500
Sign painters	1.500	1.375
Steam fitters	1.750	1.750
Structural-iron workers [1]	1.500	1.500
Rodmen [1]	1.250	1.250
Helpers and laborers		
Bricklayers' tenders	.850	.600
Building laborers	.750	.500
Composition roofers' helpers	.750	.600
Plasterers' laborers	.850	.600
Plumbers' laborers	.750	.750
Steam fitters' helpers	.750	.750

For change since July 1, 1946, see appendix.

Hours per week, 30.

Hours per week, 48.

TABLE 13.—*Union scales of wages for building trades in 75 cities, July 1, 1946, and July 1, 1945*—Continued

CHARLESTON, W. VA.

Classifications	Rate per hour—		Classifications	Rate per hour—	
	July 1, 1946	July 1, 1945		July 1, 1946	July 1, 1945
Journeymen			*Journeymen*—Continued		
Asbestos workers	$1.750	$1.625	Lathers	$1.581	$1.375
Boilermakers	1.750	1.625	Marble setters	1.750	1.500
Bricklayers	2.000	1.750	Mosaic and terrazzo workers	1.750	1.500
Carpenters [1]	1.625	1.500	Painters [1]	1.500	1.500
Millwrights [1]	1.625	1.625	Spray	2.000	2.000
Cement finishers	1.500	1.250	Paperhangers [1]	1.500	1.500
Electricians (inside wiremen) [1]	1.750	1.625	Plasterers	1.725	1.500
Elevator constructors [1]	1.625	1.625	Plumbers	1.850	1.625
Engineers — power equipment operators:			Roofers:		
Air compressors	1.450	1.375	Composition	1.375	1.250
Bulldozers	1.550	1.375	Slate and tile	1.375	1.250
Cranes, derricks, and draglines	1.800	1.625	Sheet-metal workers	1.563	1.375
Graders	1.550	1.375	Sign painters	1.625	1.400
Hoists:			Steam fitters	1.850	1.625
1 drum	1.800	1.375	Stonemasons	2.000	1.750
2 drums	1.800	1.625	Structural-iron workers	1.875	1.625
Mixers:			Rodmen	1.725	1.500
1 bag and under	1.450	1.125	Tile layers	1.750	1.500
Over 1 bag	1.550	1.375	*Helpers and laborers*		
Pumps	1.300	1.125	Bricklayers' tenders:		
Rollers	1.450	1.375	On mortar box	1.050	1.000
Shovels	1.800	1.625	On wheel barrow	1.050	.900
Tractors	1.550	1.375	Building laborers [1]	.900	.750
Trenching machines, excavating	1.800	1.625	Elevator constructors' helpers [1]	1.140	1.140
Glaziers	1.400	1.250	Plasterers' laborers	1.050	.900
			Plumbers' laborers	.900	.750

CHARLOTTE, N. C.

Classifications	July 1, 1946	July 1, 1945	Classifications	July 1, 1946	July 1, 1945
Journeymen			*Journeymen*—Continued		
Asbestos workers	$1.500	$1.375	Paperhangers	$1.375	--------
Bricklayers	1.625	1.375	Plasterers [1]	1.750	$1.375
Carpenters	1.250	1.000	Plumbers [1]	1.500	1.500
Cement finishers	1.625	1.125	Sheet-metal workers	1.500	1.250
Electricians (inside wiremen)	1.375	1.250	Steam fitters [1]	1.500	1.500
Elevator constructors	1.450	1.310	Stonemasons	1.625	1.375
Glaziers	1.000	.900	Structural-iron workers	1.500	1.500
Lathers	1.500	1.500	Rodmen	1.250	1.250
Marble setters [1]	1.500	1.500	Tile layers [1]	1.500	1.500
Mosaic and terrazzo workers [1]	1.500	1.500	*Helpers and laborers*		
Painters	1.250	1.035			
Spray, bridge, structural steel, and stage	1.375	1.300	Elevator constructors' helpers	1.015	.917

[1] For changes since July 1, 1946, see appendix.

TABLE 13.—*Union scales of wages for building trades in 75 cities, July 1, 1946, and July 1, 1945*—Continued

CHICAGO, ILL.

Classifications	Rate per hour—	
	July 1, 1946	July 1, 1945
Journeymen		
Asbestos workers	$1.950	$1.850
Boilermakers	1.950	1.850
Bricklayers	2.000	1.900
Sewer, tunnel, etc	2.250	2.000
Carpenters	1.950	1.775
Cement finishers	1.950	1.700
Pavement, curb and gutter	[2] 1.950	[2] 1.838
Electricians (inside wiremen)[1]	1.975	1.850
Elevator constructors [1]	1.910	1.755
Engineers—power equipment operators:		
Air compressors	1.875	1.775
Bulldozers	1.650	1.550
Cranes, derricks, and draglines	2.250	2.150
Graders:		
Blade	1.350	1.250
Elevating	1.875	1.775
Koehring	2.250	2.150
Patrol and weir	1.650	1.550
Sub-graders	1.875	1.775
Form	1.875	1.775
LeTourneau	1.750	1.650
Mixers:		
Over 27E	2.250	2.150
27E or less	2.150	2.000
Pumps	1.500	1.400
Rollers	2.000	1.950
Grade	1.950	1.900
Shovels, power	2.250	2.150
Tractors	1.650	1.550
Glaziers	2.125	2.025

Classifications	Rate per hour—	
	July 1, 1946	July 1, 1945
Journeymen—Continued		
Granite cutters	$1.900	------
Lathers	2.000	$1.850
Machinists	1.850	1.700
Marble setters	1.950	1.775
Mosaic and terrazzo workers [1]	1.850	1.725
Painters [1]	1.917	1.725
Paperhangers [1]	1.917	1.725
Plasterers	2.000	1.825
Plumbers	1.950	1.850
Roofers:		
Composition	2.000	1.750
Foremen	2.250	2.000
Slate and tile	2.000	1.900
Sheet-metal workers	1.950	1.750
Sign painters	2.000	2.000
Steam and sprinkler fitters	1.950	1.850
Stonemasons	2.000	1.900
Structural-iron workers	1.950	1.850
Finishers	1.950	1.750
Rodmen	1.950	1.850
Tile layers	1.950	1.850
Helpers and laborers		
Bricklayers' tenders	1.300	1.200
Building laborers	1.300	1.200
Elevator constructors' helpers [1]	1.335	1.230
Marble setters' helpers	1.375	1.250
Plasterers' laborers	1.400	1.295
Sprinkler fitters' helpers	1.220	1.220
Terrazzo workers' helpers [1]	1.350	1.200
Base-machine operators [1]	1.500	1.300
Tile layers' helpers	1.375	1.300

CINCINNATI, OHIO

Classifications	July 1, 1946	July 1, 1945
Journeymen		
Asbestos workers [1]	$1.750	$1.625
Boilermakers	1.750	1.500
Bricklayers	2.000	1.825
Carpenters	1.800	1.600
Cement finishers	1.675	1.550
Electricians (inside wiremen)	1.875	1.725
Elevator constructors [1]	1.750	1.750
Engineers—power equipment operators:		
Air compressors (plant operation)	1.625	1.500
On steel erection	1.875	--------
Portable	1.300	1.150
Bulldozers	1.500	1.375
Cranes and draglines	1.875	1.625
Derricks	1.625	1.500
Graders:		
Power	1.500	1.375
Elevating and blade	1.300	1.150
Hoists:		
High speed	1.625	1.375
Hoisting engines	1.500	1.300
Mixers:		
Concrete, with capacity of more than 1 bag, or 1-bag capacity, with side loaders	1.500	1.300
Paving, 27E and over	1.625	1.500
Pumps, over 4-inch capacity discharge	1.500	1.300
Rollers, asphalt	1.500	1.375
Rollers (brick grade, macadam)	1.300	--------
Scrapers	1.625	1.500
Shovels	1.875	1.625

Classifications	July 1, 1946	July 1, 1945
Journeymen—Continued		
Engineers—power equipment operators—Continued		
Tractors	$1.300	$1.150
Trenching machines	1.625	1.500
Glaziers	1.900	1.700
Lathers	1.775	1.625
Machinists	1.500	1.500
Marble setters [1]	1.875	1.825
Mosaic and terrazzo workers	1.750	1.575
Painters	1.700	1.550
Paperhangers	1.700	1.550
Plasterers [1]	1.875	1.750
Plumbers and gas fitters [1]	1.875	1.725
Roofers:		
Composition	1.600	1.425
Slate and tile	1.600	1.500
Precast slab	1.725	1.625
Sheet-metal workers	1.725	1.550
Sign painters	1.650	1.400
Steam fitters	1.900	1.725
Stonecutters	1.875	1.825
Stonemasons [1]	1.875	1.825
Structural-iron workers	1.925	1.725
Rodmen	1.775	1.575
Tile layers	1.750	1.575
Helpers and laborers		
Bricklayers' tenders	1.300	1.100
Building laborers	1.100	.900
Elevator constructors' helpers [1]	1.225	1.225
Marble setters' helpers	1.250	1.125
Plasterers' laborers	1.300	1.100
Plumbers' laborers	1.250	1.100
Terrazzo workers' helpers	1.250	.975
Base grinders	1.350	1.125
Tile layers' helpers	1.250	.850

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[1] For changes since July 1, 1946, see appendix.

[2] Hours per week, 48.

TABLE 13.—*Union scales of wages for building trades in 75 cities, July 1, 1946, and July 1, 1945*—Continued

CLEVELAND, OHIO

Classifications	Rate per hour—	
	July 1, 1946	July 1, 1945
Journeymen		
Asbestos workers [1]	$1.750	$1.625
Boilermakers [1]	1.925	1.750
Bricklayers [1]	2.000	1.875
Sewer and caisson [1]	2.250	2.125
Carpenters [1]	1.650	1.575
Cement finishers [1]	1.700	1.575
Electricians (inside wiremen) [1]	2.000	1.875
Elevator constructors	1.970	1.840
Engineers—power equipment operators:		
Air compressors:		
Steel erection [1]	1.875	1.750
Plant operation [1]	1.750	1.625
Portable [1]	1.425	1.300
Bulldozers [1]	1.625	1.500
Cranes and draglines [1]	2.000	1.875
Derricks [1]	1.875	1.750
Graders:		
Power [1]	1.625	1.500
Blade [1]	1.425	1.300
Hoists:		
High speed [1]	1.750	1.625
Hoisting engines [1]	1.625	1.500
Mixers:		
1 bag capacity, with side loaders [1]	1.625	1.500
27E and over [1]	1.750	1.625
Pumps, over 4-inch capacity discharge [1]	1.625	1.500
Rollers, asphalt [1]	1.625	1.500
Rollers (brick, grade, macadam)	1.425	1.300
Scrapers [1]	1.750	1.625
Shovels [1]	2.000	1.875
Tractors [1]	1.425	1.300
Trenching machines [1]	1.750	1.625
Glaziers [1]	1.750	1.625
Granite cutters (outside)	2.200	1.850
Inside (surface machine)	1.531	1.250
Lathers [1]	2.000	1.875
Journeymen—Continued		
Machinists	$1.750	$1.625
Marble setters [1]	1.850	1.725
Mosaic and terrazzo workers [1]	1.700	1.575
Painters [1]	1.675	1.550
Spray	2.000	2.000
Structural steel [1]	1.925	1.800
Swing stage [1]	1.750	1.625
Fresco	1.700	1.575
Paperhangers [1]	1.675	1.550
Plasterers [1]	2.000	1.875
Plumbers [1]	1.850	1.725
Roofers:		
Composition [1]	1.750	1.625
Foremen and waterproofers [1]	1.875	1.750
Slate and tile	2.000	1.875
Sheet-metal workers [1]	1.750	1.625
Sign painters	1.950	1.675
Steam fitters [1]	1.850	1.725
Sprinkler fitters	1.750	1.580
Stonecutters (outside)	1.875	1.700
Inside	1.750	1.575
Stonemasons [1]	2.000	1.875
Structural-iron workers [1]	2.000	1.875
Sheeters [1]	2.250	2.125
Bucker up [1]	2.215	2.000
Rodmen [1]	2.000	1.875
Tile layers [1]	1.850	1.725
Helpers and laborers		
Bricklayers' tenders [1]	1.250	1.125
Building laborers [1]	1.250	1.125
Elevator constructors' helpers	1.380	1.290
Marble setters' helpers	1.275	1.150
Plasterers' laborers [1]	1.250	1.125
Plumbers' laborers [1]	1.350	1.225
Sprinkler fitters' helpers	1.100	.950
Terrazzo workers' helpers [1]	1.275	1.150
Tile layers' helpers [1]	1.275	1.150

COLUMBUS, OHIO

Classifications	July 1, 1946	July 1, 1945
Journeymen		
Asbestos workers	$1.750	$1.625
Boilermakers	1.750	1.500
Bricklayers [1]	1.950	1.750
Carpenters [1]	1.500	1.375
Wharf and bridge	1.650	1.525
Cement finishers [1]	1.500	1.438
Electricians (inside wiremen) [1]	1.625	1.500
Elevator constructors [1]	1.690	1.620
Engineers—power equipment operators:		
Air compressors (plant operation) [1]	1.625	1.500
Portable [1]	1.300	1.150
Bulldozers [1]	1.500	1.375
Cranes and draglines [1]	1.875	1.625
Derricks [1]	1.625	1.500
Graders:		
Power [1]	1.500	1.375
Elevating and blade [1]	1.300	1.150
Hoists:		
High speed [1]	1.625	1.500
Hoisting engines [1]	1.500	1.300
Journeymen—Continued		
Engineers—power equipment operators—Continued		
Mixers:		
Concrete, with capacity of more than 1 bag, or 1 bag capacity with side loaders [1]	$1.500	$1.300
Paving, 27E and over [1]	1.625	1.500
Pumps, over 4-inch capacity discharge [1]	1.500	1.300
Rollers, asphalt [1]	1.500	1.375
Scrapers [1]	1.625	1.500
Shovels [1]	1.875	1.625
Tractors [1]	1.300	1.150
Trenching machines [1]	1.625	1.500
Lathers [1]	1.650	1.550
Marble setters	1.675	1.375
Mosaic and terrazzo workers	1.500	1.250
Painters [1]	1.450	1.375
Structural steel and spray [1]	1.625	1.550
Paperhangers	1.450	1.375
Plasterers	1.925	1.750

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[1] For changes since July 1, 1946, see appendix.

TABLE 13.—*Union scales of wages for building trades in 75 cities, July 1, 1946, and July 1, 1945*—Continued

COLUMBUS, OHIO—continued

Classifications	Rate per hour—		Classifications	Rate per hour—	
	July 1, 1946	July 1, 1945		July 1, 1946	July 1, 1945
Journeymen—Continued			*Helpers and laborers*		
Plumbers	$1.750	$1.580	Bricklayers' tenders [1]	$1.000	$0.925
Roofers:			Building laborers [1]	.925	.800
Composition	1.500	1.375	Composition roofers' helpers	.925	.800
Foremen	1.600	1.475	Elevator constructors' helpers [1]	1.180	1.130
Slate and tile	1.500	1.375	Plasterers' laborers [1]	1.000	.925
Sheet-metal workers	1.750	1.500			
Sign painters	1.500	1.375			
Steam fitters	1.750	1.580			
Stonecutters	1.375	1.250			
Stonemasons	1.875	1.750			
Structural-iron workers	1.875	1.625			
Rodmen	1.875	1.625			
Tile layers	1.625	1.500			

DALLAS, TEX.

Journeymen			*Journeymen*—Continued		
Asbestos workers	$1.750	$1.625	Glaziers	$1.500	$1.125
Home insulators	1.375	1.250	Lathers	1.875	1.625
Bricklayers [1]	1.938	1.725	Marble setters [1]	1.750	1.625
Carpenters [1]	1.425	1.250	Mosaic and terrazzo workers [1]	1.750	1.625
Cement finishers [1]	1.565	1.440	Painters [1]	1.425	1.250
Electricians (inside wiremen) [1]	1.750	1.625	Spray or stage [1]	1.625	1.500
Elevator constructors	1.760	1.600	Paperhangers	1.425	1.250
Engineers—power equipment operators:			Plasterers [1]	1.750	1.625
Air compressors [1]	1.375	1.250	Plumbers [1]	1.750	1.625
Bulldozers [1]	1.625	1.500	Roofers:		
Cranes, derricks, and draglines [1]	1.625	1.500	Composition [1]	1.275	1.150
Graders:			Slate and tile	1.500	1.375
Self-propelled [1]	1.625	1.500	Sheet-metal workers	1.750	1.625
Towed	1.375	1.250	Sign painters	1.500	[2] 1.250
Hoists:			Steam fitters [1]	1.750	1.625
1 drum [1]	1.375	1.250	Stonemasons [1]	1.938	1.725
2 drums [1]	1.625	1.500	Structural-iron workers [1]	1.625	1.500
LeTourneau [1]	1.625	1.500	Rodmen [1]	1.375	1.250
Mixers:			Tile layers [1]	1.750	1.625
Less than 14 cubic feet [1]	1.375	1.250	*Helpers and laborers*		
14 cubic feet or over [1]	1.625	1.500	Bricklayers' tenders	1.000	.700
Pumps [1]	1.375	1.250	Building laborers [1]	.800	.700
Rollers [1]	1.375	1.250	Elevator constructors' helpers	1.230	1.120
Scrapers:			Plasterers' laborers [1]	1.000	.700
3 cubic yards or less [1]	1.375	1.250	Plumbers' laborers	.800	.700
Over 3 cubic yards [1]	1.625	1.500			
Shovels [1]	1.625	1.500			
Tractors [1]	1.375	1.250			
Trenching machines [1]	1.625	1.500			

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[1] For changes since July 1, 1946, see appendix.

[2] Hours per week, 44.

Table 13.—*Union scales of wages for building trades in 75 cities, July 1, 1946, and July 1, 1945*—Continued

DAYTON, OHIO

Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945
Journeymen		
Asbestos workers [1]	$1.625	$1.500
Boilermakers	1.750	1.650
Bricklayers [1]	2.025	1.850
Carpenters	1.750	1.575
Cement finishers	1.580	1.425
Electricians (inside wiremen)	2.025	1.825
Elevator constructors	1.750	1.750
Engineers—power equipment operators:		
Air compressors [1]	1.625	1.500
On steel erection	1.875	1.650
Bulldozers [1]	1.500	1.350
Cranes and draglines [1]	1.875	1.650
Derricks [1]	1.875	1.650
Graders:		
Power [1]	1.500	1.350
Hoists:		
High speed [1]	1.625	1.500
Hoisting engines [1]	1.500	1.350
Mixers:		
Concrete, with capacity of more than 1 bag or 1 bag capacity with side loaders [1]	1.500	1.350
Paving 27E and over [1]	1.625	1.500
Pumps, over 4-inch capacity discharge [1]	1.500	1.350
Rollers, asphalt [1]	1.500	1.350
Scrapers [1]	1.625	1.500
Shovels [1]	1.875	1.650
Trenching machines [1]	1.625	1.500
Glaziers [1]	1.550	1.550

Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945
Journeymen—Continued		
Lathers	$1.900	$1.725
Marble setters	1.750	1.625
Mosaic and terrazzo workers	1.750	1.625
Painters	1.625	1.500
Spray	2.000	2.000
Structural iron and bridge	1.875	1.750
Swing and scaffold	1.625	1.600
Paperhangers	1.625	1.500
Plasterers	1.900	1.700
Plumbers	1.875	1.650
Roofers:		
Composition	1.550	1.380
Foremen	1.650	1.480
Slate and tile	1.750	1.580
Sheet-metal workers	1.750	1.550
Sign painters	1.850	1.725
Steam and sprinkler fitters	1.875	1.650
Stonemasons	2.025	1.850
Structural-iron workers	1.875	1.725
Rodmen	1.725	1.550
Tile layers	1.750	1.625
Helpers and laborers		
Bricklayers' tenders	1.250	1.150
Building laborers [1]	.975	.850
Elevator constructors' helpers	1.225	1.225
Marble setters' helpers	1.250	.975
Plasterers' laborers	1.250	1.150
Plumbers' laborers	.975	.850
Terrazzo workers' helpers	1.250	.975
Tile layers' helpers	1.250	.975

DENVER, COLO.

Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945
Journeymen		
Asbestos workers	$1.750	$1.500
Boilermakers	1.750	1.500
Bricklayers	1.980	1.800
Sewer work	2.230	2.050
Carpenters	1.700	1.500
Cement finishers	1.700	1.500
Composition floor layers	1.825	1.625
Electricians (inside wiremen)	1.850	1.650
Elevator constructors	1.860	1.650
Engineers—power equipment operators:		
Air compressors	1.700	1.500
Bulldozers	1.700	1.500
Cranes, derricks, and draglines	1.825	1.625
Graders	1.700	--------
Hoists:		
1 drum	1.700	1.500
2 drums	1.825	1.625
Mixers:		
Under 1 cubic yard	1.700	1.500
1 cubic yard or over	1.825	1.625
Pumps	1.700	1.500
Rollers	1.700	1.500
Shovels	1.825	1.625
Tractors, over 35 horsepower	1.700	1.500
Trenching machines	1.700	1.500
Glaziers (outside)	1.520	1.370
Inside	1.370	1.250
Granite cutters (outside)	1.563	1.313
Inside	1.500	1.250
Surface-machine operators	1.531	1.370

Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945
Journeymen—Continued		
Lathers	$1.900	$1.650
Machinists	1.650	1.430
Marble setters	1.900	1.650
Mosaic and terrazzo workers	1.900	1.650
Painters	1.600	1.430
Paperhangers	1.600	1.430
Plasterers	1.900	1.650
Plumbers	1.850	1.650
Roofers:		
Composition	1.700	1.500
Foremen	1.825	1.625
Slate and tile	1.700	1.500
Sheet-metal workers	1.700	1.625
Sign painters	1.850	1.500
Steam fitters	1.850	1.650
Stonecutters [1]	1.500	1.500
Stonemasons	1.980	1.800
Structural-iron workers	1.700	1.500
Rodmen	1.700	1.500
Tile layers	1.900	1.650
Helpers and laborers		
Bricklayers' tenders	1.350	1.250
Building laborers	1.100	1.000
Elevator constructors' helpers	1.300	1.135
Marble setters' helpers [1]	1.100	1.000
Plasterers' laborers	1.350	1.250
Plumbers' laborers	1.300	1.150
Terrazzo workers' helpers [1]	1.100	1.000
Tile layers' helpers [1]	1.100	1.000

[1] For changes since July 1, 1946, see appendix.

TABLE 13.—*Union scales of wages for building trades in 75 cities, July 1, 1946, and July 1, 1945*—Continued

DES MOINES, IOWA

Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945
Journeymen		
Asbestos workers	$1.500	$1.500
Bricklayers	2.000	1.725
Carpenters	1.600	1.375
Cement finishers	1.600	1.375
Electricians (inside wiremen)	1.750	1.500
Elevator constructors [1]	1.555	1.555
Engineers—power equipment operators:		
Air compressors	1.550	1.475
Bulldozers	1.550	1.475
Cranes, derricks, and draglines	1.700	1.550
Graders	1.700	1.550
Hoists:		
1 drum	1.550	1.475
2 drums	1.700	1.550
LeTourneau	1.700	1.550
Mixers:		
Under 2 bags	1.550	1.475
Paving type	1.700	1.550
Pumps:		
3 inches or under	1.150	1.150
Over 3 inches	1.550	1.475
Rollers	1.550	1.475
Scrapers	1.550	1.475
Shovels	1.700	1.550
Tractors	1.550	1.475
Trenching machines	1.700	1.550
Glaziers	1.375	1.250
Lathers	1.750	1.500
Journeymen—Continued		
Marble setters	$1.600	$1.430
Mosaic and terrazzo workers	1.600	1.430
Painters	1.450	1.325
Spray	1.700	1.575
Paperhangers	1.450	1.325
Plasterers	1.750	1.500
Plumbers [1]	1.750	1.550
Roofers:		
Composition:		
New work	1.150	1.100
Reroofing	1.150	1.000
Slate and tile	1.150	1.150
Sheet-metal workers [1]	1.580	1.500
Sign painters	1.450	1.325
Steam fitters	1.750	1.550
Stonemasons	2.000	1.725
Structural-iron workers	1.700	1.500
Rodmen	1.700	1.500
Tile layers	1.600	1.430
Helpers and laborers		
Bricklayers' tenders	1.050	.850
Building laborers	1.050	.850
Elevator constructors' helpers [1]	1.090	1.090
Marble setters' helpers	1.050	.850
Plasterers' laborers	1.175	1.025
Plumbers' laborers	1.050	.850
Terrazzo workers' helpers	1.050	.850
Tile layers' helpers	1.050	.850

DETROIT, MICH.

Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945
Journeymen		
Asbestos workers	$1.900	$1.625
Home insulators	1.500	1.375
Boilermakers	1.900	1.750
Bricklayers	2.000	1.725
Carpenters [1]	1.750	1.500
Cement finishers	1.725	1.500
Electricians (inside wiremen)	2.000	1.850
Elevator constructors	1.910	1.750
Engineers—power equipment operators:		
Air compressors, concrete	1.438	1.438
Building and road construction	1.675	1.675
Steel erection	2.000	1.825
Glaziers, outside	1.610	1.438
athers [1]	1.900	1.725
Residential	1.900	1.675
Machinists	2.000	1.750
Marble setters	1.900	1.725
Mosaic and terrazzo workers	1.750	1.500
ainters [1]	1.725	1.500
Spray and stage [1]	1.975	1.750
aperhangers [1]	1.725	1.500
asterers	2.000	1.725
Residential	1.900	1.625
umbers [1]	1.900	1.750
Journeymen—Continued		
Roofers:		
Composition	$1.750	$1.550
Foremen	2.050	1.900
Slate and tile:		
Slaters	2.050	1.950
Precast tile	1.750	1.600
Sheet-metal workers	1.875	1.550
Sign painters	1.950	1.650
Steam fitters	2.000	1.750
Sprinkler fitters	1.750	1.580
Stonemasons	2.000	1.725
Structural-iron workers	2.000	1.825
Riggers	1.750	1.625
Rodmen	1.750	1.500
Tile layers	1.875	1.675
Helpers and laborers		
Bricklayers' tenders	1.150	1.100
Mortar mixers [1]	1.250	1.100
Building laborers [1]	1.150	1.000
Elevator constructors' helpers	1.340	1.225
Marble setters' helpers [1]	1.300	1.125
Plasterers' laborers	1.500	1.250
Sprinkler fitters' helpers	1.100	.950
Terrazzo workers' helpers	1.350	1.150
Base-machine operators	1.625	1.438
Tile layers' helpers [1]	1.300	1.125

For changes since July 1, 1946, see appendix.

TABLE 13.—*Union scales of wages for building trades in 75 cities, July 1, 1946, and July 1, 1945*—Continued

DULUTH, MINN.

Classifications	Rate per hour—	
	July 1, 1946	July 1, 1945
Journeymen		
Asbestos workers	$1.500	$1.200
Boilermakers	1.750	1.700
Bricklayers [1]	1.625	1.500
Carpenters	1.500	1.295
Cement finishers	1.325	1.150
Electricians (inside wiremen) [1]	1.500	1.400
Elevator constructors	1.490	1.400
Engineers—power equipment operators:		
Air compressors	1.400	1.200
Bulldozers	1.700	1.500
Cranes, derricks, and draglines	1.850	1.625
Graders	1.500	1.250
Elevating	1.550	1.300
Motor patrol and pavement	1.450	--------
Hoists, 1 drum	1.700	1.500
LeTourneau	1.700	1.500
Mixers, road	1.750	- - -
14S and under	1.500	1.200
Over 14S	1.700	1.400
Pumps	1.400	1.200
Rollers:		
Under 8 tons	1.500	1.250
8 tons or over	1.700	1.500
Shovels	1.850	1.625
Tractors	1.500	1.200
50 hp. or less without power take-off	1.200	1.000
Trenching machines	1.700	1.500
Journeymen—Continued		
Glaziers	$1.200	$0.978
Lathers [1]	1.500	1.350
Marble setters	1.625	1.500
Painters	1.400	1.250
Structural steel	1.500	1.500
Paperhangers	1.400	1.250
Plasterers	1.725	1.500
Plumbers	1.550	1.375
Roofers, composition [1]	1.100	1.000
Foremen [1]	1.300	1.200
Sheet-metal workers	1.500	1.300
Sign painters	1.650	1.450
Steam fitters	1.550	1.375
Stonemasons [1]	1.625	1.500
Structural-iron workers	1.750	1.625
Rodmen	1.550	1.375
Tile layers	1.625	1.500
Helpers and laborers		
Bricklayers' tenders	1.100	[2] .875
Building laborers	1.000	[2] .775
Elevator constructors' helpers	1.040	.980
Plasterers' laborers [1]	1.150	[2] 1.000
Plumbers' laborers	1.100	[2] .775

EL PASO, TEX.

Classifications	Rate per hour—	
	July 1, 1946	July 1, 1945
Journeymen		
Asbestos workers	$1.750	$1.500
Bricklayers	1.750	1.625
Carpenters [1]	1.375	1.250
Cement finishers	1.440	1.440
Electricians (inside wiremen)	1.750	1.500
Engineers—power equipment operators:		
Air compressors	1.000	1.000
Bulldozers	1.250	1.250
Cranes, derricks, and draglines	1.500	1.500
Graders, road	1.000	1.000
Hoists:		
1 drum	1.250	1.250
2 drums	1.500	1.500
LeTourneau	1.250	1.250
Mixers:		
Under 10S	1.000	1.000
10S or over	1.500	1.500
Pumps	1.000	1.000
Rollers	1.250	1.250
Shovels	1.500	1.500
Journeymen—Continued		
Engineers—power equipment operators—Continued		
Tractors	$1.250	$1.250
Trenching machines	1.500	1.500
Glaziers	1.375	1.250
Lathers	1.750	1.500
Marble setters	1.750	1.625
Mosaic and terrazzo workers	1.750	1.625
Painters	1.375	1.250
Stage	1.500	1.375
Spray and structural steel	1.625	1.500
Paperhangers	1.375	1.250
Plasterers [1]	1.750	1.625
Plumbers and gas fitters [1]	1.750	1.625
Sheet-metal workers	1.750	1.500
Sign painters	1.500	1.25
Steam fitters	1.750	1.62
Stonecutters	1.750	1.62
Structural-iron workers	1.500	1.50
Rodmen	1.250	1.25
Tile layers	1.750	1.62

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[1] For changes since July 1946, see appendix.

[2] Hours per week, 44.

TABLE 13.—*Union scales of wages for building trades in 75 cities, July 1, 1946, and July 1, 1945*—Continued

ERIE, PA.

Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945
Journeymen		
Asbestos workers	$1.625	$1.500
Bricklayers [1]	1.950	1.750
Carpenters	1.525	1.375
Cement finishers	1.625	1.500
On scaffold above 3 floors	1.775	1.650
Electricians (inside wiremen)	1.750	1.500
Elevator constructors	1.740	1.570
Engineers—power equipment operators:		
Air compressors	1.375	1.375
Bulldozers	1.500	1.500
Cranes, derricks, and draglines	1.750	1.750
Graders:		
Elevating	1.750	1.750
Power	1.500	1.500
Hoists:		
1 drum	1.375	1.375
2 drums	1.750	1.750
LeTourneau	1.625	1.625
Mixers:		
Less than 1 yard	1.375	1.375
Paving	1.750	1.750
Pumps	1.375	1.375
Rollers:		
On grade	1.375	1.375
On finish	1.500	1.500
Scrapers	1.625	1.625
Shovels	1.750	1.750
Tractors	1.375	1.375
Trenching machines	1.625	1.625
Glaziers	1.350	1.250
Journeymen—Continued		
Lathers [1]	$1.750	$1.750
Marble setters	1.700	1.500
Mosaic and terrazzo workers	1.700	1.500
Painters	1.425	1.275
Spray	1.775	1.600
Swing	1.525	1.400
Structural-iron workers	1.525	1.500
Paperhangers	1.425	1.275
Plasterers	1.850	1.725
Plumbers [1]	1.625	1.500
Roofers:		
Composition [1]	1.375	1.250
Slate and tile [1]	1.375	1.250
Sheet metal workers [1]	1.375	1.250
Steam fitters [1]	1.625	1.500
Stonemasons	1.950	1.750
Structural-iron workers	1.750	1.675
Rodmen	1.600	1.438
Tile layers	1.700	1.150
Helpers and laborers		
Bricklayers' tenders:		
Using wheelbarrow	1.050	.925
Using hod	1.150	1.025
Building laborers	1.000	.825
Elevator constructors' helpers	1.220	1.100
Marble setters' helpers	1.100	.925
Plasterers' laborers	1.150	1.025
Plumbers' laborers	1.100	.925
Terrazzo workers' helpers	1.100	.925
Tile layers' helpers	1.100	.925

GRAND RAPIDS, MICH.

Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945
Journeymen		
Asbestos workers	$1.625	$1.525
Bricklayers [1]	1.900	1.650
Carpenters [1]	1.500	1.250
Wharf, bridge and millwrights [1]	1.500	1.500
Cement finishers	1.500	1.250
Electricians (inside wiremen) [1]	1.750	1.750
Residential [1]	1.750	1.500
Elevator constructors [1]	1.625	1.625
Engineers—power equipment operators:		
Air compressors:		
Concrete	1.438	1.438
Steel	1.900	1.750
Building construction engineers P. & H	1.675	1.675
Engineers on steel erection	1.900	1.750
Road construction	1.675	1.675
Glaziers (outside)	1.430	1.240
Lathers	1.800	1.500
Marble setters [1]	1.440	1.440
Mosaic and terrazzo workers [1]	1.440	1.440
Painters [1]	1.250	1.150
Spray and swing stage [1]	1.500	1.400
Paperhangers [1]	1.250	1.150
Journeymen—Continued		
Plasterers	$1.800	$1.500
Plumbers [1]	1.625	1.500
Roofers:		
Composition	1.300	1.150
Foremen	1.400	1.250
Slate and tile	1.400	1.250
Sheet-metal workers	1.400	1.250
Sign painters	1.500	1.500
Steam fitters	1.625	1.500
Stonemasons [1]	1.900	1.650
Structural-iron workers	1.725	1.725
Rodmen	1.430	1.430
Tile layers [1]	1.440	1.440
Helpers and laborers		
Bricklayers' tenders [1]	.950	.850
Mortar mixers	1.050	.950
Building laborers [1]	.950	.850
Elevator constructors' helpers [1]	1.145	1.145
Marble setters' helpers	1.300	1.000
Plasterers' laborers [1]	1.100	1.000
Terrazzo workers' helpers	1.300	1.000
Base-machine operators	1.500	1.250
Tile layers' helpers	1.300	1.000

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[1] For changes since July 1, 1946, see appendix.

TABLE 13.—*Union scales of wages for building trades in 75 cities, July 1, 1946, and July 1, 1945*—Continued

HOUSTON, TEX.

Classifications	Rate per hour—	
	July 1, 1946	July 1, 1945
Journeymen		
Asbestos workers	$1.875	$1.625
Boilermakers	1.750	1.500
Bricklayers	2.000	1.725
Carpenters	1.625	1.375
Cement finishers	1.625	1.500
Electricians (inside wiremen)	1.875	1.625
Elevator constructors	1.875	1.625
Engineers—power equipment operators:		
Air compressors	1.500	1.250
Bulldozers	1.750	1.500
Cranes, derricks, and draglines	1.750	1.500
Graders, road and elevating:		
Towed	1.500	1.250
Self-propelled	1.750	1.500
Hoists:		
1 drum	1.500	1.250
2 drums	1.750	1.500
Mixers:		
Less than 14 cubic feet	1.500	1.250
14 cubic feet or over	1.750	1.500
Pumps, larger than 2 inches	1.500	1.250
Scrapers:		
3 cubic yards or less	1.500	1.250
Over 3 cubic yards	1.750	1.500
Tractors	1.500	1.250
Trenching machines	1.750	1.500
Glaziers	1.500	1.250
Lathers	1.875	1.625
Machinists	1.625	1.625
Marble setters	1.750	1.580
Journeymen—Continued		
Mosaic and terrazzo workers	$1.750	$1.580
Painters	1.500	1.250
Spray stage and steel spray stage	1.875	1.625
Steel spray	1.750	1.625
Spray	1.750	1.500
Structural steel and stage	1.625	1.375
Paperhangers	1.500	1.250
Plasterers [1]	1.875	1.625
Plumbers [1]	1.875	1.625
Roofers:		
Composition	1.375	1.125
Slate and tile	1.500	1.500
Sheet-metal workers	1.875	1.625
Sign painters	1.750	1.500
Steam fitters	1.875	1.625
Stonemasons	2.000	1.725
Structural-iron workers	1.875	1.625
Rodmen	1.625	1.375
Sheeters	2.125	1.875
Tile layers	1.750	1.580
Helpers and laborers		
Bricklayers' tenders	1.000	.750
Building laborers	.800	.600
Elevator constructors' helpers	1.313	1.140
Marble setters' helpers	1.000	.750
Plasterers' laborers	1.000	.750
Plumbers' laborers	1.000	.750
Terrazzo workers' helpers	1.000	.750
Tile layers' helpers	1.000	.750

INDIANAPOLIS, IND.

Classifications	July 1, 1946	July 1, 1945
Journeymen		
Asbestos workers [1]	$1.625	$1.500
Boilermakers	1.850	1.700
Bricklayers	1.975	1.675
Carpenters	1.675	1.425
Cement finishers [1]	1.575	1.375
Electricians (inside wiremen) [1]	1.700	1.700
Elevator construetors [1]	1.740	1.640
Engineers—power equipment operators:		
Air compressors	1.200	1.100
In battery	1.650	1.550
Bulldozers	1.650	1.550
Cranes, derricks, and draglines	1.700	1.600
Graders:		
Elevating	1.650	1.550
Form	1.400	1.300
Hoists	1.700	1.600
Mixers:		
Under 21 cubic feet	1.200	1.100
21 cubic feet or over	1.650	1.550
Dual drum	1.850	1.750
Pumps:		
Over 2 inches	1.400	1.300
In battery of 4	1.650	1.550
Rollers:		
On earth	1.400	1.300
On stone, blacktop, or brick	1.650	1.550
Shovels	1.700	1.600
Tractors	1.400	1.300
Trenching machines	1.650	1.550
Journeymen—Continued		
Glaziers [1]	$1.425	$1.425
Lathers	1.625	1.500
Machinists	1.500	1.500
Marble setters	1.750	1.500
Mosaic and terrazzo workers	1.550	1.375
Painters	1.625	1.425
Spray	1.875	1.675
Paperhangers	1.625	1.425
Plasterers [1]	1.750	1.625
Plumbers	1.850	1.625
Roofers:		
Composition	1.350	1.175
Foremen	1.450	1.275
Slate and tile	1.500	1.325
Sheet-metal workers	1.650	1.470
Sign painters [1]	1.625	1.375
Steam fitters	1.850	1.625
Sprinkler fitters	1.750	1.580
Stonemasons	1.975	1.675
Structural-iron workers	1.875	1.650
Rodmen	1.875	1.650
Tile layers	1.750	1.500
Helpers and laborers		
Bricklayers' tenders	1.175	1.100
Building laborers [1]	.925	.850
Composition roofers' helpers	.950	.800
Elevator constructors' helpers [1]	1.220	1.150
Plasterers' laborers	1.175	1.100
Plumbers' laborers	.925	.85

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[1] For changes since July 1, 1946, see appendix.

TABLE 13.—*Union scales of wages for building trades in 75 cities, July 1, 1946, and July 1, 1945*—Continued

JACKSON, MISS.

Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945
Journeymen		
Bricklayers	$1.875	$1.625
Carpenters [1]	1.250	1.150
Cement finishers	1.500	1.500
Electricians (inside wiremen)	1.500	1.375
Engineers—power equipment operators:		
Air compressors	1.250	1.125
Bulldozers	1.500	1.375
Cranes, derricks, and draglines	1.625	1.500
Graders:		
Blade	1.250	1.125
Elevating and motor	1.500	1.375
Hoists:		
1 drum	1.500	1.125
2 drums	1.500	1.375
Mixers:		
10S or smaller	1.375	1.250
Larger than 10S	1.500	1.375
Pumps	1.250	1.125
Rollers	1.500	1.375
Scrapers	1.500	1.375
Shovels	1.625	1.500
Tractors	1.250	1.125
Trenching machines	1.500	1.375
Glaziers	1.000	1.000
Journeymen—Continued		
Lathers	$1.250	$1.250
Marble setters	1.875	1.500
Mosaic and terrazzo workers	1.875	1.500
Painters	1.250	1.000
Spray	1.500	1.500
Swing stage	1.500	1.250
Paperhangers	1.375	1.000
Plasterers	1.750	1.500
Plumbers [1]	1.625	1.500
Roofers:		
Composition	1.150	1.150
Slate and tile	1.150	1.150
Sheet-metal workers	1.375	1.250
Sign painters	1.500	1.250
Steam fitters	1.625	1.500
Stonemasons	1.875	1.625
Structural-iron workers [1]	1.500	1.500
Rodmen	1.250	1.250
Tile layers	1.875	1.500
Helpers and laborers		
Bricklayers' tenders [1]	.700	--------
Building laborers [1]	.600	--------
Plasterers' laborers [1]	.700	--------

JACKSONVILLE, FLA.

Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945
Journeymen		
Asbestos workers	$1.625	$1.500
Boilermakers	1.625	1.500
Bricklayers	1.625	1.500
Carpenters [1]	1.250	1.125
Millwrights and pile drivers [1]	1.350	1.250
Cement finishers	1.375	1.250
Electricians (inside wiremen) [1]	1.750	1.500
Elevator constructors	1.675	1.500
Engineers—power equipment operators:		
Air compressors	1.250	1.250
Bulldozers	1.250	1.250
Cranes, derricks, and draglines	1.500	1.500
Graders	1.250	1.250
Hoists:		
1 drum	1.250	1.250
2 drums	1.500	1.500
Mixers	1.250	1.250
Pumps	1.000	1.000
Rollers	1.250	1.250
Shovels	1.500	1.500
Tractors	1.250	1.250
laziers	1.000	1.000
athers	1.750	1.500
Marble setters	1.625	1.500
Mosaic and terrazzo workers	1.625	1.500
Journeymen—Continued		
Painters	$1.250	$1.250
Spray	1.875	1.875
Structural steel workers	1.625	1.500
Paperhangers	1.250	1.250
Plasterers	1.750	1.500
Plumbers and gas fitters	1.700	1.500
Roofers:		
Composition	1.125	1.125
Slate and tile	1.125	1.125
Sheet-metal workers	1.550	1.250
Sign painters	1.500	1.375
Steam fitters	1.700	1.500
Stonemasons	1.625	1.500
Structural-iron workers	1.625	1.500
Rodmen	1.375	1.250
Tile layers	1.625	1.500
Helpers and laborers		
Bricklayers' tenders	.800	.600
Mortar mixers	.850	.650
Building laborers	.750	.600
Elevator constructors' helpers	1.170	1.050
Plasterers' laborers	.800	.650
Plumbers' laborers	.800	.600
Tile layers' helpers	.800	.650

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[1] For changes since July 1, 1946, see appendix.

TABLE 13.—*Union scales of wages for building trades in 75 cities, July 1, 1946, and July 1, 1945*—Continued

KANSAS CITY, MO.

Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945
Journeymen		
Asbestos workers	$1.750	$1.625
Boilermakers	1.875	1.625
Bricklayers	2.000	1.750
Carpenters	1.750	1.500
Cement finishers	1.750	1.575
Electricians (inside wiremen)	1.875	1.650
Elevator constructors	1.925	1.645
Engineers—power equipment operators:		
Air compressors	1.750	1.550
2-inch tandem	1.875	1.675
Bulldozers [1]	1.625	1.425
Cranes, derricks, and draglines	1.875	1.675
Graders, elevating [1]	1.625	1.425
Hoists:		
1 drum	1.750	1.550
2 drums	1.875	1.675
LeTourneau	1.750	1.550
Mixers	1.750	1.550
Pumps	1.750	1.550
Rollers	1.750	1.550
Shovels	1.875	1.675
Tractors	1.250	1.175
Trenching machines (hoe)	1.875	1.675
Glaziers	1.875	1.625
Lathers	1.800	1.650
Machinists	1.650	1.650
Marble setters	1.825	1.650
Mosaic and terrazzo workers	1.775	1.450
Journeymen—Continued		
Painters	$1.700	$1.575
Paperhangers	1.700	1.575
Plasterers	2.000	1.750
Plumbers and gas fitters	1.875	1.700
Roofers:		
Composition	1.600	1.440
Foremen	1.740	1.580
Slate and tile	1.600	1.440
Sheet-metal workers	1.875	1.675
Residential	1.500	1.500
Sign painters	2.000	1.720
Steam fitters	1.875	1.700
Sprinkler fitters	1.750	1.580
Stonemasons	1.750	1.500
Structural-iron workers	1.875	1.700
Rodmen	1.750	1.575
Tile layers	1.775	1.450
Helpers and laborers		
Bricklayers' tenders	1.350	1.125
Building laborers	1.175	.975
Elevator constructors' helpers	1.348	1.150
Marble setters' helpers	1.225	1.025
Plasterers' laborers	1.350	1.125
Plumbers' laborers	1.225	1.025
Sprinkler fitters' helpers	1.150	.950
Terrazzo workers' helpers	1.225	.960
Tile layers' helpers	1.225	1.025

LITTLE ROCK, ARK.

Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945
Journeymen		
Asbestos workers	$1.625	$1.500
Bricklayers [1]	1.875	1.625
Carpenters [1]	1.375	1.250
Cement finishers	1.500	1.250
Electricians (inside wiremen) [1]	1.500	1.375
Elevator constructors [1]	1.500	1.500
Engineers—power equipment operators:		
Air compressors	1.250	1.250
Bulldozers	1.375	1.375
Cranes, derricks, and draglines	1.500	1.500
Graders, elevating	1.250	1.250
Hoists:		
1 drum	1.250	1.250
2 drums	1.500	1.500
Mixers:		
10S or smaller	1.250	1.250
Larger than 10S	1.500	1.500
Pumps	1.250	1.250
Rollers	1.250	1.250
Shovels	1.500	1.500
Trenching machines	1.500	1.500
Journeymen—Continued		
Glaziers	$1.375	$1.250
Marble setters	1.875	1.625
Mosaic and terrazzo workers	1.875	1.625
Painters	1.375	1.250
Spray	1.750	1.750
Swing stage	1.750	1.500
Paperhangers	1.500	1.250
Plasterers	1.750	1.500
Plumbers [1]	1.750	1.500
Sheet-metal workers	1.375	1.250
Sign painters	1.500	1.250
Steam fitters [1]	1.750	1.500
Stonemasons	1.875	1.625
Structural-iron workers	1.625	1.500
Rodmen	1.375	1.250
Tile layers	1.875	1.625
Helpers and laborers		
Bricklayers' tenders	1.000	.750
Building laborers [1]	.700	.600
Elevator constructors' helpers [1]	1.050	1.050
Plumbers' laborers	.750	.600

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[1] For changes since July 1, 1946, see appendix.

TABLE 13.—*Union scales of wages for building trades in 75 cities, July 1, 1946, and July 1, 1945*—Continued

LOS ANGELES, CALIF.

Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945
Journeymen		
Asbestos workers	$1.750	$1.500
Home insulators	1.400	1.125
Boilermakers [1]	1.750	1.650
Bricklayers [1]	1.850	1.500
Carpenters [1]	1.500	1.350
Millwrights [1]	1.700	1.550
Parquetry floor layers [1]	1.575	1.425
Wharf and bridge [1]	1.725	1.575
Cement finishers [1]	1.625	1.500
Composition and mastic finishers [1]	1.750	1.625
Electricians (inside wiremen) [1]	1.750	1.700
Fixture hangers	2.000	------
Elevator constructors	1.700	1.590
Engineers—power equipment operators:		
Air compressors [1]	1.300	1.250
Bulldozers [1]	1.550	1.500
Cranes, derricks, and draglines:		
Capacity less than 1 cu. yd	1.625	1.625
Capacity 1 cu. yd. or more [1]	1.750	1.750
Graders [1]	1.425	1.375
Elevating [1]	1.675	1.625
Hoists	1.625	1.625
LeTourneau:		
Model super C	1.550	1.500
Models larger than super C	1.675	1.625
Mixers:		
Paving type [1]	1.650	1.625
Skip type [1]	1.425	1.375
Mobile type [1]	1.550	1.500
Pumps [1]	1.300	1.250
Rollers [1]	1.500	1.375
Scrapers [1]	1.550	1.500
Shovels:		
Capacity less than 1 cubic yard	1.625	1.625
Capacity 1 cubic yard or more [1]	1.750	1.750
Tractors [1]	1.550	1.500
Trenching machines [1]	1.625	1.500
No. 224 Buckeye or larger	1.625	1.625
laziers	1.350	1.250
ranite cutters	1.500	1.250
Journeymen—Continued		
Lathers:		
Metal [1]	$1.850	$1.667
Wood [1]	1.750	1.500
Machinists	1.900	1.550
Marble setters [1]	1.625	1.438
Mosaic and terrazzo workers [1]	1.625	1.500
Painters	1.500	1.250
Spray	1.750	1.500
Paperhangers	1.625	1.375
Plasterers [1]	[2] 1.850	[2] 1.667
Plumbers and gas fitters	2.000	1.750
Lead burners	2.250	2.000
Utility plumbers	2.000	1.750
Roofers:		
Composition [1]	1.430	1.313
Damp and waterproof workers	1.430	1.375
Foremen [1]	1.550	1.438
Slate and tile [1]	1.430	1.313
Sheet-metal workers	1.750	1.500
Sign painters	[3] 2.000	[3] 1.500
Advertising	[3] 2.000	[3] 1.714
Steam fitters [1]	1.875	1.750
Pipe line fitters	2.000	1.875
Sprinkler fitters	1.750	1.580
Refrigerator fitters:		
Certified journeymen	1.750	1.500
Noncertified journeymen	1.500	1.375
Welders	1.875	1.750
Stonemasons [1]	1.850	1.500
Structural-iron workers [1]	1.750	1.625
Finishers [1]	1.625	1.500
Rodmen [1]	1.625	1.500
Tile layers	1.800	1.438
Helpers and laborers		
Bricklayers' tenders	1.375	1.125
Building laborers [1]	1.000	.875
Elevator constructors' helpers	1.190	1.110
Marble setters' helpers	1.220	.900
Plasterers' laborers [1]	1.550	1.375
Steam fitters' helpers	1.350	1.150
Sprinkler fitters' helpers	1.100	.950
Terrazzo workers' helpers	1.375	1.250
Grinding- and base-machine operators	1.625	1.500
Tile layers' helpers	1.250	.900

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[1] For changes since July 1, 1946, see appendix.

[2] Hours per week, 30.

[3] Hours per week, 35.

TABLE 13.—*Union scales of wages for building trades in 75 cities, July 1, 1946, and July 1, 1945*—Continued

LOUISVILLE, KY.

Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945
Journeymen		
Asbestos workers [1]	$1.725	$1.625
Boilermakers	1.750	1.625
Bricklayers [1]	1.800	1.675
Carpenters [1]	1.600	1.500
Cement finishers	1.600	1.500
Electricians (inside wiremen)[1]	1.725	1.625
Elevator constructors	1.745	1.610
Engineers—power equipment operators:		
Air compressors:		
Under 200 cubic feet per minute capacity	1.450	1.425
200 cubic feet per minute capacity and over	1.650	1.575
Bulldozers	1.650	1.575
Cranes, derricks, and draglines	1.650	1.575
Graders:		
Road	1.450	1.425
Elevating	1.650	1.575
Hoists	1.650	1.575
LeTourneau	1.650	1.575
Mixers:		
Under 21 cubic feet	1.450	1.425
21 cubic feet and over	1.650	1.575
Pumps	1.200	1.150
Rollers:		
Bituminous	1.650	1.575
Earth	1.200	1.150
Rock	1.450	1.425
Shovels	1.650	1.575
Tractors:		
Under 50 horsepower	1.200	1.150
50 horsepower and over	1.450	1.425
Trenching machines	1.650	1.575
Journeymen—Continued		
Glaziers	$1.500	$1.250
Lathers	1.700	1.500
Machinists	1.750	1.438
Marble setters	1.625	1.500
Mosaic and terrazzo workers	1.625	1.445
Painters	1.500	1.250
Paperhangers	1.250	1.150
Plasterers [1]	1.750	1.625
Plumbers [1]	1.725	1.625
Roofers:		
Composition	1.250	1.100
Slate and tile	1.525	1.375
Sheet-metal workers	1.500	1.425
Sign painters	1.750	1.440
Steam fitters	1.725	1.625
Stonecutters	1.450	1.250
Planemen	1.250	1.000
Stone carvers	1.575	1.375
Stonemasons [1]	1.800	1.675
Structural-iron workers	1.725	1.675
Rodmen	1.550	1.500
Tile layers	1.625	1.445
Helpers and laborers		
Bricklayers' tenders	1.150	1.090
Building laborers [1]	.900	.700
Elevator constructors' helpers	1.220	1.125
Marble setters' helpers	1.000	.800
Plasterers' laborers	1.150	1.090
Plumbers' laborers	.900	.700
Terrazzo workers' helpers	1.000	.800
Base grinders	1.250	1.150
Flat grinders	1.000	.890
Tile layers' helpers	1.000	.800

MADISON, WIS.

Classifications	July 1, 1946	July 1, 1945
Journeymen		
Asbestos workers	$1.675	$1.525
Bricklayers	1.750	1.580
Carpenters	1.500	1.250
Cement finishers	1.475	1.300
Electricians (inside wiremen)[1]	1.500	1.500
Elevator constructors	1.575	1.520
Engineers—power equipment operators:		
Air compressors [1]	1.200	1.100
Sewer and tunnel	1.350	1.250
Bulldozers [1]	1.400	1.300
Cranes, derricks, and draglines	1.750	1.650
Hoists	1.450	1.350
Mixers	1.400	1.300
When paver is used	1.600	1.500
Pumps	1.150	1.050
Concrete	1.600	1.500
Sewer and tunnel	1.300	1.200
Rollers	1.600	1.500
Scrapers	1.600	1.500
Shovels	1.750	1.650
Tractors	1.400	1.300
Glaziers [1]	1.350	1.250
Lathers	1.675	1.500
Journeymen—Continued		
Marble setters	$1.750	$1.500
Painters	1.500	1.250
Spray	1.750	1.400
Paperhangers	1.500	1.250
Plasterers	1.750	1.500
Plumbers	1.750	1.500
Roofers:		
Composition	1.375	1.150
Slate and tile, transite	1.500	1.500
Sheet-metal workers [1]	1.500	1.400
Sign painters	1.500	1.250
Steam fitters	1.750	1.500
Stonemasons	1.750	1.580
Structural-iron workers	1.625	1.500
Rodmen	1.625	1.375
Helpers and laborers		
Bricklayers' tenders [1]	1.000	.850
Mortar mixers [1]	1.150	1.000
Building laborers [1]	1.000	.85
Elevator constructors' helpers	1.100	1.06
Plasterers' laborers	1.350	1.15
Plumbers' laborers	1.000	.85

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[1] For change since July 1, 1946, see appendix.

TABLE 13.—*Union scales of wages for building trades in 75 cities, July 1, 1946, and July 1, 1945*—Continued

MANCHESTER, N. H.

Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945
Journeymen		
Bricklayers [1]	$1.875	$1.750
Carpenters	1.375	1.150
Cement finishers	1.875	1.750
Electricians (inside wiremen) [1]	1.250	1.250
Engineers — power equipment operators:		
Air compressors:		
220 cubic feet and under	1.150	.875
315 cubic feet and over	1.400	1.250
Cranes, derricks, and draglines	1.900	1.650
Hoists	1.500	1.350
Mixers:		
Small	1.050	.850
Road	1.500	1.350
Pumps	1.500	1.350
Rollers:		
5 tons and under	1.150	1.000
Over 5 tons	1.400	1.125
Journeymen—Continued		
Engineers—power equipment operators—Continued		
Shovels	$1.900	$1.650
Tractors	1.500	1.350
Painters	1.150	1.000
Paperhangers	1.150	1.000
Plasterers [1]	1.875	1.750
Plumbers [1]	1.500	1.375
Steam fitters	1.500	1.375
Stonemasons	1.875	1.750
Structural-iron workers	1.800	1.650
Rodmen	1.800	1.650
Tile layers	1.875	1.750
Helpers and laborers		
Bricklayers' tenders	1.050	.900
Building laborers [1]	.900	.750
Plasterers' laborers	1.050	.900

MEMPHIS, TENN.

Journeymen		
Asbestos workers	$1.625	$1.500
Bricklayers [1]	1.938	1.725
Carpenters	1.500	1.300
Cement finishers	1.500	1.250
Machine operators	1.625	1.375
Electricians (inside wiremen) [1]	1.750	1.580
Elevator constructors	1.750	1.570
Engineers — power equipment operators:		
Air compressors:		
Portable	1.250	1.125
Stationary	1.375	1.250
Bulldozers	1.500	1.375
Cranes, derricks, and draglines	1.750	1.500
Graders	1.500	1.375
Hoists:		
1 drum	1.375	1.250
2 drums	1.625	1.500
LeTourneau	1.625	1.500
Mixers, mobile	1.375	1.250
10S or smaller	1.250	1.125
Larger than 10S	1.500	1.375
Pumps, on excavation	1.000	.850
Under 3-inch discharge	.850	.850
Rollers, top	1.500	1.375
Sheepfoot	1.500	1.375
Shovels	1.750	1.500
Tractors, 40 horsepower or less	1.250	1.125
Over 40 horsepower	1.375	1.250
Trenching machines	1.500	1.375
Journeymen—Continued		
Glaziers	$1.300	$1.125
Lathers [1]	1.563	1.563
Marble setters	1.750	1.500
Mosaic and terrazzo workers	1.750	1.500
Painters [1]	1.500	1.375
Spray	1.625	1.500
Structural steel	1.625	1.625
Paperhangers	1.500	1.375
Plasterers [1]	1.875	1.700
Plumbers [1]	1.750	1.500
Roofers:		
Composition	1.625	1.250
Slate and tile	1.625	1.250
Sheet-metal workers	1.625	1.438
Sign painters	1.625	1.500
Steam fitters	1.750	1.500
Stonemasons	1.938	1.725
Structural-iron workers [1]	1.625	1.500
Rodmen [1]	1.500	1.375
Tile layers	1.750	1.500
Helpers and laborers		
Bricklayers' tenders	1.000	.750
Building laborers	.750	.600
Elevator constructors' helpers	1.225	1.100
Plasterers' laborers	1.000	.750
Plumbers' laborers	1.125	.750

For changes since July 1, 1946, see appendix.

Table 13.—*Union scales of wages for building trades in 75 cities, July 1, 1946, and July 1, 1945*—Continued

MILWAUKEE, WIS.

Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945
Journeymen		
Asbestos workers	$1.675	$1.525
Boilermakers	1.750	1.700
Bricklayers	1.825	1.668
Sewer, tunnel and caisson	1.900	1.750
Carpenters	1.600	1.425
Millwrights	1.575	1.500
Wharf and bridge	1.625	1.425
Cement finishers	1.600	1.400
Finishing machines	1.600	1.500
Electricians (inside wiremen)[1]	1.650	1.500
Residential [1]	1.350	1.250
Elevator constructors	1.690	1.520
Engineers—power equipment operators:		
Air compressors [1]	1.300	1.200
Bulldozers [1]	1.500	1.400
Cranes, derricks, and draglines [1]	1.850	1.750
Hoists [1]	1.550	1.450
Mixers, on building [1]	1.500	1.400
When power is used [1]	1.700	1.600
Pumps [1]	1.250	1.150
Concrete [1]	1.700	1.600
Scrapers [1]	1.700	1.600
Shovels [1]	1.850	1.750
Tractors [1]	1.500	1.400
Glaziers	1.550	1.400
Lathers	1.750	1.580
Machinists	1.500	1.500
Marble setters	1.725	1.500
Mosaic and terrazzo workers	1.675	1.500
Journeymen—Continued		
Painters	$1.500	$1.300
Swing and stage	1.850	1.400
Spray	1.725	1.425
Structural iron	1.850	1.550
Plasterers	1.750	1.580
Plumbers [1]	1.700	1.550
Roofers:		
Composition [1]	1.350	1.250
Built-up roofers [1]	1.450	1.350
Slate and tile	1.700	1.500
Sheet-metal workers	1.650	1.400
Sign painters	1.750	1.580
Steam fitters	1.700	1.550
Sprinkler fitters	1.580	1.580
Stone cutters	1.450	1.250
Stonemasons	1.825	1.668
Structural-iron workers	1.700	1.575
Rodmen	1.565	1.438
Tile layers	1.750	1.580
Helpers and laborers		
Bricklayers' tenders	1.300	1.100
Building laborers	1.200	1.000
Elevator constructors' helpers	1.180	1.060
Marble setters' helpers	1.275	1.050
Plasterers' laborers [1]	1.300	1.150
Plumbers' laborers [1]	1.250	1.150
Secondmen	1.150	1.050
Sprinkler fitters' helpers [1]	.950	.950
Terrazzo workers' helpers	1.300	1.100
Base-machine operators	1.450	1.200
Tile layers' helpers	1.300	1.100

MINNEAPOLIS, MINN.

Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945
Journeymen		
Asbestos workers	$1.650	$1.580
Boilermakers	1.750	1.700
Bricklayers	1.825	1.625
Carpenters	1.650	1.440
Cement finishers	1.825	1.440
Composition floor	2.075	1.690
Electricians (inside wiremen)	1.850	1.650
Elevator constructors [1]	1.660	1.600
Engineers—power equipment operators:		
Air compressors	1.400	1.200
Bulldozers	1.700	1.500
Cranes, derricks, and draglines	1.850	1.625
Graders	1.550	1.250
Blade	1.500	1.250
Elevating	1.550	1.300
Hoists, 1 drum	1.700	1.500
LeTourneau	1.700	1.500
Mixers, concrete	1.750	1.500
14S and under	1.500	1.200
Over 14S	1.700	1.400
Pumps	1.400	1.200
Rollers:		
Under 8 tons	1.500	1.250
8 tons or over	1.700	1.500
Shovels	1.850	1.625
Tractors:		
50 horsepower or less, without power take-off	1.200	1.000
50 horse power or less with power take-off or over 50 horsepower without	1.500	1.200
Trenching machines	1.700	1.500
Journeymen—Continued		
Glaziers [1]	$1.400	$1.250
Lathers	1.850	1.625
Marble setters	1.700	1.525
Mosaic and terrazzo workers	1.700	1.440
Painters [1]	1.625	1.440
Swing	1.705	1.580
Paperhangers [1]	1.625	1.440
Plasterers [1]	1.850	1.625
Plumbers	1.750	1.550
Roofers:		
Composition	1.580	1.380
Foremen	1.680	1.480
Slate and tile	1.580	1.380
Sheet-metal workers	1.600	1.500
Steam fitters	1.750	1.550
Sprinkler fitters [1]	1.580	1.580
Structural-iron workers	1.750	1.625
Rodmen	1.625	1.500
Tile layers	1.700	1.550
Helpers and laborers		
Bricklayers' tenders	1.150	.950
Building laborers	1.150	.950
Composition roofers' helpers	1.150	.950
Elevator constructors' helpers [1]	1.165	1.12
Marble setters' helpers	1.150	.95
Plasterers' laborers	1.450	1.20
Plumbers' laborers	1.250	1.05
After 3 years	1.350	1.15
Sprinkler fitters' helpers [1]	.950	.95
Terrazzo workers' helpers	1.200	.97
Base-machine helpers	1.350	1.10
Tile layers' helpers	1.150	.95

[1] For changes since July 1, 1946, see appendix.

TABLE 13.—*Union scales of wages for building trades in 75 cities, July 1, 1946, and July 1, 1945*—Continued

MOBILE, ALA.

Classifications	Rate per hour—	
	July 1, 1946	July 1, 1945
Journeymen		
Asbestos workers	$1.625	$1.500
Boilermakers	1.625	1.500
Bricklayers [1]	1.875	1.625
Carpenters [1]	1.500	1.375
Pile drivers and dock builders [1]	1.500	1.500
Cement finishers	1.625	1.375
Electricians (inside wiremen)	1.625	1.500
Engineers—power equipment operators:		
Air compressors [1]	1.250	1.250
Bulldozers [1]	1.500	1.500
Cranes, derricks, and draglines [1]	1.500	1.500
Graders [1]	1.250	1.250
Elevating [1]	1.500	1.500
Hoists [1]	1.500	1.500
LeTourneau [1]	1.500	1.500
Mixers:		
Central [1]	1.500	1.500
Others [1]	1.250	1.250
Pumps [1]	1.250	1.250
Rollers:		
Street and road [1]	1.250	1.250
Road [1]	1.500	1.500
Scrapers [1]	1.500	1.500
Shovels [1]	1.500	1.500
Tractors [1]	1.250	1.250
Trenching machines [1]	1.500	1.500
laziers [1]	1.250	1.250
Journeymen—Continued		
Lathers (metal)	$1.500	$1.500
Marble setters	1.875	1.625
Mosaic and terrazzo workers	1.875	1.625
Painters [1]	1.375	1.250
Swing, stage and structural	1.625	1.500
Spray	2.000	2.000
Paperhangers	1.375	1.350
Plasterers	1.625	1.375
Plumbers	1.750	1.750
Roofers:		
Composition [1]	1.375	1.375
Foremen [1]	1.500	1.500
Slate and tile [1]	1.375	1.375
Sheet-metal workers	1.375	1.375
Sign painters	1.625	1.625
Steam fitters	1.750	1.750
Stonemasons	1.875	1.625
Structural-iron workers	1.750	1.500
Rodmen	1.500	1.250
Tile layers	1.875	1.625
Helpers and laborers		
Bricklayers' tenders [1]	.750	.750
Mortar mixers [1]	.850	.850
Building laborers [1]	.650	.650
Composition roofers' helpers	.750	.750
Marble setters' helpers	.750	.750
Plasterers' laborers [1]	.750	.750
Tile layers' helpers	.750	.750

NASHVILLE, TENN.

Journeymen		
bestos workers	$1.625	$1.500
icklayers [1]	1.875	1.725
rpenters [1]	1.400	1.320
ment finishers	1.250	1.250
ectricians (inside wiremen) [1]	1.750	1.500
vator constructors	1.640	1.525
gineers—power equipment perators:		
Air compressors:		
One portable	1.250	1.125
Two in tandem stationary	1.375	1.250
Bulldozers	1.500	1.375
Cranes, derricks, and draglines	1.750	1.500
Graders, road	1.375	1.250
Hoists:		
1 drum	1.375	1.250
2 drums	1.625	1.500
LeTourneau	1.625	1.500
Mixers:		
Without side loader 10S or smaller	1.250	1.125
With side loader 14S and larger	1.500	1.375
Pumps	1.000	1.000
Rollers:		
Top rollers	1.375	1.250
Subgrade	1.500	1.375
Scrapers	1.375	1.250
Shovels	1.750	1.500
Journeymen—Continued		
Engineers—power equipment operators—Continued		
Tractors 40 horsepower or less	$1.250	$1.125
Caterpillar, etc	1.375	1.250
With power take-off	1.500	1.375
Trenching machines	1.500	1.375
Glaziers	1.250	1.125
Lathers	1.725	1.500
Marble setters [1]	1.625	1.625
Mosaic and terrazzo workers [1]	1.500	1.500
Painters	1.450	1.250
Spray	1.700	1.500
Paperhangers	1.450	1.250
Plasterers [1]	1.750	1.500
Plumbers	1.750	1.580
Roofers:		
Composition	1.250	1.000
Slate and tile	1.250	1.125
Sheet-metal workers	1.375	1.250
Sign painters	1.500	1.250
Steam fitters	1.750	1.580
Stonemasons	1.875	1.725
Structural-iron workers	1.625	1.625
Rodmen	1.500	1.500
Tile layers [1]	1.500	1.500
Helpers and laborers		
Bricklayers' tenders	.875	.700
Mortar mixers	.875	.775
Building laborers	.750	.600
Elevator constructors' helpers	1.150	1.068
Plasterers' laborers	.875	.700
Plumbers' laborers	.750	.600

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or changes since July 1, 1946, see appendix.

Table 13.—*Union scales of wages for building trades in 75 cities, July 1, 1946, and July 1, 1945*—Continued

NEWARK, N. J.

Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945
Journeymen		
Asbestos workers	$2.000	$1.875
Home insulators	1.250	1.000
Boilermakers	2.250	2.000
Bricklayers [1]	2.250	2.000
Carpenters	2.300	2.000
Wharf and bridge	2.100	1.850
Cement finishers	2.250	2.000
Electricians (inside wiremen)	2.250	2.000
Elevator constructors	2.250	2.000
Engineers—power equipment operators:		
Air compressors	2.375	2.150
Bulldozers	1.750	1.525
Cranes, derricks, and draglines	2.375	2.150
Steel erection	2.500	2.400
Graders	2.150	2.150
Hoists	2.150	2.150
Steel erection	2.500	2.400
Mixers	2.150	--------
LeTourneau	2.150	--------
Pumps	2.150	2.150
Rollers	2.150	2.150
Scrapers	2.150	2.150
Shovels	2.375	2.150
Tractors	2.150	2.150
Trenching machines	2.375	2.150
Glaziers	1.875	1.625
Lathers	2.100	1.900
Machinists	2.000	1.650
Mosaic and terrazzo workers	[2] 2.000	[2] 1.750
Journeymen—Continued		
Painters [1]	[2] $1.825	$1.714
Structural steel	[2] 2.000	2.000
Paperhangers	[2] 1.714	1.714
Plasterers [1]	2.250	2.000
Plumbers	2.000	1.750
Roofers:		
Composition	[2] 1.976	1.850
Foremen	[2] 2.127	2.000
Slate and tile	2.100	1.850
Sheet-metal workers	2.250	1.900
Sign painters	[2] 2.000	1.710
Inside	[2] 1.714	1.500
Steam fitters	2.000	1.875
Sprinkler fitters	1.750	1.580
Stonemasons	2.250	2.000
Structural-iron workers	2.250	2.000
Rodmen	2.250	2.000
Tile layers	1.938	1.750
Helpers and laborers		
Bricklayers' tenders [1]	[2] 1.400	1.250
Building laborers [1]	[2] 1.400	1.250
Composition roofers' helpers	[2] 1.142	------
Elevator constructors' helpers	1.670	1.450
Plasterers' laborers [1]	[2] 1.400	1.250
Steam fitters' helpers	1.375	1.250
Sprinkler fitters' helpers	1.100	.950
Terrazzo workers' helpers	[2] 1.495	[2] 1.300
Tile layers' helpers	1.438	1.313

NEW HAVEN, CONN.

Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945
Journeymen		
Asbestos workers	$1.750	$1.563
Bricklayers [1]	1.900	1.650
Carpenters [1]	1.500	1.375
Cement finishers	1.900	1.650
Electricians (inside wiremen)	1.625	1.500
Elevator constructors	1.755	1.650
Engineers—power equipment operators:		
Air compressors	1.825	1.500
Bulldozers	1.500	1.375
Cranes, derricks, and draglines	1.825	1.700
Graders	1.825	1.500
Hoists:		
1 drum	1.825	1.500
2 drums or steel erection	1.825	1.700
LeTourneau	1.500	1.375
Mixers	1.825	1.500
Pumps	1.825	1.500
Rollers	1.825	1.500
Scrapers	1.500	1.375
Shovels	1.825	1.700
Tractors	1.500	1.375
Marble setters	1.900	1.650
Mosaic and terrazzo workers	1.900	1.650
Journeymen—Continued		
Painters [1]	$1.650	$1.375
Paperhangers	1.650	1.375
Plasterers [1]	1.900	1.650
Plumbers [1]	1.625	1.500
Roofers:		
Composition	1.625	1.500
Foremen	1.875	1.750
Slate and tile	1.950	1.875
Sheet-metal workers	1.750	1.500
Sign painters	1.650	1.375
Steam fitters [1]	1.625	1.500
Stonemasons	1.900	1.650
Structural-iron workers	2.000	1.800
Rodmen	2.000	1.800
Tile layers	1.900	1.650
Helpers and laborers		
Bricklayers' tenders [1]	1.125	.950
Building laborers [1]	1.125	.950
Elevator constructors' helpers	1.220	1.150
Marble setters' helpers [1]	1.125	1.063
Plasterers' laborers [1]	1.125	.950
Terrazzo workers' helpers [1]	1.125	1.063
Tile layers' helpers [1]	1.125	1.063

[1] For changes since July 1, 1946, see appendix.

[2] Hours per week, 35.

TABLE 13.—*Union scales of wages for building trades in 75 cities, July 1, 1946, and July 1, 1945*—Continued

NEW ORLEANS, LA.

Classifications	Rate per hour—	
	July 1, 1946	July 1, 1945
Journeymen		
Ashestos workers	$1.750	$1.625
Home insulators	1.300	1.150
Boilermakers	1.750	1.500
Bricklayers [1]	1.750	1.625
Carpenters	1.500	1.375
Cement finishers	1.500	1.375
Electricians (inside wiremen)	1.750	1.625
Elevator constructors	1.590	1.520
Engineers—power equipment operators:		
Air compressors	1.425	1.300
Cranes, derricks, and draglines	1.675	1.550
Graders, blade	1.425	1.300
Hoists:		
1 drum	1.425	1.300
2 drums	1.675	1.550
Mixers:		
Paving	1.675	1.550
Small	1.425	1.300
Pumps (3-inch suction or more)	1.425	1.300
Rollers:		
Brick, asphalt or subgrade	1.675	1.555
Except on hrick, asphalt or suhgrade	1.425	1.300
Shovels	1.675	1.550
Tractors, snatch cats	1.425	1.300
Trenching machines	1.675	1.550
Journeymen—Continued		
Glaziers [1]	$1.313	$1.313
Lathers	1.775	1.625
Machinists	1.750	1.500
Marhle setters [1]	1.750	1.625
Mosaic and terrazzo workers	1.625	1.500
Painters	1.250	1.150
Structural steel and spray	1.500	1.400
Paperhangers	1.250	1.150
Plasterers	1.625	1.500
Plumbers [1]	1.750	1.580
Roofers:		
Composition	1.300	1.150
Foremen	1.450	1.300
Slate and tile	1.300	1.150
Sheet-metal workers [1]	1.450	1.300
Sign painters	1.750	1.500
Steam and sprinkler fitters	1.750	1.580
Stonemasons [1]	1.750	1.625
Structural-iron workers	1.750	1.625
Rodmen	1.500	1.375
Tile layers	1.625	1.500
Helpers and laborers		
Bricklayers' tenders	.950	.850
Mortar mixers	1.050	.950
Building lahorers	.800	.700
Composition roofers' helpers	.800	.750
Elevator constructors' helpers	1.110	1.060
Plasterers' laborers	.950	.850
Plumhers' lahorers	.800	.800

NEW YORK, N. Y.

Journeymen		
bestos workers	[2] $2.250	[3] $2.000
ilermakers	[2] 2.250	2.000
icklayers [1]	[2] 2.250	[2] 2.000
rpenters [1]	[2] 2.100	[2] 1.850
Wharf and hridge	2.100	1.850
ment finishers	[2] 2.100	[2] 1.850
ectricians (inside wiremen) [1]	[3] 2.000	2.000
Alterations and repairs	[2] 1.350	1.350
evator constructors	2.250	2.000
gincers—power equipment operators:		
Air compressors	2.250	1.925
Portahle	1.875	1.750
Cranes and derricks	2.250	2.000
Draglines, steel derricks, and cranes	2.500	2.250
Graders	2.500	2.250
Hod	2.250	2.000
Hoists:		
1 drum	2.250	1.925
2 drums	2.250	1.925
Mixers	2.250	1.925
Small with loader attachments	1.875	1.750
Pumps	1.875	1.750
Concrete	2.250	1.925
Rollers	2.075	1.813
Scrapers	2.250	1.925
Shovels	2.500	2.250
Trenching machines	2.500	2.250
Journeymen—Continued		
Glaziers	[2] $2.136	[2] $1.886
Granite cutters (outside)	[2] 2.286	[2] 2.000
Inside	[2] 2.000	[2] 1.643
Surface machine and sand blasters	[2] 2.071	[2] 1.714
Lathers:		
Brooklyn [1]	[2] 2.167	2.167
Bronx, Manhattan, and Richmond [1]	[3] 2.167	[3] 2.167
Queens, Nassau, and Suffolk	[2] 2.570	[3] 2.167
Metal and wire	[2] 2.100	1.850
Machinists	[2] 2.000	[2] 1.750
Marble setters	2.100	1.888
Mosaic and terrazzo workers	[2] 2.000	[2] 1.750
Painters:		
Agreement A [1]	[2] 1.840	[2] 1.800
Decorators and grainers	[2] 1.886	[2] 1.886
Agreement B [1]	[2] 1.840	[2] 1.714
Swing and stage	[2] 2.100	[2] 1.959
Steel	[2] 2.050	[2] 1.900
Plasterers [1]	[3] 2.250	[2] 2.000
Plumbers	[3] 2.000	2.000
Brooklyn and Queens	[2] 2.250	[2] 2.000
Staten Island	[2] 2.285	2.000
Residential and alteration	[2] 2.000	1.750
Roofers:		
Composition	[2] 1.850	[2] 1.700
Foremen	[2] 1.990	[2] 1.840

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or changes since July 1, 1946, see appendix.

ours per week, 35.

ours per week, 30.

TABLE 13.—*Union scales of wages for building trades in 75 cities, July 1, 1946, and July 1, 1945*—Continued

NEW YORK, N. Y.—Continued

Classifications	Rate per hour—	
	July 1, 1946	July 1, 1945
Journeymen—Continued		
Roofers—Continued		
Slate and tile	$2.250	$2.000
Brooklyn	2.400	2.250
Sheet-metal workers	[2] 2.250	[2] 2.000
Sign painters	[2] 2.089	[2] 1.990
Outdoor advertising	[2] 2.790	[2] 2.657
Steam and sprinkler fitters	[2] 2.250	2.000
Stonecutters	[2] 2.179	[2] 1.929
Bluestone	[2] 2.143	[2] 1.904
Stonemasons	[2] 2.250	[2] 2.000
Structural-iron workers	2.250	2.000
Finishers (ornamental)	[2] 2.100	[2] 1.900
Rodmen	2.100	1.850
Tile layers	1.938	1.750
Helpers and laborers		
Bricklayers' tenders	[2] $1.500	[2] $1.214
Building laborers	1.250	1.100
Concrete workers	[2] 1.400	[2] 1.214
Elevator constructors' helpers	1.670	1.450
Marble setters' helpers	1.700	1.468
Mosaic and terrazzo helpers	[2] 1.495	[2] 1.300
Plasterers' laborers [1]	[3] 1.630	[3] 1.420
Brooklyn	[3] 1.675	[3] 1 517
Plumbers' laborers	[3] 1.167	[3] 1.167
Residential	[3] 1.167	1.000
Long Island	1.500	1.179
Steam and sprinkler fitters' helpers	[2] 1.725	1.500
Temporary heat	1.222	1.063
Tile layers helpers	1.438	1.313

NORFOLK, VA.

Classifications	July 1, 1946	July 1, 1945
Journeymen		
Asbestos workers	$1.625	$1.438
Bricklayers [1]	1.750	1.675
Carpenters [1]	1.300	1.150
Millwrights	1.500	1.500
Pile drivers and dock builders	1.150	1.150
Cement finishers	1.250	1.250
Electricians (inside wiremen)[1]	1.625	1.500
Elevator constructors	1.625	1.480
Engineers—power equipment operators:		
Air compressors	1.375	1.375
Bulldozers	1.500	1.375
Cranes, derricks, and draglines	1.625	1.625
Graders	1.375	1.375
Hoists:		
1 drum	1.375	1.375
2 drums	1.625	1.625
LeTourneau	1.625	1.375
Mixers	1.375	1.375
Pumps	1.375	1.375
Rollers	1.375	1.375
Shovels	1.625	1.625
Tractors	1.375	1.375
Trenching machines	1.625	1.625
Journeymen—Continued		
Glaziers	$1.375	$1.000
Lathers [1]	1.625	1.500
Marble setters	1.625	1.500
Mosaic and terrazzo workers	1.625	1.500
Painters	1.375	1.250
Spray	1.500	1.500
Scaffold, and structural steel	1.625	1.500
Paperhangers	1.375	1.250
Plasterers [1]	1.625	1.500
Plumbers [1]	1.625	1.500
Roofers:		
Composition	1.000	1.000
Slate and tile	1.000	1.000
Sheet-metal workers	1.400	1.250
Sign painters	1.375	1.250
Steam fitters [1]	1.625	1.500
Stonemasons [1]	1.750	1.675
Structural-iron workers [1]	1.750	1.500
Rodmen	1.500	1.250
Tile layers	1.625	1.500
Helpers and laborers		
Composition roofers' helpers	.700	.700
Elevator constructors' helpers	1.140	1.040

OKLAHOMA CITY, OKLA.

Classifications	July 1, 1946	July 1, 1945
Journeymen		
Asbestos workers	$1.750	$1.625
Bricklayers	1.938	1.675
Carpenters [1]	1.528	1.438
Millwrights	1.665	1.580
Parquetry floor layers	1.525	1.438
Pile drivers	1.665	1.580
Cement finishers	1.725	1.500
Electricians (inside wiremen)[1]	1.750	1.500
Elevator constructors	1.640	1.450
Glaziers	1.250	1.125
Lathers	1.725	1.500
Painters	1.500	1.300
Structural steel	1.700	1.550
Spray	1.875	1.550
Swing stage	1.750	1.300
Paperhangers	1.500	1.300
Plasterers [1]	1.875	1.725
Journeymen—Continued		
Plumbers [1]	$1.750	$1.500
Roofers:		
Composition	1.250	1.125
Slate and tile	1.250	1.125
Sheet-metal workers	1.500	1.375
Sign painters	1.500	1.250
Steam fitters	1.750	1.500
Stonemasons	1.938	1.675
Structural-iron workers	1.500	1.438
Rodmen	1.500	1.438
Helpers and laborers		
Bricklayers' tenders	1.000	[4] .850
Building laborers [1]	.850	.650
Elevator constructors' helpers	1.150	1.015
Plasterers' laborers	1.000	[4] .850
Plumbers' laborers	1.000	.850

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[1] For changes since July 1, 1946, see appendix.

[2] Hours per week, 35.

[3] Hours per week, 30.

[4] Hours per week, 45.

TABLE 13.—*Union scales of wages for building trades in 75 cities, July 1, 1946, and July 1, 1945*—Continued

OMAHA, NEBR.

Classifications	Rate per hour—	
	July 1, 1946	July 1, 1945
Journeymen		
Asbestos workers	$1.650	$1.553
Bricklayers	1.825	1.575
Carpenters	1.625	1.375
Cement finishers	1.625	1.450
Electricians (inside wiremen)[1]	1.750	1.500
Elevator constructors	1.590	1.515
Engineers—power equipment operators:		
Air compressors	1.375	1.250
Bulldozers	1.375	1.250
Cranes, derricks, and draglines	1.750	1.500
Hoists:		
1 drum	1.375	1.250
2 drums	1.750	1.500
Mixers	1.375	1.250
Pumps	1.375	1.250
Rollers	1.375	1.250
Shovels	1.750	1.500
Tractors	1.375	1.250
Trenching machines	1.500	1.375
laziers	1.400	1.260
athers	1.700	1.500
achinists	1.625	1.350
arble setters	1.600	1.375
osaic and terrazzo workers	1.600	1.375
ainters	1.375	1.250
Swing stage	1.500	1.375
Spray or structural steel	1.625	1.500
Journeymen—Continued		
Paperhangers	$1.375	$1.250
Plasterers	1.750	1.575
Plumbers	1.750	1.580
Roofers:		
Composition	1.375	1.100
Foremen	1.475	1.250
Slate and tile	1.475	1.250
Sheet-metal workers	1.500	1.300
Sign painters	1.375	1.300
Steam fitters	1.750	1.580
Stonemasons	1.825	1.575
Structural-iron workers	1.750	1.500
Rodmen	1.750	1.500
Tile layers	1.600	1.375
Helpers and laborers		
Bricklayers' tenders [1]	.850	.850
Hod carriers [1]	.900	.900
Building laborers [1]	.700	.700
Elevator constructors' helpers	1.110	1.060
Marble setters' helpers	1.000	.850
Plasterers' laborers [1]	.850	.850
Terrazzo workers' helpers	1.000	.850
Base-machine operators	1.100	.950
Tile layers' helpers	1.000	.850
Sewer	.900	.900

PEORIA, ILL.

Journeymen		
sbestos workers	$1.950	$1.850
oilermakers	1.850	1.700
Repair work	1.650	1.500
ricklayers	1.925	1.750
Sewer	2.175	2.000
arpenters	1.750	1.500
ement finishers	1.750	1.500
lectricians (inside wiremen)[1]	1.750	1.625
levator constructors	1.700	1.700
ngineers—power equipment operators:		
Air compressors [1]	1.375	1.250
Riveting steel tunnel and caisson [1]	1.581	1.375
Bulldozers [1]	1.725	1.650
Cranes, derricks, and draglines [1]	1.725	1.650
On steel [1]	1.825	1.750
Graders:		
Form [1]	1.438	1.250
Elevating [1]	1.725	1.650
Hoists, 2 or more drums [1]	1.725	1.650
LeTourneau [1]	1.825	1.750
Mixers:		
Under 3 bags [1]	1.250	1.250
3-bag to 21E capacity [1]	1.581	1.375
Paving, 21E and larger [1]	1.725	1.650
Pumps:		
Water [1]	1.375	1.375
Concrete [1]	1.725	1.650
Rollers:		
On asphalt or brick [1]	1.725	1.650
On earth, 5 tons or less [1]	1.250	1.250
Scrapers [1]	1.725	1.650
Shovels [1]	1.725	1.650
Journeymen—Continued		
Engineers—power equipment operators—Continued		
Tractors, straight cats [1]	$1.438	$1.250
Trenching machines [1]	1.725	1.650
Glaziers	1.625	1.450
Lathers	1.750	1.500
Machinists	1.750	1.750
Marble setters	1.825	1.625
Painters	1.575	1.450
Swing stage	1.815	1.815
Spray	1.815	1.750
Paperhangers	1.575	1.450
Plasterers	2.000	1.750
Plumbers	1.875	1.625
Roofers:		
Composition	1.625	1.425
Foremen	1.750	1.550
Slate and tile	1.625	1.425
Sheet-metal workers	1.750	1.500
Sign painters	1.750	1.485
Steam fitters	1.875	1.625
Stonemasons	1.925	1.750
Structural-iron workers	1.875	1.750
Rodmen	1.875	1.750
Tile layers	1.825	1.625
Helpers and laborers		
Bricklayers' tenders	1.125	1.000
Building laborers	1.125	1.000
Composition roofers' helpers	1.250	--------
Elevator constructors' helpers	1.190	1.190
Marble setters' helpers	1.125	1.000
Plasterers' laborers	1.250	1.125
Terrazzo workers' helpers	1.125	1.000
Tile layers' helpers	1.125	1.000

For changes since July 1, 1946, see appendix.

Table 13.—*Union scales of wages for building trades in 75 cities, July 1, 1946, and July 1, 1945*—Continued

PHILADELPHIA, PA.

Classifications	Rate per hour—	
	July 1, 1946	July 1, 1945
Journeymen		
Asbestos workers	$1.875	$1.725
Home insulators	1.000	1.000
Boilermakers	1.750	1.750
Bricklayers	2.250	2.000
Residential	2.000	1.620
Carpenters	1.775	1.580
Cement finishers	1.750	1.580
Electricians (inside wiremen) [1]	2.000	1.875
Residential	2.000	1.500
Elevator constructors	1.910	1.910
Engineers—power equipment operators:		
Air compressors:		
Daily unit	2.250	1.950
Weekly unit	2.000	1.700
Bulldozers:		
Daily unit	2.000	1.550
Weekly unit	1.750	1.450
Cranes, derricks, and draglines:		
Daily unit	2.375	1.950
Weekly unit	2.250	1.850
Graders, elevating:		
Daily unit	2.250	1.850
Weekly unit	2.000	1.750
Hoists:		
Daily unit	2.375	1.950
Weekly unit	2.125	1.750
Pumps:		
Daily unit	2.250	1.850
Weekly unit	2.000	1.750
Rollers:		
Daily unit	2.250	1.625
Weekly unit	2.000	1.500
Shovels:		
Daily unit	2.500	2.125
Weekly unit	2.250	2.000
Tractors with scrapers or carry-alls:		
Daily unit	2.250	1.850
Weekly unit	2.000	1.750
All other equipment on building and construction work not mentioned:		
Daily unit	2.250	--------
Weekly unit	2.000	--------
Glaziers	1.750	1.550
30 feet or over above the ground	1.900	1.700
Journeymen—Continued		
Granite cutters, inside	$1.625	$1.250
Outside	1.875	1.500
Lathers	2.000	1.875
Residential	1.875	1.560
Machinists [1]	1.650	1.650
Marble setters [1]	1.750	1.750
Mosaic and terrazzo workers	1.875	1.650
Painters	1.750	1.500
Steel	1.875	1.625
Swing stage or spray	1.875	1.625
Paperhangers	1.625	1.375
Plasterers [1]	2.000	2.000
Residential	2.000	1.840
Plumbers	2.000	1.750
Residential	2.000	1.670
Roofers:		
Composition	1.575	1.500
Foremen	1.725	1.650
Slate and tile	1.875	1.700
Sheet-metal workers	2.000	1.725
Sign painters	1.780	1.513
Outside advertising	1.900	1.650
Steam fitters	2.000	1.750
Residential	1.875	1.550
Stonemasons	1.875	1.500
Residential	1.875	--------
Structural-iron workers	2.150	1.900
Rodmen [1]	1.775	1.610
Tile layers	1.875	1.625
Residential	1.875	1.500
Helpers and laborers		
Bricklayers' tenders	1.025	.900
Residential	1.125	.925
Building laborers	1.025	.900
Residential	1.000	.780
Elevator constructors' helpers	1.340	1.340
Marble setters' helpers [1]	1.275	1.150
Plasterers' laborers [1]	1.375	1.325
Residential	1.500	1.250
Terrazzo workers' helpers	1.400	1.250
Tile layers' helpers	1.275	1.035
Residential	1.275	1.035

[1] For changes since July 1, 1946, see appendix

Table 13.—*Union scales of wages for building trades in 75 cities, July 1, 1946, and July 1, 1945*—Continued

PHOENIX, ARIZ.

Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945
Journeymen		
Asbestos workers	$1.750	$1.500
Boilermakers [1]	1.750	1.500
Bricklayers	2.000	1.650
Carpenters [1]	1.625	1.350
Parquetry floor layers	1.875	1.600
Millwrights	1.750	1.475
Cement finishers	1.625	1.440
Electricians (inside wiremen) [1]	1.625	1.500
Elevator constructors	1.875	1.590
Engineers—power equipment operators:		
Air compressors	1.300	--------
Bulldozers	1.550	1.500
Graders, elevating	1.675	--------
Tow blade	1.425	--------
Hoists, elevating	1.500	--------
LeTourneau	1.675	1.625
Mixers	1.650	--------
Pumps	1.300	--------
Concrete	1.425	--------
Rollers	1.500	1.375
Trenching machines	1.625	--------
Universal equipment operators	1.750	--------
Glaziers	1.375	1.250
Lathers	1.750	1.500
Machinists	1.500	1.375
Marble setters	2.000	1.650
Journeymen—Continued		
Mosaic and terrazzo workers	$2.000	$1.650
Painters	1.500	1.300
Spray	1.675	1.675
Structural steel	1.750	1.550
Swing stage	1.625	1.425
Paperhangers	1.625	1.425
Plasterers	2.000	1.725
Plumbers [1]	1.750	1.500
Roofers:		
Composition	1.430	1.250
Foremen	1.680	1.500
Slate and tile	1.430	1.250
Sheet-metal workers	1.500	1.440
Sign painters	[2] 2.000	[3] 1.500
Steam fitters	1.750	1.500
Stonemasons	2.000	1.650
Structural-iron workers	1.750	1.500
Rodmen	1.625	1.375
Tile layers	2.000	1.650
Helpers and laborers		
Bricklayers' tenders	1.375	1.000
Building laborers [1]	1.000	.825
Concrete workers	1.000	.950
Elevator constructors' helpers	1.375	1.110
Plasterers' laborers	1.575	1.250

PITTSBURGH, PA.

Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945
Journeymen		
Asbestos workers	$1.875	$1.750
Boilermakers	1.750	1.750
Bricklayers	2.150	2.000
Carpenters	2.000	1.750
Cement finishers [1]	1.875	1.750
Electricians (inside wiremen)	2.000	1.875
Elevator constructors	1.850	1.850
Engineers—power equipment operators:		
Air compressors [1]	1.750	1.750
Bulldozers [1]	1.500	1.500
Cranes, derricks, and draglines [1]	1.813	1.813
Graders:		
Road [1]	1.500	1.500
Elevating [1]	1.813	1.813
Hoists:		
1 drum [1]	1.750	1.750
2 drums [1]	1.813	1.813
LeTourneau [1]	1.813	1.813
Mixers [1]	1.750	1.750
Pumps [1]	1.750	1.750
Rollers [1]	1.750	1.750
Shovels [1]	1.813	1.813
Tractors [1]	1.500	1.500
Trenching machines [1]	1.813	1.813
laziers	1.685	1.610
athers	2.000	1.875
Residential	1.688	1.688
achinists	1.750	1.500
arble setters	1.750	1.750
osaic and terrazzo workers	1.875	1.625
ainters	1.850	1.625
Grainers	2.160	1.875
Journeymen—Continued		
Paperhangers	$1.850	$1.625
Plasterers	2.000	1.875
Plumbers and gas fitters [1]	1.875	1.750
Roofers:		
Composition	1.800	1.625
Foremen	1.925	1.750
Slate and tile	1.835	1.650
Slab work	1.875	1.750
Sheet-metal workers	1.875	1.700
Kitchen equipment	1.875	1.550
Sign painters:		
Under 80 feet	1.875	1.750
Over 80 feet	2.125	2.000
Steam fitters [1]	1.875	1.750
Sprinkler fitters	1.750	1.580
Stonecutters	1.625	1.625
Carvers	2.000	2.000
Stonemasons [1]	1.750	1.750
Structural-iron workers [1]	1.750	1.750
Rodmen [1]	1.750	1.750
Tile layers [1]	1.725	1.565
Helpers and laborers		
Bricklayers' tenders	1.400	1.250
Building laborers	1.150	1.000
Elevator constructors' helpers	1.295	1.295
Marble setters' helpers	1.000	1.000
Polishers	1.100	1.100
Plasterers' laborers	1.400	1.250
Plumbers' laborers	1.250	1.125
Terrazzo workers' helpers	1.375	1.125
Tile layers' helpers [1]	1.125	1.035

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[1] For changes since July 1, 1946, see appendix.

[2] Hours per week, 35.

[3] Hours per week, 44.

Table 13.—*Union scales of wages for building trades in 75 cities, July 1, 1946, and July 1, 1945*—Continued

PORTLAND, MAINE

Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945	Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945
Journeymen			*Journeymen*—Continued		
Asbestos workers	$1.725	$1.650	Stonemasons [1]	$1.850	$1.600
Bricklayers [1]	1.850	1.600	Structural-iron workers	1.650	1.438
Carpenters	1.375	1.160	Rodmen	1.650	1.375
Cement finishers [1]	1.850	1.600	Tile layers [1]	1.850	1.600
Electricians (inside wiremen)	1.450	1.350			
Elevator constructors	1.450	1.450	*Helpers and laborers*		
Marble setters	1.850	1.600			
Mosaic and terrazzo workers	1.850	1.600	Bricklayers' tenders	1.100	.970
Painters	1.250	1.100	Building laborers	1.000	.880
Paperhangers	1.250	1.100	Elevator constructors' helpers	1.020	1.020
Plasterers [1]	1.600	1.600	Plasterers' laborers	1.200	1.100
Plumbers	1.650	1.500	Steam fitters' helpers	1.050	1.000
Steam fitters	1.650	1.500	Terrazzo workers' helpers	1.100	.970

PORTLAND, OREG.

Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945	Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945
Journeymen			*Journeymen*—Continued		
Asbestos workers [1]	$1.750	$1.515	Glaziers	$1.575	$1.438
Boilermakers [1]	1.750	1.650	Lathers	1.800	1.625
Bricklayers	1.875	1.725	Marble setters [1]	1.750	1.580
Carpenters	1.550	1.375	Mosaic and terrazzo workers	1.450	1.350
Floor layers	1.675	1.500	Painters	1.550	1.375
Wharf and dock	1.650	1.500	Spray	1.700	1.550
Shinglers	1.750	1.500	Structural steel and swing stage	1.700	1.500
Millwrights	1.750	1.375	Paperhangers	1.500	1.375
Cement finishers	1.575	1.375	Plasterers	1.875	1.725
Composition, mastic and gunite workers	1.700	1.625	Plumbers and gas fitters	1.875	1.725
Electricians (inside wiremen)	1.700	1.580	Roofers:		
Elevator constructors [1]	1.665	1.665	Composition	1.600	1.438
Engineers—power equipment operators:			Foremen	1.725	1.563
Air compressors	1.500	1.375	Slate and tile	1.600	1.438
Cranes, derricks, and draglines:			Sheet-metal workers	1.625	1.438
Under 1 cubic yard	1.800	1.650	Sign painters	2.000	1.714
1 to 5 cubic yards	1.900	1.750	Steam fitters	1.875	1.725
Over 5 cubic yards	2.150	2.000	Oil fitters	1.640	1.250
Graders, elevating	1.650	1.500	Stonemasons	1.875	1.725
Hoists:			Structural-iron workers	1.750	1.650
1 drum	1.600	1.450	Rodmen	1.550	1.375
2 drums	1.850	1.700	Tile layers	1.750	1.500
Steel erection	1.800	1.650			
Mixers:			*Helpers and laborers*		
1 to 5 bags	1.500	1.375	Bricklayers' tenders	1.400	1.300
5 bags and over	1.650	1.500	Building laborers	1.150	.950
Pumps	1.500	1.375	Elevator constructors' helpers [1]	1.165	1.165
Rollers:			Plasterers' laborers	1.400	1.300
Grade and surfacing	1.400	1.250	Plumbers' laborers	1.250	-------
Finishing; high type	1.650	1.500			
Shovels	1.900	1.750			
Tractors:					
50 horsepower and under	1.550	1.400			
Over 50 horsepower	1.750	1.600			
Tandem carry-all	2.000	1.850			
Trenching machines	1.650	1.500			

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[1] For changes since July 1, 1946, see appendix.

TABLE 13.—*Union scales of wages for building trades in 75 cities, July 1, 1946, and July 1, 1945*—Continued

PROVIDENCE, R. I.

Classifications	Rate per hour—	
	July 1, 1946	July 1, 1945
Journeymen		
Asbestos workers	$1.650	$1.500
Boilermakers	1.750	1.650
Bricklayers	1.825	1.650
Carpenters	1.500	1.350
Cement finishers	1.550	1.325
Electricians (inside wiremen)	1.625	1.500
Elevator constructors [1]	1.620	1.620
Engineers—power equipment operators:		
Air compressors	1.675	1.500
All digging machines	2.000	1.750
Graders, motor	1.375	1.250
Hoists:		
1 drum	1.675	1.500
2 drums	2.000	1.750
Pumps	1.675	1.500
Rollers	1.675	1.500
Tractors	1.375	1.250
Glaziers [1]	1.350	1.300
Granite cutters	1.500	1.275
Lathers	1.800	1.650
Marble setters [1]	1.500	1.500
Mosaic and terrazzo workers [1]	1.500	1.500
Painters	1.375	1.250
Structural steel	1.625	1.500
Journeymen—Continued		
Paperhangers	$1.375	$1.250
Plasterers [1]	1.800	1.650
Plumbers	1.700	1.550
Roofers:		
Composition	1.300	1.300
Slate and tile	1.500	1.500
Sheet-metal workers	1.500	1.500
Sign painters	1.500	1.250
Steam fitters	1.700	1.550
Stonemasons	1.825	1.650
Structural-iron workers [1]	1.725	1.650
Rodmen [1]	1.725	1.650
Tile layers [1]	1.500	1.500
Helpers and laborers		
Bricklayers' tenders	1.000	.850
Building laborers	1.000	.850
Composition roofers' helpers	.900	.900
Elevator constructors' helpers [1]	1.130	1.130
Marble setters' helpers	1.150	1.000
Plasterers' laborers	1.250	1.100
Terrazzo workers' helpers	1.150	1.000
Tile layers' helpers	1.150	1.000

READING, PA.

Classifications	July 1, 1946	July 1, 1945
Journeymen		
Asbestos workers	$1.875	$1.725
Bricklayers [1]	1.750	1.583
Carpenters [1]	1.500	1.375
Millwrights	1.500	1.500
Cement finishers	1.500	1.500
Electricians (inside wiremen):		
Contracts under $20,000 [1]	1.500	1.375
Contracts $20,000 or over [1]	1.750	1.750
Elevator constructors [1]	1.560	1.560
Engineers—power equipment operators.[2]		
Lathers	1.750	1.500
Mosaic and terrazzo workers	1.750	1.583
Painters	1.420	1.320
Spray	1.750	1.750
Steel or swing	1.600	1.500
Paperhangers	1.420	1.320
Plasterers	1.720	1.720
Plumbers	1.650	1.500
Journeymen—Continued		
Roofers:		
Composition	$1.350	$1.050
Slate and tile	1.450	1.200
Sheet-metal workers	1.500	1.375
Sign painters	1.000	1.000
Outside advertising	1.100	1.100
Steam fitters	1.650	1.500
Stonemasons	1.750	1.583
Structural-iron workers	1.875	1.750
Rodmen	1.675	1.550
Tile layers [1]	1.583	1.583
Helpers and laborers		
Bricklayers' tenders	1.250	1.100
Building laborers	.950	.800
Elevator constructors' helpers [1]	1.092	1.092
Plasterers' laborers	1.250	1.100
Plumbers' laborers	.950	.800

[1] For changes since July 1, 1946, see appendix.
[2] See Philadelphia, Pa.

TABLE 13.—*Union scales of wages for building trades in 75 cities, July 1, 1946, and July 1, 1945*—Continued

RICHMOND, VA.

Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945
Journeymen		
Asbestos workers	$1.625	$1.500
Bricklayers	1.875	1.650
Carpenters [1]	1.300	1.150
Millwrights	1.500	1.500
Cement finishers [1]	1.250	1.250
Electricians (inside wiremen)	1.625	1.500
Elevator constructors	1.660	1.530
Engineers—power equipment operators:		
Air compressors	1.375	1.250
Bulldozers	1.500	1.250
Cranes, derricks, and draglines	1.625	1.500
Graders, blade and motor	1.500	1.250
Hoists:		
1 drum	1.375	1.250
2 drums	1.625	1.500
Mixers:		
Larger than 10S	1.375	1.250
10S or smaller	1.250	--------
Pumps:		
2-inch discharge	1.200	--------
Over 2-inch discharge	1.375	1.250
Rollers:		
Earth	1.375	1.250
Asphalt	1.500	--------
Shovels	1.625	1.500
Journeymen—Continued		
Engineers—power equipment operators—Continued		
Tractors, with attachments	$1.500	--------
Without attachments	1.375	$1.250
Trenching machines	1.625	1.500
Glaziers	1.250	1.100
Lathers [1]	1.500	1.500
Machinists	1.500	1.500
Marble setters [1]	1.500	1.500
Mosaic and terrazzo workers [1]	1.375	1.375
Painters [1]	1.250	1.100
Spray	1.600	1.550
Structural steel	1.500	1.400
Paperhangers	1.250	1.100
Plasterers [1]	1.625	1.500
Plumbers [1]	1.625	1.500
Roofers, composition	1.300	1.250
Sheet-metal workers [1]	1.400	1.250
Sign painters	1.450	1.450
Steam fitters [1]	1.625	1.500
Stonemasons	1.875	1.650
Structural-iron workers [1]	1.725	1.500
Rodmen [1]	1.450	1.250
Tile layers [1]	1.375	1.375
Helpers and laborers		
Elevator constructors' helpers	1.160	1.070

ROCHESTER, N. Y.

Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945
Journeymen		
Asbestos workers	$1.800	$1.650
Boilermakers	1.750	1.750
Bricklayers	1.960	1.725
Carpenters [1]	1.710	1.535
Cement finishers	1.960	1.725
Electricians (inside wiremen) [1]	1.875	1.700
Elevator constructors	1.825	1.710
Engineers—power equipment operators:		
Air compressors:		
Under 160 cubic feet	1.250	1.000
160 cubic feet and over	1.750	1.500
Bulldozers	1.625	1.250
Cranes and derricks	2.125	1.875
Draglines	2.000	1.750
Hoists	2.000	1.750
LeTourneau	1.750	1.500
Mixers:		
Under 14S	1.500	1.250
14S and over	1.750	1.500
Pumps:		
2 or 3 in a battery	2.000	--------
Under 4 inches	1.250	1.000
4 inches and over	1.500	1.250
Rollers	1.500	1.250
Scrapers	1.750	1.500
Shovels	2.000	1.750
Trenching machines	2.000	1.750
Glaziers	1.400	1.150
Steel sash	1.400	1.380
Lathers	1.965	1.625
Journeymen—Continued		
Machinists	$1.750	$1.500
Marble setters [1]	1.750	1.580
Mosaic and terrazzo workers [1]	1.750	1.580
Painters	1.625	1.450
Structural iron and bridge	1.625	1.500
Spray	1.875	1.700
Paperhangers	1.625	1.450
Plasterers	1.960	1.725
Plumbers and gas fitters [1]	1.750	1.650
Roofers:		
Composition	1.575	1.380
Slate and tile	1.575	1.380
Sheet-metal workers	1.675	1.500
Sign painters	1.800	1.513
Steam fitters [1]	1.750	1.650
Stonemasons	1.960	1.725
Structural-iron workers [1]	1.750	1.750
Rodmen [1]	1.750	1.750
Tile layers [1]	1.750	1.580
Helpers and laborers		
Bricklayers' tenders	1.135	1.000
Building laborers [1]	1.135	1.000
Elevator constructors' helpers	1.280	1.200
Marble setters' helpers	1.155	1.000
Plasterers' laborers	1.135	1.000
Plumbers' laborers	.875	.825
Steam fitters' helpers	.875	.825
Terrazzo workers' helpers	1.150	1.000
Tile layers' helpers	1.150	1.000

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[1] For changes since July 1, 1946, see appendix.

TABLE 13.—*Union scales of wages for building trades in 75 cities, July 1, 1946, and July 1, 1945*—Continued

ROCK ISLAND (ILL.) DISTRICT [2]

Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945
Journeymen		
Asbestos workers	$1.750	$1.500
Boilermakers	1.850	1.750
Bricklayers	1.850	1.725
Carpenters	1.600	1.425
Cement finishers	1.585	1.400
Electricians (inside wiremen)	1.750	1.580
Elevator constructors [1]	1.630	1.595
Engineers—power equipment operators:		
Air compressors	1.400	1.275
Bulldozers	1.700	1.500
Cranes, derricks, and draglines	1.700	1.500
Graders:		
Elevating	1.700	1.500
Form	1.550	--------
Hoists	1.700	1.375
Mixers	1.400	1.275
Paving type	1.700	1.500
Pumps	1.400	1.275
Roller, asphalt	1.700	--------
Shovels	1.700	1.500
Tractors, side boom	1.700	1.500
Without power attachment	1.550	--------
Trenching machines	1.700	1.500
Glaziers	1.650	1.425
athers	1.750	1.500
arble setters	1.625	1.500
Journeymen—Continued		
Mosaic and terrazzo workers	$1.625	$1.500
Painters [1]	1.600	1.375
Steel	1.750	1.500
Paperhangers [1]	1.600	1.375
Plasterers [1]	1.850	1.750
Plumbers [1]	1.625	1.500
Roofers:		
Composition	1.563	1.438
Foremen	1.688	1.563
Slate and tile	1.563	1.438
Sheet-metal workers	1.550	1.375
Sign painters	1.600	1.375
Steam fitters [1]	1.625	1.500
Structural-iron workers	1.730	1.580
Rodmen	1.730	1.580
Tile layers	1.625	1.500
Helpers and laborers		
Bricklayers' tenders	1.050	.875
Building laborers	1.050	.875
Composition roofers' helpers	1.000	.875
Elevator constructors' helpers [1]	1.140	1.120
Marble setters' helpers	.900	.900
Base grinders	1.100	1.000
Plasterers' laborers	1.250	1.125
Plumbers' laborers	1.050	.875
Terrazzo workers' helpers	1.000	.900
Tile layers' helpers	.900	.900

ST. LOUIS, MO.

Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945
Journeymen		
sbestos workers	$1.875	$1.750
oilermakers	1.750	1.625
ricklayers [1]	2.000	1.900
Sewer work, over 6 feet	2.250	2.000
arpenters [1]	1.875	1.700
ement finishers	1.950	1.575
Composition	2.200	1.750
On swinging scaffold	2.075	1.700
lectricians (inside wiremen) [1]	1.875	1.750
levator constructors	1.865	1.750
ngineers—power equipment operators:		
Air compressors	1.650	1.500
Two in tandem	2.200	2.000
Bulldozers	1.650	1.500
Cranes, derricks, and draglines	2.200	2.000
Graders, road	2.200	1.500
Form	1.650	--------
Hoists	1.650	1.500
LeTourneau	2.200	2.000
Mixers	1.650	1 500
Paving	2.200	--------
Concrete	2.200	--------
Pumps	1.650	1.500
Rollers	1.650	1.500
Asphalt	2.200	--------
Shovels	2.200	2.000
Tractors:		
Caterpillar	1.650	1.500
With power take-off	2.200	2.000
Trenching machine, large	2.200	2.000
Small	1.925	--------
ziers	1.875	1.750
hers	2.050	1.750
Residential	1.750	1.250
Journeymen—Continued		
Machinists	$1.500	$1.500
Marble setters	1.750	1.500
Mosaic and terrazzo workers	1.750	1.500
Painters [1]	1.650	1.563
Paperhangers	1.650	1.563
Plasterers [1]	1.900	1.750
Plumbers [1]	1.875	1.750
Roofers:		
Composition	1.750	1.575
Foremen	1.875	1.700
Slate and tile	1.875	1.750
Precast slab	1.875	1.875
Sheet-metal workers	1.875	1.625
Sign painters	1.875	1.650
Steam fitters	1.875	1.750
Sprinkler fitters	1.875	1.700
Stonemasons	1.875	1.500
Structural-iron workers	2.000	1.900
Rodmen	2.000	1.900
Tile layers [1]	1.700	1.700
Helpers and laborers		
Bricklayers' tenders [1]	1.325	1.150
Building laborers	1.200	1.000
Composition roofers' helpers	1.250	--------
Elevator constructors' helpers	1.305	1.225
Marble setters' helpers	1.050	.900
Plasterers' laborers	1.435	1.435
Plumbers' laborers	1.325	1.150
Sprinkler fitters' helpers	1.225	1.100
Terrazzo workers' helpers	1.300	1.075
Base-machine operators	1.425	1.175
Tile layers' helpers [1]	1.050	1.050

For changes since July 1, 1946, see appendix.
Includes Rock Island and Moline, Ill., and Davenport, Iowa.

TABLE 13.—*Union scales of wages for building trades in 75 cities, July 1, 1946, and July 1, 1945*—Continued

ST. PAUL, MINN.

Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945	Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945
Journeymen			*Journeymen*—Continued		
Asbestos workers	[2] $1.650	$1.580	Sheet-metal workers	$1.750	$1.500
Bricklayers	1.825	1.625	Sign painters	1.825	1.625
Tuck pointing, etc	1.950	--------	Steam fitters	1.750	1.550
Carpenters	1.650	1.440	Sprinkler fitters [1]	1.580	1.580
Cement finishers	1.625	1.440	Stonemasons	1.825	1.625
Electricians (inside wiremen)	1.850	1.650	Structural-iron workers	1.750	1.625
Elevator construetors	1.660	1.600	Rodmen	1.625	1.500
Engineers—power equipment operators.[3]			Tile layers	1.700	1.550
Glaziers	1.400	1.250	*Helpers and laborers*		
Lathers	1.850	1.625			
Marble setters	1.700	1.525	Bricklayers' tenders	1.150	.950
Mosaic and terrazzo workers	1.700	1.440	Mortar mixers	1.250	1.075
Painters [1]	1.625	1.440	Building laborers	1.150	.950
Structural steel, swing stage and spray	1.705	1.580	Composition roofers' helpers	1.150	.950
Paperhangers	1.625	1.440	Elevator constructors' helpers	1.165	1.120
Plasterers	[2] 1.850	[2] 1.625	Plasterers' laborers	1.450	1.200
Plumbers	1.750	1.550	Plumbers' laborers	1.150	.950
Roofers:			Sprinkler fitters' helpers [1]	.950	.950
Composition	1.580	1.380	Terrazzo workers' helpers:		
Foremen	1.680	1.480	Floor-machine operators	1.200	.975
Slate and tile	1.580	1.380	Base-machine operators	1.350	1.100
			Tile layers' helpers	1.150	.950

SALT LAKE CITY, UTAH

Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945	Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945
Journeymen			*Journeymen*—Continued		
Asbestos workers	$1.375	$1.250	Machinists	$1.625	$1.500
Boilermakers [1]	1.750	1.650	Marble setters	1.550	1.375
Bricklayers [1]	1.750	1.580	Mosaic and terrazzo workers	1.550	1.375
Carpenters	1.500	1.350	Painters [1]	1.375	1.250
Floor layers and scrapers	1.625	1.500	Swing stage [1]	1.500	1.375
Millwrights	1.500	1.375	Spray	1.875	1.750
Cement finishers	1.500	1.300	Paperhangers [1]	1.375	1.250
Electricians (inside wiremen)[1]	1.500	1.500	Plasterers [1]	1.875	1.650
Elevator constructors	1.350	1.350	Plumbers [1]	1.625	1.500
Engineers—power equipment operators:			Roofers:		
Air compressors [1]	1.250	1.250	Composition	1.500	1.250
Bulldozers [1]	1.500	1.500	Foremen	1.625	1.375
Cranes, derricks, and draglines [1]	1.650	1.650	Slate and tile	1.500	1.250
Graders, elevating [1]	1.500	1.500	Sheet-metal workers	1.500	1.375
Hoist, 1 drum [1]	1.375	1.375	Sign painters	1.500	1.150
LeTourneau:			Steam fitters [1]	1.625	1.500
Model super C [1]	1.500	1.500	Structural-iron workers	1.750	1.500
Larger than super C [1]	1.625	1.625	Rodmen	1.625	1.375
Mixers:			Tile layers	1.550	1.375
Skip type [1]	1.250	1.250	*Helpers and laborers*		
Paving type [1]	1.500	1.500	Bricklayers' tenders [1]	1.250	1.125
Pumps:			Building laborers [1]	.875	.850
Concrete [1]	1.250	1.250	Concrete laborers	1.000	.850
Water [1]	1.125	1.125	Elevator constructors' helpers	.945	.945
Rollers [1]	1.500	1.500	Marble setters' helpers	.875	.750
Scrapers [1]	1.500	1.500	Plasterers' laborers [1]	1.400	1.250
Shovels [1]	1.650	1.650	Plumbers laborers [1]	1.000	1.000
Tractors [1]	1.500	1.500	Tile layers' helpers	.875	.750
Trenching machines [1]	1.500	1.500			
Glaziers	1.330	1.125			
Lathers:					
Metal	1.650	1.650			
Wood	1.400	1.400			

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[1] For changes since July 1, 1946, see appendix.
[2] Hours per week, 35.
[3] See Minneapolis, Minn.

TABLE 13.—*Union scales of wages for building trades in 75 cities, July 1, 1946, and July 1, 1945*—Continued

SAN ANTONIO, TEX.

Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945
Journeymen		
Asbestos workers	$1.750	$1.625
Bricklayers	1.938	1.725
Carpenters [1]	1.438	1.250
Cement finishers [1]	1.500	1.500
Electricians (inside wiremen)[1]	1.800	1.500
Elevator constructors	1.695	1.550
ngineers—power equipment operators:		
Air compressors	1.250	1.250
Bulldozers	1.500	1.500
Cranes, derricks, and draglines	1.500	1.500
Graders	1.250	1.250
Hoists:		
1 drum	1.250	1.250
2 drums	1.500	1.500
Mixers:		
Small	1.250	1.250
Large	1.500	1.500
Pumps:		
Small	1.250	1.250
Large	1.500	1.500
Rollers	1.250	1.250
Shovels	1.500	1.500
Tractors	1.250	1.250
laziers	1.375	1.125
athers	1.875	1.625
Journeymen—Continued		
Machinists	$1.725	$1.500
Marble setters [1]	1.625	1.440
Mosaic and terrazzo workers [1]	1.625	1.440
Painters [1]	1.375	1.125
Stage and structural steel	1.500	1.375
Spray	1.625	1.375
Paperhangers	1.375	1.125
Plasterers [1]	1.650	1.650
Plumbers [1]	1.875	1.625
Roofers:		
Composition [1]	[2] 1.125	[2] 1.125
Slate and tile [1]	[2] 1.250	[2] 1.250
Sheet-metal workers	1.750	1.500
Sign painters	[2] 1.065	[2] 1.065
Steam fitters	1.875	1.625
Stonemasons	1.938	1.725
Structural-iron workers	1.750	1.500
Rodmen	1.500	1.250
Tile layers [1]	1.625	1.440
Helpers and laborers		
Bricklayers' tenders	1.000	.700
Mortar mixers	1.000	.700
Building laborers [1]	.625	.575
Elevator constructors' helpers	1.190	1.090
Plasterers' laborers	1.000	.700
Plumbers' laborers [1]	.625	.575

SAN FRANCISCO, CALIF.

Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945
Journeymen		
bestos workers	$1.750	$1.500
oilermakers [1]	1.750	1.650
icklayers [1]	2.050	1.875
rpenters	1.750	1.500
Hardwood floor layers	1.875	1.500
Millwrights	1.875	1.625
Wharf and bridge	1.860	1.610
ment finishers	1.750	1.500
Composition finishers and machine operators	1.875	1.625
ectricians (inside wiremen)[1]	1.875	1.700
evator constructors	1.910	1.755
gineers—power equipment perators:		
Air compressors	1.600	1.250
More than 1	1.900	--------
Cranes, derricks, and draglines	2.100	1.750
Graders	2.100	1.625
Hoists	1.850	--------
LeTourneau:		
Up to 14 yards	2.100	1.625
14 yards and over	2.100	1.750
Mixers:		
Up to 1 yard	1.600	1.250
Over 1 yard and paving type	1.900	1.500
Dual drum	2.000	--------
Pumps	1.600	1.250
Concrete	1.900	1.500
Rollers	1.950	1.625
Shovels, power:		
Up to and including 1 yard	2.250	2.000
Over 1 yard	2.350	2.000
Tractors	1.950	1.625
Boom	2.100	1.750
Tandem	2.250	1.750
Trenching machines	2.000	1.625
ziers	1.650	1.400
Journeymen—Continued		
Granite cutters	$1.500	$1.250
Lathers	2.000	1.750
Machinists	1.810	1.530
Marble setters	1.750	1.500
Mosaic and terrazzo workers	1.900	1.500
Base-machine operators	1.750	1.250
Painters	[3] 1.750	[3] 1.500
Structural steel	[3] 1.750	[3] 1.750
Paperhangers	[3] 1.750	[3] 1.500
Plasterers [1]	2.000	1.750
Plumbers and gas fitters [1]	1.875	1.700
Roofers:		
Composition	1.750	1.500
Foremen	1.875	1.625
Slate and tile	1.750	1.500
Sheet-metal workers	1.750	1.500
Sign painters	[3] 2.000	[3] 1.714
Steam fitters	1.875	1.700
Sprinkler fitters	1.750	1.580
Refrigeration fitters:		
High pressure	1.875	1.700
Low pressure	1.500	1.250
Oil burner fitters	1.575	1.250
Stonemasons	2.050	1.875
Structural-iron workers	2.000	1.750
Finishers	1.850	1.600
Rodmen	1.750	1.500
Tile layers	1.800	1.500
Helpers and laborers		
Bricklayers' tenders	1.575	1.400
Building laborers	1.250	1.000
Elevator constructors' helpers	1.340	1.230
Marhle setters' helpers	1.188	1.000
Plasterers' laborers	1.750	1.600
Sprinkler fitters' helpers	1.100	.950
Terrazzo workers' helpers	1.500	1.063
Wet-base machine	1.500	1.125
Common labor	1.250	1.000
Tile layers' helpers	1.375	1.063

For changes since July 1, 1946, see appendix.

[2] Hours per week, 44.

[3] Hours per week, 35.

TABLE 13.—*Union scales of wages for building trades in 75 cities, July 1, 1946, and July 1, 1945*—Continued

SCRANTON, PA.

Classifications	Rate per hour—		Classifications	Rate per hour—	
	July 1, 1946	July 1, 1945		July 1, 1946	July 1, 1945
Journeymen			*Journeymen*—Continued		
Asbestos workers [1]	$1.500	$1.500	Sheet-metal workers	$1.375	$1.375
Bricklayers [1]	1.750	1.650	Sign painters	1.425	1.250
Carpenters	1.500	1.300	Steam fitters	1.500	1.375
Millwrights	1.500	1.500	Stonecutters	1.250	1.250
Cement finishers [1]	1.425	1.375	Stonemasons [1]	1.750	1.650
Electricians (inside wiremen)	1.625	1.500	Structural-iron workers	2.150	1.750
Elevator constructors	1.500	1.500	Rodmen	2.050	1.650
Engineers—power equipment operators [2]	--------	--------	Tile layers [1]	1.600	1.500
Glaziers	1.300	1.100	*Helpers and laborers*		
Lathers	1.585	1.500			
Marble setters [1]	1.600	1.500	Bricklayers' tenders	1.100	1.000
Mosaic and terrazzo workers [1]	1.600	1.500	Building laborers	.900	.800
Painters [1]	1.425	1.250	Composition roofers' helpers	1.125	1.000
Paperhangers	1.425	1.250	Elevator constructors' helpers	1.050	1.050
Plasterers [1]	1.725	1.625	Marble setters' helpers	.925	.925
Plumbers	1.500	1.375	Plasterers' laborers	1.100	1.000
Roofers:			Plumbers' laborers	.900	.800
Composition	1.425	1.300	Terrazzo workers' helpers	.925	.925
Slate and tile	1.425	1.300	Tile layers' helpers	.925	.925

SEATTLE, WASH.

Classifications	July 1, 1946	July 1, 1945	Classifications	July 1, 1946	July 1, 1945
Journeymen			*Journeymen*—Continued		
Asbestos workers	$1.775	$1.645	Engineers—power equipment operators—Continued		
Boilermakers [1]	1.750	1.745			
Bricklayers [1]	1.975	1.845	Shovels	$2.200	$2.000
Sewer and tunnel	2.100	1.970	Tractors	1.900	1.700
Carpenters [1]	1.675	1.545	Trenching machines:		
Floor layers and boommen	1.775	1.645	Under 16 inches	1.950	1.750
Wharf and bridge	1.725	1.595	16 inches and over	2.150	1.950
Cement finishers	1.675	1.545	Glaziers	1.625	1.495
Composition finishers	1.725	1.595	Inside	1.525	1.395
Paving finishers and ribbon setters	1.700	1.570	Lathers	1.875	1.745
Finishing machines:			Machinists	1.875	1.650
Trowel	1.800	1.670	Marble setters	1.875	1.745
Paving	1.945	1.815	Mosaic and terrazzo workers	1.725	1.595
Electricians (inside wiremen)[1]	1.875	1.745	Painters [1]	1.675	1.545
Fixture hangers	1.875	--------	Structural steel	1.800	1.670
Elevator constructors	1.850	1.785	Spray	2.000	2.000
Engineers—power equipment operators:			Paperhangers	1.675	1.545
Air compressors:			Plasterers [1]	1.975	1.845
Excavating	1.700	1.500	Plumbers [1]	1.875	1.745
Steel erection	1.950	1.750	Roofers:		
Bulldozers	1.900	1.700	Composition	1.775	1.645
Cranes and draglines	2.200	2.000	Slate and tile	1.675	1.545
Derricks	1.900	1.700	Sheet-metal workers	1.825	1.695
Graders, motor patrols, power grade	1.900	1.700	Sign painters	1.975	1.845
Hoists	1.900	1.700	Steam fitters	1.875	1.745
Steel erection	1.950	1.750	Stonemasons	1.975	1.845
3 drums	2.200	2.000	Structural-iron workers	1.875	1.745
LeTourneau	1.900	1.700	Rodmen	1.675	1.545
Mixers, paving	2.050	1.850	Tile layers	1.725	1.595
Dual	2.200	2.000	*Helpers and laborers*		
Pumps	1.950	1.600	Bricklayers' tenders	1.525	1.395
Rollers:			Building laborers [1]	1.275	1.145
On plant mix materials	1.950	1.750	Elevator constructors' helpers	1.295	1.270
On other than plant mix	1.650	1.450	Marble setters' helpers	1.275	1.145
Scrapers:			Plasterers' laborers	1.525	1.395
Carry-all type, single	1.900	1.700	Plumbers' laborers	1.275	1.145
Carry-all type, tandem	2.050	1.850	Terrazzo workers' helpers	1.275	1.145
			Tile layers' helpers	1.275	1.145

[1] For changes since July 1, 1946, see appendix.

[2] See Philadelphia, Pa.

TABLE 13.—*Union scales of wages for building trades in 75 cities, July 1, 1946, and July 1, 1945*—Continued

SOUTH BEND, IND.

Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945
Journeymen		
sbestos workers [1]	$1.700	$1.500
oilermakers	1.850	1.700
ricklayers	1.900	1.750
Sewer, tunnel and caisson	2.150	2.000
arpenters	1.700	1.500
ement finishers	1.700	1.500
lectricians (inside wiremen)	1.800	1.625
levator constructors [1]	1.665	1.500
ngineers—power equipment operators:		
Air compressors	1.500	1.375
Bulldozers	1.600	1.500
Cranes, derricks, and draglines	1.875	1.625
Hoists:		
1 drum	1.600	1.375
2 or more drums	1.875	1.625
Mixers:		
Less than 21 inches	1.600	1.375
21 inches and over	1.875	1.625
Pumps	1.500	1.375
Rollers	1.600	1.375
Shovels	1.875	1.625
Tractors:		
Less than 50 horsepower	1.500	1.250
50 horsepower and over	1.500	1.375
Trenching machines	1.875	1.625
laziers	1.400	1.400
athers	1.700	1.500
arble setters	1.750	1.750
osaic and terrazzo workers	1.750	1.750
Journeymen—Continued		
Painters	$1.500	$1.300
Spray, stage, and structural steel	1.500	1.500
Paperhangers	1.500	1.300
Plasterers [1]	1.750	1.625
Plumbers	1.800	1.625
Roofers:		
Composition	1.750	1.500
Foremen	1.900	1.650
Slate and tile	1.750	1.500
Steeple work	2.000	--------
Sheet-metal workers	1.750	1.500
Sign painters	1.500	1.300
Steam fitters	1.800	1.625
Stonemasons	1.900	1.750
Structural-iron workers	1.875	1.700
Rodmen	1.875	1.700
Tile layers	1.750	1.750
Helpers and laborers		
Bricklayers' tenders	1.150	1.000
Mortar mixers	1.300	1.150
Building laborers	1.150	1.000
Composition roofers' helpers	1.200	1.000
Elevator constructors' helpers [1]	1.165	1.050
Marble setters' helpers	1.250	1.250
Plasterers' laborers	1.300	1.150
Plumbers' laborers	1.150	1.000
Terrazzo workers' helpers	1.350	1.250
Base-machine operators	1.500	1.375
Tile layers' helpers	1.250	1.250

SPOKANE, WASH.

Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945
Journeymen		
bestos workers	$1.625	$1.500
ilermakers [1]	1.750	1.580
icklayers [1]	1.925	1.750
rpenters [1]	1.625	1.440
ment finishers	1.800	1.675
ectricians (inside wiremen)	1.750	1.550
vator constructors	1.810	1.645
gineers—power equipment operators:		
Air compressors	1.500	1.375
Bulldozers	1.700	1.500
Cranes, derricks, and draglines	1.850	1.750
Graders, elevating	1.700	1.500
Hoists:		
1 drum	1.500	1.375
2 drums	1.750	1.500
3 drums or steel erection	1.750	1.650
LeTourneau 13 yards and under	1.700	1.500
Over 13 yards	1.850	--------
Mixers	1.500	1.375
Concrete mixer, paving	1.750	--------
Pumps	1.500	1.375
Rollers:		
Finishing high type pavement	1.650	1.500
Grade and surfacing	1.350	--------
Shovels	1.850	1.750
Tractors	1.700	1.500
Trenching machines	1.750	1.500
ziers	1.350	1.250
Journeymen—Continued		
Lathers	$1.800	$1.625
Machinists	1.500	1.500
Marble setters	1.850	1.750
Mosaic and terrazzo workers	1.725	1.600
Painters [1]	1.575	1.450
Spray [1]	1.925	1.800
Structural steel [1]	1.875	1.800
Paperhangers	1.575	1.450
Plasterers [1]	1.950	1.750
Plumbers [1]	1.750	1.650
Roofers:		
Composition	1.375	1.250
Foremen	1.625	1.500
Slate and tile	1.375	1.250
Sheet-metal workers	1.700	1.500
Sign painters	1.650	1.650
Steam fitters	1.750	1.650
Stonemasons [1]	1.925	1.750
Structural-iron workers	1.800	1.690
Rodmen	1.600	1.500
Tile layers	1.725	1.600
Helpers and laborers		
Bricklayers' tenders	1.350	1.200
Cement mixers	1.350	1.100
Building laborers	1.150	1.000
Elevator constructors' helpers	1.270	1.150
Marble setters' helpers	1.350	1.200
Plasterers' laborers [1]	1.500	1.300
Terrazzo workers' helpers	1.350	1.200
Tile layers' helpers	1.350	1.100

For changes since July 1, 1946, see appendix.

Table 13.—*Union scales of wages for building trades in 75 cities, July 1, 1946, and July 1, 1945*—Continued

SPRINGFIELD, MASS.

Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945
Journeymen		
Asbestos workers	$1.700	$1.500
Bricklayers	1.925	1.750
Carpenters	1.625	1.500
Cement finishers	1.925	1.750
Electricians (inside wiremen)	1.750	1.580
Elevator constructors [1]	1.660	1.660
Engineers—power equipment operators:		
Air compressors:		
225 feet and under	1.150	1.000
315 feet and over	1.500	1.250
Bulldozers	1.500	1.350
Cranes, derricks, and draglines	1.900	1.750
Graders	1.500	1.350
Hoists:		
Under 3 drums	1.500	1.350
3 or more drums	1.900	1.750
Mixers:		
Small	1.050	.900
Road	1.900	1.750
Pumps	1.500	1.350
Rollers	1.400	1.250
Scrapers	1.650	1.440
Shovels	1.900	1.750
Glaziers	1.750	1.500
Lathers	1.750	1.500
Marble setters	1.925	1.750
Journeymen—Continued		
Mosaic and terrazzo workers	$1.925	$1.750
Painters [1]	1.500	1.375
Paperhangers [1]	1.500	1.375
Plasterers	1.925	1.750
Plumbers and gas fitters [1]	1.700	1.580
Roofers:		
Composition	1.625	1.500
Slate and tile	1.625	1.500
Sheet-metal workers	1.750	1.580
Sign painters	1.500	1.375
Steam fitters [1]	1.700	1.580
Stonecutters	1.750	1.675
Inside	1.500	1.250
Stonemasons	1.925	1.750
Structural-iron workers	1.850	1.650
Rodmen	1.850	1.650
Tile layers	1.925	1.750
Helpers and laborers		
Bricklayers' tenders	1.250	1.125
Building laborers	1.000	.900
Elevator constructors' helpers [1]	1.160	1.160
Marble setters' helpers	1.375	1.000
Plasterers' laborers	1.250	1.125
Terrazzo workers' helpers	1.375	1.000
Tile layers' helpers	1.375	1.000

TAMPA, FLA.

Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945
Journeymen		
Asbestos workers	$1.625	$1.500
Boilermakers	1.625	1.500
Bricklayers	1.750	1.500
Carpenters [1]	1.250	1.150
Millwrights	1.375	1.150
Wharf and bridge	1.250	1.250
Cement finishers	1.500	1.250
Electricians (inside wiremen) [1]	1.675	1.500
Elevator constructors	1.685	1.500
Engineers—power equipment operators:		
Air compressors	1.250	--------
Bulldozers	1.500	1.500
Cranes and derricks	1.750	1.500
Draglines	1.500	1.350
Graders	1.250	--------
Hoists:		
1 drum	1.250	1.250
2 drums	1.500	1.250
LeTourneau	1.250	1.250
Mixers	1.250	--------
Pumps	1.250	1.250
Shovels	1.500	1.500
Tractors	1.250	--------
Trenching machines	1.250	1.250
Journeymen—Continued		
Glaziers [1]	$1.200	$1.200
Lathers	1.625	1.500
Marble setters	1.750	1.440
Mosaic and terrazzo workers	1.750	1.440
Painters	1.375	1.200
Structural steel	1.625	1.500
Spray	1.750	1.600
Paperhangers	1.375	1.200
Plasterers	1.750	1.500
Plumbers [1]	1.625	1.500
Sheet-metal workers	1.500	1.250
Sign painters	1.540	1.360
Steam fitters	1.625	1.500
Stonemasons	1.750	1.500
Structural-iron workers	1.750	1.500
Rodmen	1.625	1.375
Tile layers	1.750	1.440
Helpers and laborers		
Bricklayers' tenders	.850	.650
Building laborers	.750	.600
Elevator constructors' helpers	1.180	1.050
Plasterers' laborers	.850	.650

[1] For changes since July 1, 1946, see appendix.

TABLE 13.—*Union scales of wages for building trades in 75 cities, July 1, 1946, and July 1, 1945*—Continued

TOLEDO, OHIO

Classifications	Rate per hour—	
	July 1, 1946	July 1, 1945
Journeymen		
Asbestos workers	$1.750	$1.625
Boilermakers	2.000	1.750
Bricklayers	2.000	1.800
Carpenters	1.750	1.580
Cement finishers	1.970	1.725
Electricians (inside wiremen)	2.000	1.750
Fixture hangers	1.850	1.600
Elevator constructors [1]	1.810	1.760
Engineers — power equipment operators:		
Air compressors:		
Plant operation	1.750	1.600
Steel	2.000	1.500
Portable	1.425	1.350
Bulldozers	1.625	1.475
Cranes, derricks, and draglines	2.000	1.725
Graders	1.625	1.475
Hoists:		
Steel and brick erection	1.750	1.625
All others	1.625	1.475
Mixers:		
Up to 1 bag	1.625	1.350
Large	1.625	1.475
27E and over	1.750	1.600
Pumps	1.625	1.475
Rollers	1.625	1.475
Scrapers	1.750	1.600
Shovels	2.000	1.725
Trenching machines	1.750	1.600
laziers	1.500	1.330
athers	[2] 2.000	[2] 1.800
Journeymen—Continued		
Marble setters	$1.875	$1.750
Mosaic and terrazzo workers	1.750	1.625
Painters	1.675	1.500
Over 30 feet and swing stage	1.925	1.750
Spray	1.775	1.625
Over 30 feet	2.025	1.875
Paperhangers	1.675	1.500
Plasterers	2.000	1.750
Plumbers [1]	1.875	1.725
Roofers:		
Composition:		
Built-up moppers [1]	1.625	1.500
Built-up rollers or house roofers [1]	1.625	1.400
Slate and tile [1]	1.625	1.500
Sheet-metal workers	1.725	1.500
Sign painters	1.750	1.555
Steam fitters	1.875	1.725
Stonemasons	2.000	1.800
Structural-iron workers	2.000	1.800
Rodmen	1.625	1.475
Tile layers [1]	1.750	1.625
Helpers and laborers		
Bricklayers' tenders [1]	1.225	1.050
Mortar mixers [1]	1.225	1.100
Building laborers [1]	1.125	1.000
Elevator constructors' helpers [1]	1.270	1.240
Marble setters' helpers [1]	1.000	1.000
Plumbers' laborers	1.410	1.150
Terrazzo workers' helpers [1]	1.000	1.000
Tile layers' helpers [1]	1.000	1.000

WASHINGTON, D. C.

Classifications	Rate per hour—	
	July 1, 1946	July 1, 1945
Journeymen		
sbestos workers	$1.938	$1.813
ilermakers	1.750	1.750
icklayers	2.125	1.900
Residential	2.125	1.750
rpenters	1.925	1.775
ment finishers	1.750	1.600
ectricians (inside wiremen) [1]	2.125	2.000
evator constructors	2.040	1.930
gineers—power equipment operators:		
Air compressors	1.750	1.600
Bulldozers	1.450	1.250
Cranes, derricks, and draglines	2.125	2.000
Graders:		
Blade	1.450	1.250
Elevating	1.900	--------
Fine and form grader	1.400	--------
Motor	1.500	--------
Hoists:		
1 drum	1.900	1.750
2 drums	2.125	2.000
Mixers:		
10S and larger	1.750	--------
Paving	1.825	--------
Dual drum	2.000	--------
Pumps	1.700	1.600
Rollers	1.600	1.500
Shovels	2.125	2.000
Tractors	1.450	1.250
Trenching machines	1.900	1.750
ziers	1.775	1.650
hers [1]	1.875	1.750
chinists	1.800	1.800
rble setters	1.900	1.750
Journeymen—Continued		
Mosaic and terrazzo workers	$1.725	$1.650
Painters	[2] 1.775	[2] 1.775
Bridge, structural steel and spray [1]	[2] 2.000	[2] 2.000
Paperhangers	[2] 1.775	[2] 1.775
Plasterers [1]	2.000	2.000
Residential [1]	2.000	1.500
Plumbers and gas fitters [1]	1.875	1.875
Roofers:		
Composition:		
First hand	1.700	1.620
Second hand	1.400	1.300
Slate and tile	2.000	1.750
Sheet-metal workers [1]	1.875	1.875
Sign painters	2.000	1.625
Steam fitters [1]	1.875	1.875
Refrigeration and oil burner fitters, 7½ horsepower or less	1.500	1.500
Sprinkler fitters	1.750	1.580
Stonemasons	1.900	1.750
Structural-iron workers	2.250	2.000
Rodmen	1.850	1.700
Tile layers	1.725	1.650
Helpers and laborers		
Bricklayers' tenders	1.050	.900
Building laborers	1.050	.900
Composition roofers' helpers	.950	.920
Elevator constructors' helpers	1.430	1.350
Marble setters' helpers	1.250	1.100
Plasterers' laborers	1.375	1.200
Residential	1.050	.900
Plumbers' laborers	1.000	1.000
Terrazzo workers' helpers	1.250	1.100
Tile layers' helpers	1.250	1.100

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[1] For changes since July 1, 1946, see appendix.

[2] Hours per week, 35.

TABLE 13.—*Union scales of wages for building trades in 75 cities, July 1, 1946, and July 1, 1945*—Continued

WICHITA, KANS.

Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945
Journeymen		
Asbestos workers	$1.500	$1.500
Bricklayers [1]	1.750	1.580
Carpenters [1]	1.375	1.250
Cement finishers	1.500	1.375
Electricians (inside wiremen)	1.750	1.500
Elevator constructors	1.520	1.450
Engineers—power equipment operators:		
Air compressors	1.500	1.500
Bulldozers:		
Under 60 horsepower	1.100	1.100
60 horsepower and over	1.250	1.250
Cranes, derricks, and draglines	1.500	1.500
Graders	1.250	1.250
Hoists:		
1 drum	1.375	1.375
2 drums	1.500	1.500
LeTourneau	1.375	1.375
Mixers	1.250	1.250
Pumps	1.375	1.375
Rollers	1.250	1.250
Shovels	1.500	1.500
Tractors, without power take-off	.900	.900
Trenching machines	1.500	1.500
Glaziers	1.250	1.125
Lathers	1.750	1.500
Journeymen—Continued		
Marble setters	$1.750	$1.580
Mosaic and terrazzo workers	1.750	1.580
Painters	1.250	1.125
Spray	1.500	1.375
Structural steel and stage	1.375	1.250
Paperhangers	1.375	1.250
Plasterers	1.625	1.500
Plumbers	1.625	1.500
Roofers:		
Composition	1.250	1.125
Foremen	1.375	1.250
Slate and tile	1.375	1.250
Sheet-metal workers	1.500	1.250
Sign painters	1.375	--------
Steam fitters	1.625	1.500
Stonemasons	1.750	1.580
Structural-iron workers [1]	1.500	1.250
Rodmen [1]	1.250	1.000
Tile layers	1.750	1.580
Helpers and laborers		
Bricklayers' tenders	1.000	.875
Building laborers	.875	.750
Elevator constructors' helpers	1.060	1.015
Plasterers' laborers	1.000	.875
Tile layers' helpers	1.000	.875

WORCESTER, MASS.

Journeymen		
Bricklayers [1]	$1.725	$1.675
Carpenters	1.500	1.350
Millwrights	1.500	1.350
Cement finishers [1]	1.725	1.675
Electricians (inside wiremen)[1]	1.580	1.500
Elevator constructors [1]	1.500	1.500
Glaziers	1.350	1.250
Lathers	1.800	1.500
Marble setters [1]	1.725	1.675
Mosaic and terrazzo workers [1]	1.725	1.675
Painters [1]	1.350	1.250
Paperhangers	1.350	1.150
Plasterers [1]	1.725	1.675
Journeymen—Continued		
Plumbers	$1.650	$1.500
Sign painters	1.350	1.250
Steam fitters	1.650	1.500
Structural-iron workers	1.850	1.650
Rodmen	1.850	1.650
Tile layers [1]	1.725	1.675
Helpers and laborers		
Bricklayers' tenders	1.100	1.000
Building laborers [1]	1.000	.900
Elevator constructors' helpers [1]	1.050	1.050
Plasterers' laborers	1.100	1.000

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[1] For changes since July 1, 1946, see appendix.

Table 13.—*Union scales of wages for building trades in 75 cities, July 1, 1946, and July 1, 1945*—Continued

YORK, PA.

Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945
Journeymen		
Asbestos workers [1]	$1.725	$1.500
Boilermakers:		
Small work	1.890	1.680
Large work	1.890	1.680
Bricklayers	1.675	1.440
Carpenters	1.300	1.150
Cement finishers	1.500	1.500
Electricians (inside wiremen)	1.500	1.350
Engineers—power equipment operators.[2]		
Glaziers	1.100	1.100
Machinists	1.890	1.680
Marble setters	1.675	1.440
Mosaic and terrazzo workers	1.675	1.440
Painters	1.250	1.000
Structural iron	1.500	1.250
Spray	1.750	1.500
Paperhangers	1.250	1.000
Plasterers	1.500	1.500
Plumbers	1.375	1.375
Journeymen—Continued		
Roofers:		
Composition	$1.000	$1.000
Foremen and mopmen	1.250	1.250
Slate and tile	1.250	1.250
Sheet-metal workers	1.500	1.375
Sign painters	1.350	1.150
Steam fitters	1.375	1.375
Stonemasons	1.675	1.440
Tile layers	1.675	1.440
Helpers and laborers		
Bricklayers' tenders	1.100	.850
Building laborers [1]	.800	.750
Composition roofers' helpers	.750	.750
Marble setters' helpers	1.000	.850
Plasterers' laborers	1.100	.850
Plumbers' laborers	1.100	.750
Steam fitters' helpers	1.000	1.000
Terrazzo workers' helpers	1.000	.850
Tile layers' helpers	1.000	1.000

YOUNGSTOWN, OHIO

Classifications	Rate per hour— July 1, 1946	Rate per hour— July 1, 1945
Journeymen		
Asbestos workers	$1.750	$1.625
Bricklayers	2.000	1.750
Carpenters	1.750	1.475
Millwrights	1.900	1.575
Cement finishers	1.625	1.450
Electricians (inside wiremen)[1]	1.850	1.650
Elevator constructors	1.865	1.710
Engineers—power equipment operators:		
Air compressors	1.500	1.313
Bulldozers	1.625	1.438
Cranes, derricks, and draglines	1.938	1.750
Graders	1.500	1.313
Hoists:		
1 drum	1.625	1.313
1 drum 35 feet or more or 2 drums	1.938	1.750
Mixers	1.500	1.313
Pumps, 4 inches or over	1.500	1.313
Rollers	1.563	1.313
Scrapers	1.500	1.313
Shovels	1.938	1.750
Tractors	1.500	1.313
laziers	1.735	1.610
athers	1.875	1.750
achinists:		
First class	1.685	1.500
Second class	1.500	1.315
arble setters	1.625	1.500
Journeymen—Continued		
Mosaic and terrazzo workers	$1.625	$1.500
Painters	1.625	1.438
Spray	2.050	2.050
Structural iron and swing stage	1.750	1.650
Paperhangers	1.625	1.438
Plasterers [1]	1.875	1.750
Plumbers	1.850	1.650
Roofers:		
Composition	1.625	1.500
Foremen	1.750	1.625
Slate and tile	1.625	1.500
Sheet-metal workers	1.700	1.575
Sign painters	1.750	1.500
Steam fitters	1.850	1.650
Stonemasons	2.000	1.750
Structural-iron workers	1.875	1.750
Rodmen	1.875	1.750
Tile layers	1.625	1.500
Helpers and laborers		
Bricklayers' tenders	1.150	.925
Building laborers [1]	1.050	.825
Elevator constructors' helpers	1.305	1.210
Marble setters' helpers	1.250	1.000
Plasterers' laborers	1.250	1.025
Plumbers' laborers	1.175	.950
Terrazzo workers' helpers	1.250	1.000
Tile layers' helpers	1.250	1.000

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[1] For changes since July 1, 1946, see appendix.

[2] See Philadelphia, Pa.

TABLE 14.—*Wage changes for the building construction industry between July 1, 1946, and Jan. 15, 1947*

City and trade	Authorized rate	Effective date
Atlanta, Ga.		
Bricklayers	$1.938	8-12-45
Bricklayers	2.000	(1)
Carpenters	1.400	7-31-46
Carpenters	1.500	(1)
Electricians	1.800	(1)
Painters	1.400	(1)
Paperhangers	1.400	(1)
Plasterers	2.000	(1)
Plumbers	2.000	(1)
Stonemasons	1.938	8-12-46
Structural-iron workers	1.750	9-24-46
Rodmen	1.500	9-24-46
Building laborers	.850	(1)
Baltimore, Md.		
Bricklayers	2.250	(1)
Carpenters	1.775	8-1-46
Elevator constructors	1.870	8-5-46
Plasterers	1.900	9-5-46
Structural-iron workers	2.000	10-28-46
Rodmen	1.750	10-28-46
Elevator constructors' helpers	1.310	8-5-46
Binghamton, N. Y.		
Bricklayers	1.875	10-15-46
Bricklayers	2.000	(1)
Cement finishers	1.875	10-15-46
Electricians (inside wiremen)	1.650	(1)
Engineers—power equipment operators:		
Bulldozers	1.500	9-3-46
Plasterers	1.875	10-15-46
Plasterers	2.000	(1)
Plumbers	1.850	(1)
Birmingham, Ala.		
Electricians (inside wiremen)	1.875	9-13-46
Elevator constructors	1.840	9-2-46
Painters	1.750	(1)
Roofers:		
Slate and tile	1.600	7-26-46
Building laborers	.850	(1)
Boston, Mass.		
Asbestos workers	1.900	10-1-46
Carpenters	1.750	(1)
Cement finishers	1.875	8-27-46
Elevator constructors	1.920	9-2-46
Lathers	2.000	9-12-46
Plumbers and gas fitters	1.900	8-5-46
Roofers, composition	1.750	10-15-46
Sheet-metal workers	1.900	10-1-46
Steam fitters	1.900	8-5-46
Bricklayers' tender	1.250	9-20-46
Building laborers	1.250	9-20-46
Composition roofers' helpers	1.300	10-15-46
Elevator construetors' helpers	1.350	9-2-46
Terrazzo workers' helpers	1.400	10-15-46
Buffalo, N. Y.		
Electricians (inside wiremen)	[2] 1.950	8-12-46
Electricians (inside wiremen)	2.000	(1)
Lathers	1.950	8-12-46
Marble setters	1.950	8-12-46
Plasterers	[2] 1.950	8-12-46
Plasterers	2.000	(1)
Terrazzo workers' helpers	1.250	8-12-46
Tile layers' helpers	1.250	8-12-46
Butte, Mont.		
Bricklayers	$2.100	(1)
Electricians (inside wiremen)	2.000	7-25-46
Plumbers	2.250	7-25-46
Steam fitters	2.250	7-25-46
Structural-iron workers	1.685	11-1-46
Charleston, S. C.		
Bricklayers	1.750	(1)
Carpenters	1.375	9-13-46
Electricians	1.875	8-22-46
Plasterers	1.750	(1)
Structural-iron workers	1.625	7-31-46
Rodmen	1.375	7-31-46
Charleston, W. Va.		
Carpenters	1.725	7-26-46
Millwrights	1.850	7-26-46
Electricians (inside wiremen)	1.875	8-22-46
Elevator constructors	1.835	8-12-46
Painters	1.600	8-12-46
Paperhangers	1.600	8-12-46
Building laborers	1.000	(1)
Elevator constructors' helpers	1.285	8-12-46
Charlotte, N. C.		
Bricklayers	1.750	(1)
Marble setters	1.625	10-28-46
Mosaic and terrazzo workers	1.625	10-28-46
Plasterers	[2] 1.625	10-14-46
Plasterers	1.750	(1)
Plumbers	1.750	7-26-46
Steam fitters	1.750	7-26-46
Tile layers	1.625	10-28-46
Chicago, Ill.		
Electricians	2.150	(1)
Elevator constructors	1.975	10-7-46
Mosaic and terrazzo workers	1.950	7-25-46
Painters	1.950	7-30-46
Paperhangers	1.950	7-30-4
Elevator constructors' helpers	1.380	10-7-4
Terrazzo workers' helpers	1.500	7-25-4
Base-machine operators	1.700	7-25-4
Cincinnati, Ohio		
Asbestos workers	1.775	10-15-4
Elevator constructors	1.915	8-5-4
Marble setters	2.000	7-25-4
Plasterers	2.000	(1)
Plumbers	1.900	(1)
Stonemasons	2.000	7-25-4
Elevator constructors' helpers	1.340	8-5-
Cleveland, Ohio		
Asbestos workers	1.875	7-28-
Boilermakers	2.000	9-26-
Bricklayers	2.125	7-25-
Sewer and caisson	2.375	7-25-
Carpenters	1.875	8-12-
Carpenters	2.000	(1)
Millwrights and floor layers	1.875	8-12-
Millwrights and floor layers	2.000	(1)
Cement finishers	1.825	7-25-
Electricians (inside wiremen)	2.125	8-12-

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[1] Changes effective between Nov. 10, 1946, and Jan. 15, 1947.

[2] Roll-back rates.

TABLE 14.—*Wage changes for the building construction industry between July 1, 1946, and Jan. 15, 1947*—Continued

City and trade	Authorized rate	Effective date
Cleveland, Ohio—Continued		
Engineers—power equipment operators:		
Air comprsesors:		
Steel erection	$2.125	7-25-46
Plant operation	1.875	7-25-46
Portable	1.550	7-25-46
Bulldozers	1.750	7-25-46
Cranes and draglines	2.125	7-25-46
Derricks	2.125	7-25-46
Graders:		
Power	1.750	7-25-46
Blade	1.550	7-25-46
Hoists:		
High speed	1.875	7-25-46
Hoisting engines	1.750	7-25-46
Mixers:		
1 bag capacity, with side loaders	1.750	7-25-46
27E and over	1.875	7-25-46
Pumps, over 4-inch capacity discharge	1.750	7-25-46
Rollers, asphalt	1.750	7-25-46
Scrapers	1.875	7-25-46
Shovels	2.125	7-25-46
Tractors	1.550	7-25-46
Trenching machines	1.875	7-25-46
laziers	1.875	7-25-46
athers	2.125	7-26-46
arble setters	1.975	7-25-46
osaic and terrazzo workers	1.825	7-25-46
ainters	1.775	8-13-46
Structural steel	2.000	8-12-46
Swing stage	1.850	8-12-46
aperhangers	1.775	8-12-46
asterers	2.125	7-25-46
umbers	2.000	7-25-46
oofers:		
Composition	1.875	8-1-46
Foremen and waterproofers	1.925	8-1-46
eet-metal workers	1.875	7-25-46
eam fitters	2.000	7-25-46
onemasons	2.125	7-25-46
ructural-iron workers	2.125	7-25-46
Sheeters	2.375	7-25-46
Bucker up	2.250	7-25-46
Rodmen	2.125	7-25-46
e layers	1.875	8-22-46
icklayers' tenders	1.375	8-12-46
ilding laborers	1.375	7-25-46
asterers' laborers	1.375	7-25-46
umbers' laborers	1.475	8-12-46
razzo workers' helpers	1.375	10-14-46
e layers' helpers	1.350	8-12-46
Columbus, Ohio		
cklayers	2.000	7-25-46
rpenters	1.625	8-12-46
rpenters	1.750	(1)
ment finishers	1.625	9-17-46
ctricians (inside wiremen)	1.750	8-1-46
vator constructors	1.855	8-5-46
gineers—power equipment op-ators:		
Increase for all break-downs	.125	7-25-46
hers	1.875	8-1-46
nters	1.550	10-14-46
Structural steel and spray	1.725	10-14-46
sterers	2.000	(1)
klayers' tenders	1.150	7-25-46
lding laborers	1.000	7-25-46
vator constructors' helpers	1.300	8-5-46
terers' laborers	1.150	7-25-46
Dallas, Tex.		
Bricklayers	$2.000	8-29-46
Carpenters	1.625	10-23-46
Cement finishers	1.650	10-23-46
Electricians (inside wiremen)	1.875	9-1-46
Engineers—power equipment operators:		
Air compressors	1.500	8-29-46
Bulldozers	1.750	8-29-46
Cranes, derricks, and draglines	1.750	8-29-46
Graders:		
Self-propelled	1.750	8-29-46
Hoists:		
1 drum	1.500	8-29-46
2 drums	1.750	8-29-46
LeTourneau	1.750	8-29-46
Mixers:		
Less than 14 cubic feet	1.500	8-29-46
14 cubic feet or over	1.750	8-29-46
Pumps (2 or more)	1.500	8-29-46
Rollers	1.500	8-29-46
Scrapers:		
3 cubic yards or less	1.500	8-29-46
Over 3 cubic yards	1.750	8-28-46
Shovels	1.750	8-29-46
Tractors	1.750	8-29-46
Trenching machines	1.750	8-29-46
Marble setters	1.875	7-25-46
Mosaic and terrazzo workers	1.875	7-25-46
Painters	1.500	10-23-46
Painters	1.625	(1)
Spray or stage	1.750	10-23-46
Spray or stage	1.825	(1)
Plasterers	1.875	7-26-46
Plumbers	1.875	7-25-46
Roofers:		
Composition	1.400	10-23-46
Steam fitters	1.875	7-25-46
Stonemasons	2.000	8-29-46
Structural-iron workers	1.750	8-12-46
Rodmen	1.500	8-12-46
Tile layers	1.875	7-25-46
Building laborers	.900	10-23-46
Plasterers' laborers	1.100	10-23-46
Dayton, Ohio		
Asbestos workers	1.775	10-15-46
Bricklayers	2.100	(1)
Engineers—power equipment operators:		
Air compressors	1.750	9-25-46
Bulldozers	1.625	9-25-46
Cranes and draglines	2.000	9-25-46
Derricks	2.000	9-25-46
Graders:		
Power	1.625	9-25-46
Hoists:		
High speed	1.750	9-25-46
Hoisting engines	1.625	9-25-46
Mixers:		
Concrete, with capacity of more than 1 bag or 1 bag capacity with side loaders	1.625	9-25-46
Paving 27E and over	1.750	9-25-46
Pumps, over 4-inch capacity discharge	1.625	9-25-46
Rollers, asphalt	1.625	9-25-46
Scrapers	1.750	9-25-46
Shovels	2.000	9-25-46
Trenching machines	1.750	9-25-46
Glaziers	1.750	11-1-46
Plumbers	[2] 1.775	7-1-46
Plumbers	1.875	(1)
Building laborers	1.000	(1)

Changes effective between Nov. 10, 1946, and Jan. 15, 1947.

Roll-back rates.

TABLE 14.—*Wage changes for the building construction industry between July 1, 1946, and Jan. 15, 1947*—Continued

City and trade	Authorized rate	Effective date
Denver, Colo.		
Stonecutters	$1.750	9-12-46
Marble setters' helpers	1.250	10-1-46
Terrazzo workers' helpers	1.350	7-26-46
Tile layers' helpers	1.250	10-1-46
Des Moines, Iowa		
Elevator constructors	1.750	8-1-46
Plumbers	1.875	(1)
Sheet-metal workers	1.625	10-1-46
Elevator constructors' helpers	1.250	8-1-46
Detroit, Mich.		
Carpenters	1.825	7-25-46
Lathers	2.000	7-25-46
Painters	1.750	(1)
Spray and stage	2.000	(1)
Paperhangers	1.750	(1)
Plumbers	2.000	7-25-46
Bricklayers' tenders	1.275	7-25-46
Mortar mixers	1.350	7-25-46
Marble setters' helpers	1.400	7-25-46
Tile layers' helpers	1.400	9-10-46
Duluth, Minn.		
Bricklayers	1.750	7-25-46
Electricians	1.680	(1)
Lathers	1.725	9-18-46
Roofers, composition	1.250	8-5-46
Foremen	1.450	8-5-46
Stonemasons	1.750	7-25-46
Plasterers' laborers	1.325	9-1-46
El Paso, Tex.		
Carpenters	1.625	(1)
Plasterers	2.000	(1)
Plumbers	2.000	(1)
Erie, Pa.		
Bricklayers	2.125	(1)
Electricians (inside wiremen)	1.625	8-1-46
Lathers	1.850	9-16-46
Plumbers	1.750	7-25-46
Roofers:		
Composition	1.425	9-16-46
Slate and tile	1.425	9-16-46
Sheet-metal workers	1.425	9-16-46
Steam fitters	1.750	7-25-46
Grand Rapids, Mich.		
Bricklayers	2.000	7-25-46
Carpenters	1.625	7-25-46
Wharf, bridge and millwrights	1.625	8-12-46
Electricians (inside wiremen)	1.750	8-12-46
Electricians (inside wiremen)	2.000	(1)
Elevator constructors	1.775	8-26-46
Engineers—power equipment operators:		
Cranes, derricks, compressors and all other power driven machinery used in the handling of steel for building and bridges	1.900	9-10-46
Marble setters	1.750	7-26-46
Mosaic and terrazzo workers	1.750	7-26-46
Painters	1.375	7-26-46
Spray and swing stage	1.625	7-26-46
Paperhangers	1.375	7-26-46
Plumbers	1.875	(1)
Grand Rapids, Mich.—Continued		
Stonemasons	$2.000	7-25-46
Tile layers	1.750	7-26-46
Bricklayers' tenders	1.150	7-25-46
Building laborers	1.075	7-25-46
Elevator constructors' helpers	1.240	8-26-46
Plasterers' laborers	1.200	7-25-46
Houston, Tex.		
Plasterers	2.250	(1)
Plumbers	2.125	(1)
Indianapolis, Ind.		
Asbestos workers	1.775	10-15-46
Cement finishers	1.950	10-29-46
Electricians (inside wiremen)	1.850	8-15-46
Elevator constructors	1.860	9-30-46
Glaziers	1.625	8-8-46
Plasterers	1.950	10-29-46
Sign painters	1.750	8-22-46
Building laborers	1.100	(1)
Elevator constructors' helpers	1.300	9-30-46
Jackson, Miss.		
Carpenters	1.375	8-12-46
Plumbers	1.750	(1)
Structural-iron workers	1.750	7-30-46
Rodmen	1.500	7-30-46
Bricklayers' tenders	.850	10-23-46
Building laborers	.750	10-23-46
Building laborers	.800	(1)
Plasterers' laborers	.850	10-23-46
Jacksonville, Fla.		
Carpenters	1.500	(1)
Millwrights and pile drivers	1.600	(1)
Electricians	1.875	(1)
Kansas City, Mo.		
Engineers—power equipment operators:		
Bulldozers	1.750	10-18-46
Graders, elevating	1.750	10-18-46
Little Rock, Ark.		
Bricklayers	2.120	(1)
Carpenters	1.500	(1)
Electricians	1.625	(1)
Elevator constructors	1.675	9-1-4
Plumbers	[2] 1.625	8-12-4
Plumbers	1.750	(1)
Steam fitters	[2] 1.625	8-12-4
Steam fitters	1.750	(1)
Building laborers	.750	(1)
Elevator constructors' helpers	1.170	9-1-4
Los Angeles, Calif.		
Boilermakers	1.950	10-1-
Bricklayers	2.000	7-25-
Carpenters	1.650	7-25-
Millwrights	1.850	7-25-
Parquetry floor layers	1.850	7-25-
Wharf and bridge	1.775	7-25-
Cement finishers	1.775	7-25-
Composition and mastic finishers	1.900	7-25-
Electricians (inside wiremen)	1.875	8-12-
Electricians (inside wiremen)	2.000	(1)

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[1] Changes effective between Nov. 10, 1946, and Jan. 15, 1947.

[2] Roll-back rate.

TABLE 14.—*Wage changes for the building construction industry between July 1, 1946, and Jan. 15, 1947*—Continued

City and trade	Authorized rate	Effective date
Los Angeles, Calif.—Continued		
Engineers—power equipment operators:		
Air compressors	$1.450	7-25-46
Bulldozers	1.750	7-25-46
Cranes, derricks, and draglines	1.900	7-25-46
Graders	1.575	7-25-46
Elevating	1.825	7-25-46
Mixers:		
Paving type	1.800	7-25-46
Skip type	1.575	7-25-46
Mobile type	1.800	7-25-46
Pumps	1.450	7-25-46
Rollers	1.650	7-25-46
Scrapers	1.700	7-25-46
Shovels	1.900	7-25-46
Tractors	1.700	7-25-46
Trenching machines	1.775	7-25-46
athers:		
Metal	2.000	7-25-46
Wood	1.900	7-25-46
Iarble setters	1.800	8-21-46
Iosaic and terrazzo workers	1.800	8-28-46
lasterers	2.000	7-25-46
oofers:		
Composition	1.600	8-12-46
Foremen	1.775	8-12-46
Slate and tile	1.600	8-12-46
eam fitters	2.000	7-25-46
onemasons	2.000	7-25-46
ructural-iron workers	1.900	7-25-46
Finishers	1.775	7-25-46
Rodmen	1.775	7-25-46
uilding laborers	1.150	7-25-46
asterers' laborers	1.700	7-25-46
Louisville, Ky.		
sbestos workers	1.775	10-15-46
ricklayers	1.875	8-12-46
ricklayers	2.000	(1)
rpenters	1.700	(1)
ectricians	1.850	(1)
asterers	2.000	(1)
umbers	1.850	(1)
onemasons	1.875	8-12-46
Madison, Wis.		
gineers—power equipment operators:		
Air compressors	1.550	8-22-46
Bulldozers	1.850	8-22-46
aziers	1.500	10-11-46
eet-metal workers	1.600	7-25-46
le layers	1.625	11-4-46
icklayers' tenders	1.100	10-16-46
Mortar mixers	1.250	10-16-46
ilding laborers	1.100	10-16-46
Manchester, N. H.		
ectricians (inside wiremen)	1.500	8-15-46
asterers	2.000	(1)
umbers	1.750	(1)
ilding laborers	1.050	(1)
Memphis, Tenn.		
icklayers	2.250	(1)
ctricians	1.875	(1)
thers	1.750	7-26-46
inters	2.000	(1)
sterers	2.250	(1)
mbers	2.000	(1)
uctural-iron workers	1.750	10-18-46
Rodmen	1.625	10-18-46
Milwaukee, Wis.		
Electricians (inside wiremen)	$1.675	10-30-46
Electricians (inside wiremen)	1.850	(1)
Residential	1.675	10-30-46
Residential	1.850	(1)
Engineers—power equipment operators:		
Air compressors	1.450	9-7-46
Bulldozers	1.650	8-22-46
Cranes, derricks, and draglines	2.000	8-22-46
Hoists	1.700	8-22-46
Mixers, on building	1.650	8-22-46
When paver is used	1.850	8-22-46
Pumps	1.400	8-22-46
Concrete	1.850	8-22-46
Scrapers	1.850	8-22-46
Shovels	2.000	8-22-46
Tractors	1.650	8-22-46
Plumbers	1.850	(1)
Roofers:		
Composition	1.550	7-25-46
Built-up roofers	1.550	7-25-46
Plasterers' laborers	1.350	7-26-46
Plumbers' laborers	1.350	10-16-46
Sprinkler fitters' helpers	1.100	9-3-46
Minneapolis, Minn.		
Elevator constructors	1.800	8-26-46
Glaziers	1.500	8-1-46
Painters	1.650	(1)
Paperhangers	1.650	(1)
Plasterers	1.900	(1)
Sprinkler fitters	1.750	9-3-46
Elevator constructors' helpers	1.260	8-26-46
Sprinkler fitters' helpers	1.100	9-3-46
Mobile, Ala.		
Bricklayers	2.000	(1)
Carpenters	1.625	(1)
Pile drivers and dock builders	1.625	9-13-46
Electricians	1.750	(1)
Engineers—power equipment operators:		
Air compressors	1.500	7-4-46
Graders	1.500	7-4-46
Mixers, other than central	1.500	7-4-46
Pumps	1.500	7-4-46
Rollers, steam and road	1.500	7-4-46
Tractors	1.500	7-4-46
All other power equipment operators	1.750	7-4-46
Glaziers	1.375	9-13-46
Painters	1.500	(1)
Roofers:		
Composition	1.500	7-26-46
Foremen	1.625	7-26-46
Slate and tile	1.500	7-26-46
Bricklayers' tenders	.900	7-26-46
Mortar mixers	1.000	7-26-46
Building laborers	.900	7-26-46
Plasterers' laborers	.900	7-26-46
Nashville, Tenn.		
Bricklayers	2.000	(1)
Carpenters	1.500	(1)
Electricians	1.875	(1)
Marble setters	1.780	9-27-46
Mosaic and terrazzo workers	1.750	9-27-46
Plasterers	2.250	(1)
Tile layers	1.750	9-27-46

Changes effective between Nov. 10, 1946, and Jan. 15, 1946.

TABLE 14.—*Wage changes for the building construction industry between July 1, 1946, and Jan. 15, 1947*—Continued

City and trade	Authorized rate	Effective date
Newark, N. J.		
Bricklayers	$2.500	(1)
Painters	1.990	9-1-46
Plasterers	2.500	(1)
Bricklayers' tenders	1.500	7-25-46
Bricklayers' tenders	1.550	(1)
Building laborers	1.500	7-25-46
Building laborers	1.550	(1)
Plasterers' laborers	1.500	7-25-46
Plasterers' laborers	1.550	(1)
New Haven, Conn.		
Bricklayers	2.000	(1)
Carpenters	1.625	7-25-46
Painters	[2]1.625	7-25-46
Plasterers	2.000	(1)
Plumbers	1.750	10-22-46
Steam fitters	1.750	10-22-46
Bricklayers' tenders	1.175	8-22-46
Building laborers	1.175	8-22-46
Marble setters' helpers	1.175	8-22-46
Plasterers' laborers	1.175	8-22-46
Terrazzo workers' helpers	1.175	8-22-46
Tile layers' helpers	1.175	8-22-46
New Orleans, La.		
Bricklayers	1.938	11-1-46
Glaziers	1.463	8-29-46
Marble setters	1.938	11-1-46
Plumbers	1.875	(1)
Sheet-metal workers	1.600	10-1-46
Stonemasons	1.938	11-1-46
New York, N. Y.		
Bricklayers	2.500	(1)
Carpenters	2.500	(1)
Electricians	2.250	(1)
Lathers	2.250	9-13-46
Painters	2.000	9-1-46
Plasterers	2.500	(1)
Plasterers' laborers	1.670	10-29-46
Norfolk, Va.		
Bricklayers	1.875	8-12-46
Carpenters	1.375	7-26-46
Carpenters	1.500	(1)
Electricians	1.800	(1)
Lathers	1.750	10-14-46
Plasterers	1.750	9-3-46
Plumbers	1.750	8-23-46
Steam fitters	1.750	8-23-46
Stonemasons	1.875	8-12-46
Structural-iron workers	1.875	8-12-46
Oklahoma City, Okla.		
Carpenters	1.675	(1)
Electricians	1.875	(1)
Plasterers	2.250	(1)
Plumbers	1.875	(1)
Building laborers	.975	(1)
Omaha, Nebr.		
Electricians	1.825	(1)
Bricklayers' tenders	1.050	7-25-46
Hod carriers	1.050	7-25-46
Building laborers	1.050	(1)
Plasterers' laborers	1.050	7-25-46
Peoria, Ill.		
Electricians	$1.875	(1)
Engineers—power equipment operators:		
Air compressors	1.800	10-8-46
Riveting steel tunnel and caisson	1.600	10-8-46
Bulldozers	1.800	10-8-46
Cranes, derricks, and draglines	1.800	10-8-46
On steel	1.900	10-8-46
Graders:		
Form	1.500	10-8-46
Elevating	1.800	10-8-46
Hoists, 2 or more drums	1.800	10-8-46
LeTourneau, steel	1.900	10-8-46
Mixers:		
Under 3 bags	1.580	10-8-46
3 bag to 21E capacity	1.600	10-8-46
Paving, 21E and larger	1.800	10-8-46
Pumps:		
Water	1.580	10-8-46
Concrete	1.800	10-8-46
Rollers:		
On asphalt or brick	1.800	10-8-46
On earth, 5 tons or less	1.500	10-8-46
Scrapers	1.800	10-8-46
Shovels	1.800	10-8-46
Tractors, straight cats	1.450	10-8-46
Trenching machines	1.800	10-8-46
Philadelphia, Pa.		
Electricians (inside wiremen)	2.125	9-1-46
Electricians	2.250	(1)
Machinists	1.875	10-21-46
Marble setters	1.900	8-1-46
Plasterers	2.250	8-8-46
Structural-iron workers:		
Rodmen	1.800	7-25-4
Riggers and machinery movers	1.800	7-25-4
Marble setters' helpers	1.300	8-1-4
Plasterers' laborers	1.525	9-4-4
Phoenix, Ariz.		
Boilermakers	1.950	10-1-4
Carpenters	1.775	(1)
Electricians (inside wiremen)	1.750	10-14-4
Plumbers	2.000	(1)
Building laborers	1.150	(1)
Pittsburgh, Pa.		
Cement finishers	2.000	7-25-
Engineers—power equipment operators:		
Air compressors	2.050	7-25-
Bulldozers	2.050	7-25-
Cranes, derricks, and draglines	2.150	7-25-
Graders:		
Road	2.050	7-25
Elevating	2.150	7-25
Hoists:		
1 drum	2.050	7-25
2 drums	2.150	7-25
LeTourneau	2.150	7-25
Concrete:		
Mixers	2.050	7-25
Paving	2.150	7-25

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[1] Changes effective between Nov. 10, 1946, and Jan. 15, 1947.

[2] Roll-back rates.

TABLE 14.—*Wage changes for the building construction industry between July 1, 1946, and Jan. 15, 1947*—Continued

City and trade	Authorized rate	Effective date
Pittsburgh, Pa.—Continued		
Engineers—power equipment operators—Continued		
Pumps	$2.050	7-25-46
Rollers	2.050	7-25-46
Shovels	2.150	7-25-46
Tractors	2.050	7-25-46
Trenching machines	2.150	7-25-46
lumbers and gas fitters	2.000	7-26-46
team fitters	2.000	9-4-46
tonemasons	2.000	7-26-46
tructural-iron workers	2.000	7-25-46
Rodmen	2.000	7-25-46
ile layers	1.750	7-25-46
ile layers' helpers	1.170	7-25-46
Portland, Maine		
ricklayers	[2] 1.775	8-12-46
ement finishers	[2] 1.775	8-12-46
lasterers	1.750	(1)
tonemasons	[2] 1.775	8-12-46
ile layers	[2] 1.775	8-12-46
Portland, Ore.		
sbestos workers	1.875	7-26-46
oilermakers	1.950	10-1-46
ricklayers	2.100	(1)
arpenters	1.750	(1)
ectricians	1.800	(1)
evator constructors	1.815	7-8-46
arble setters	1.775	8-12-46
umbers	2.125	(1)
ilding laborers	1.350	(1)
evator constructors' helpers	1.270	7-8-46
Providence, R. I.		
evator constructors	1.740	7-15-46
aziers	1.400	10-25-46
arble setters	1.750	10-25-46
osaic and terrazzo workers	1.750	10-25-46
asterers	2.000	(1)
uctural-iron workers	1.875	10-15-46
Rodmen	1.875	10-15-46
e layers	1.750	10-25-46
evator constructors' helpers	1.220	7-15-46
Reading, Pa.		
cklayers	2.000	(1)
rpenters	1.575	9-4-46
rpenters	1.600	(1)
ctricians	1.750	(1)
vator constructors	1.720	9-9-46
e layers	1.750	9-1-46
vator constructors' helpers	1.200	9-9-46
Richmond, Va.		
penters	1.375	9-17-46
penters	1.500	(1)
nent finishers	1.625	9-15-46
hers	1.750	9-20-46
rble setters	1.750	9-18-46
saic and terrazzo workers	1.625	9-18-46
nters	1.400	(1)
terers	1.750	9-1-46
terers	2.000	(1)
mbers	1.750	8-23-46
et-metal workers	1.500	8-23-46
m fitters	1.750	8-23-46
ctural-iron workers	1.875	10-28-46
Rodmen	1.625	10-28-46
layers	1.625	9-8-46
Rochester, N. Y.		
Carpenters	$1.910	(1)
Electricians	1.985	(1)
Marble setters	1.820	9-3-46
Mosaic and terrazzo workers	1.820	9-3-46
Plumbers and gas fitters	1.875	9-3-46
Plumbers	1.900	(1)
Steam fitters	1.875	9-3-46
Stonemasons	1.960	9-1-46
Structural-iron workers	2.000	7-29-46
Rodmen	2.000	7-29-46
Tile layers	1.820	9-3-46
Building laborers	1.300	(1)
Rock Island, Ill.		
Elevator constructors	1.790	8-23-46
Painters	1.625	7-29-46
Paperhangers	1.625	7-29-46
Plasterers	2.000	(1)
Plumbers	1.750	7-26-46
Steam fitters	1.750	7-26-46
Elevator constructors' helpers	1.250	8-23-46
St. Louis, Mo.		
Bricklayers	2.250	(1)
Carpenters	1.950	(1)
Electricians (inside wiremen)	2.000	8-1-46
Electricians (inside wiremen)	2.250	(1)
Painters	1.800	(1)
Spray	1.900	7-25-46
Plasterers	2.050	9-3-46
Plasterers	2.250	(1)
Plumbers	1.875	8-31-46
Plumbers	2.050	(1)
Tile layers	1.875	9-5-46
Bricklayers' tenders	1.375	8-12-46
Tile layers' helpers	1.250	10-22-46
St. Paul, Minn.		
Painters	1.650	(1)
Sprinkler fitters	1.750	9-3-46
Sprinkler fitters' helpers	1.100	9-3-46
Salt Lake City, Utah		
Boilermakers	1.950	10-1-46
Bricklayers	1.875	11-5-46
Electricians (inside wiremen)	1.625	8-12-46
Electricians	1.680	(1)
Engineers—power equipment operators:		
Air compressors	1.375	7-26-46
Bulldozers	1.625	7-26-46
Cranes, derricks, and draglines	1.775	7-26-46
Graders, elevating	1.625	7-26-46
Hoists, 1 drum	1.500	7-26-46
LeTourneau:		
Model super C	1.625	7-26-46
Larger than super C	1.750	7-26-46
Mixers:		
Skip type	1.375	7-26-46
Paving type	1.625	7-26-46
Pumps	1.375	7-26-46
Rollers	1.625	7-26-46
Scrapers up to 14 yards	1.625	7-26-46
Scrapers 14 yards or over	1.750	7-26-46
Shovels	1.775	7-26-46
Tractors	1.625	7-26-46
Trenching machines	1.625	7-26-46
Painters	1.500	7-25-46
Swing stage	1.625	7-25-46
Steel	1.625	7-25-46

Change effective between Nov. 10, 1946, and Jan. 15, 1947.

Roll-back rates.

TABLE 14.—*Wage changes for the building construction industry between July 1, 1946, and Jan. 15, 1947*—Continued

City and trade	Authorized rate	Effective date
Salt Lake City, Utah—Continued		
Paperhangers	$1.500	7-25-46
Plasterers	2.000	(1)
Plumbers	1.750	11-5-46
Steam fitters	1.750	11-5-46
Bricklayers' tenders	1.375	7-25-46
Building laborers	1.000	7-25-46
Plasterers' laborers	1.525	7-25-46
Plumbers' laborers (pipe layers)	1.125	7-25-46
San Antonio, Tex.		
Carpenters	1.500	10-22-46
Carpenters	1.625	(1)
Cement finishers	1.625	7-26-46
Electricians (inside wiremen)	1.750	8-6-46
Marble setters	1.750	10-24-46
Mosaic and terrazzo workers	1.750	10-23-46
Painters	1.500	(1)
Plasterers	1.875	7-26-46
Plasterers	2.250	(1)
Plumbers	2.000	(1)
Roofers:		
Composition	1.250	9-11-46
Slate and tile	1.375	9-11-46
Tile layers	1.750	10-23-46
Bricklayers' tenders	1.000	10-25-46
Mortar mixers	1.000	10-25-46
Building laborers	.750	10-25-46
Plasterers' laborers	1.000	10-25-46
Plumbers' laborers	.800	10-25-46
San Francisco, Calif.		
Boilermakers	1.950	10-1-46
Bricklayers	2.250	(1)
Electricians	2.000	(1)
Plasterers	2.250	(1)
Plumbers	2.000	(1)
Scranton, Pa.		
Asbestos workers	1.750	8-20-46
Bricklayers	1.875	10-21-46
Cement finishers	1.575	8-1-46
Marble setters	1.750	10-21-46
Mosaic and terrazzo workers	1.750	10-21-46
Painters	1.500	(1)
Plasterers	1.875	8-1-46
Plumbers	1.750	(1)
Stonemasons	1.875	10-21-46
Tile layers	1.750	10-21-46
Seattle, Wash.		
Boilermakers	1.950	10-1-46
Bricklayers	2.105	(1)
Carpenters	1.805	(1)
Electricians	2.005	(1)
Painters	1.805	(1)
Plasterers	2.105	(1)
Plumbers	2.200	(1)
Building laborers	1.405	(1)
South Bend, Ind.		
Asbestos workers	1.775	10-15-46
Elevator constructors'	1.825	7-22-46
Plasterers	2.000	(1)
Elevator constructors' helpers	1.280	7-22-46
Spokane, Wash.		
Boilermakers	$1.950	10-1-46
Bricklayers	2.000	7-25-46
Bricklayers	2.250	(1)
Carpenters	1.650	9-12-46
Painters	1.650	7-25-46
Spray	2.000	7-25-46
Steel	1.900	7-25-46
Plasterers	2.000	8-12-46
Plasterers	2.100	(1)
Plumbers	2.200	(1)
Stonemasons	2.000	7-25-46
Plasterers' laborers	1.550	8-12-46
Springfield, Mass.		
Elevator constructors	1.840	7-29-46
Painters	1.625	9-1-46
Paperhangers	1.625	9-1-46
Plumbers and gas fitters	1.750	9-25-46
Steam fitters	1.750	9-25-46
Elevator constructors' helpers	1.290	7-29-46
Tampa, Fla.		
Carpenters	1.440	7-25-46
Electricians	1.750	(1)
Glaziers	1.375	8-12-46
Plumbers	1.750	(1)
Toledo, Ohio		
Elevator constructors	1.975	9-22-46
Plumbers	1.940	(1)
Roofers:		
Composition	1.725	8-7-46
Build-up moppers	1.725	8-7-46
Build-up rollers or house roofers	1.725	8-7-46
Slate and tile	1.725	8-7-46
Tile layers	1.875	11-1-46
Bricklayers' tenders	1.295	7-25-46
Mortar mixer	1.295	7-25-46
Building laborers	1.175	7-25-46
Elevator constructors' helpers	1.380	9-22-46
Marble setters' helpers	1.250	9-6-46
Plasterers' laborers	1.345	7-25-46
Terrazzo workers' helpers	1.250	9-6-46
Tile layers' helpers	1.250	9-6-46
Washington, D. C.		
Electricians	2.250	(1)
Lathers	2.000	10-25-46
Painters:		
Bridge, structural steel and spray	2.250	7-25-46
Plasterers	2.125	8-12-46
Plasterers	2.250	(1)
Residential	2.125	8-12-46
Plumbers and gas fitters	2.000	9-1-4
Plumbers	2.125	(1)
Sheet-metal workers	2.000	7-25-4
Steam fitters	2.125	10-11-4
Wichita, Kans.		
Bricklayers	2.000	(1)
Carpenters	1.450	9-27-4
Carpenters	1.963	(1)
Plasterers	1.875	(1)
Plumbers	1.875	(1)
Structural-iron workers	1.625	10-22-
Rodmen	1.375	10-22-
Building laborers	1.000	(1)

[1] Change effective between Nov. 10, 1946, and Jan. 15, 1947.

TABLE 14.—*Wage changes for the building construction industry between July 1, 1946, and Jan. 15, 1947*—Continued

City and trade	Authorized rate	Effective date
Worcester, Mass.		
ricklayers	$1.995	8-1-46
arpenters	1.625	(1)
ement finishers	1.995	8- 1-46
lectricians (inside wiremen)	1.625	8-12-46
lectricians	1.750	(1)
levator constructors	1.740	7-22-46
arble setters	1.875	8-1-46
osaic and terrazzo workers	1.875	8-1-46
ainters	1.500	(1)
lasterers	1.995	8-1-46
lumbers	1.850	(1)
onemasons	1.995	8-1-46
ile layers	1.875	8-1-46
uilding laborers	1.100	(1)
levator constructors' helpers	1.220	7-22-46
York, Pa.		
Asbestos workers	$2.000	11-4-46
Elevator constructors	1.625	7-10-46
Plumbers	1.500	(1)
Building laborers	.900	(1)
Elevator constructors' helpers	1.140	7-10-46
Youngstown, Ohio		
Boilermakers	2.000	9-26-46
Electricians	2.000	(1)
Plasterers	2.000	(1)
Building laborers	1.200	(1)

[1] Changes effective between Nov. 10, 1946, and Jan. 15, 1947.

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UNITED STATES DEPARTMENT OF LABOR
L. B. Schwellenbach, *Secretary*

BUREAU OF LABOR STATISTICS
Ewan Clague, *Commissioner*

Union Wages and Hours of Motortruck Drivers and Helpers

July 1, 1946

Bulletin No. 911

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Letter of Transmittal

UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS,
Washington, D. C., June 5, 1947

The SECRETARY OF LABOR:

I have the honor to transmit herewith the annual report on wages and hours of union motortruck drivers and helpers in 75 cities, as of July 1, 1946.

This report was prepared in the Bureau's Wage Analysis Branch by James P. Corkery, under the direction of Donald H. Gerrish.

EWAN CLAGUE, *Commissioner.*

Hon. L. B. SCHWELLENBACH,
Secretary of Labor.

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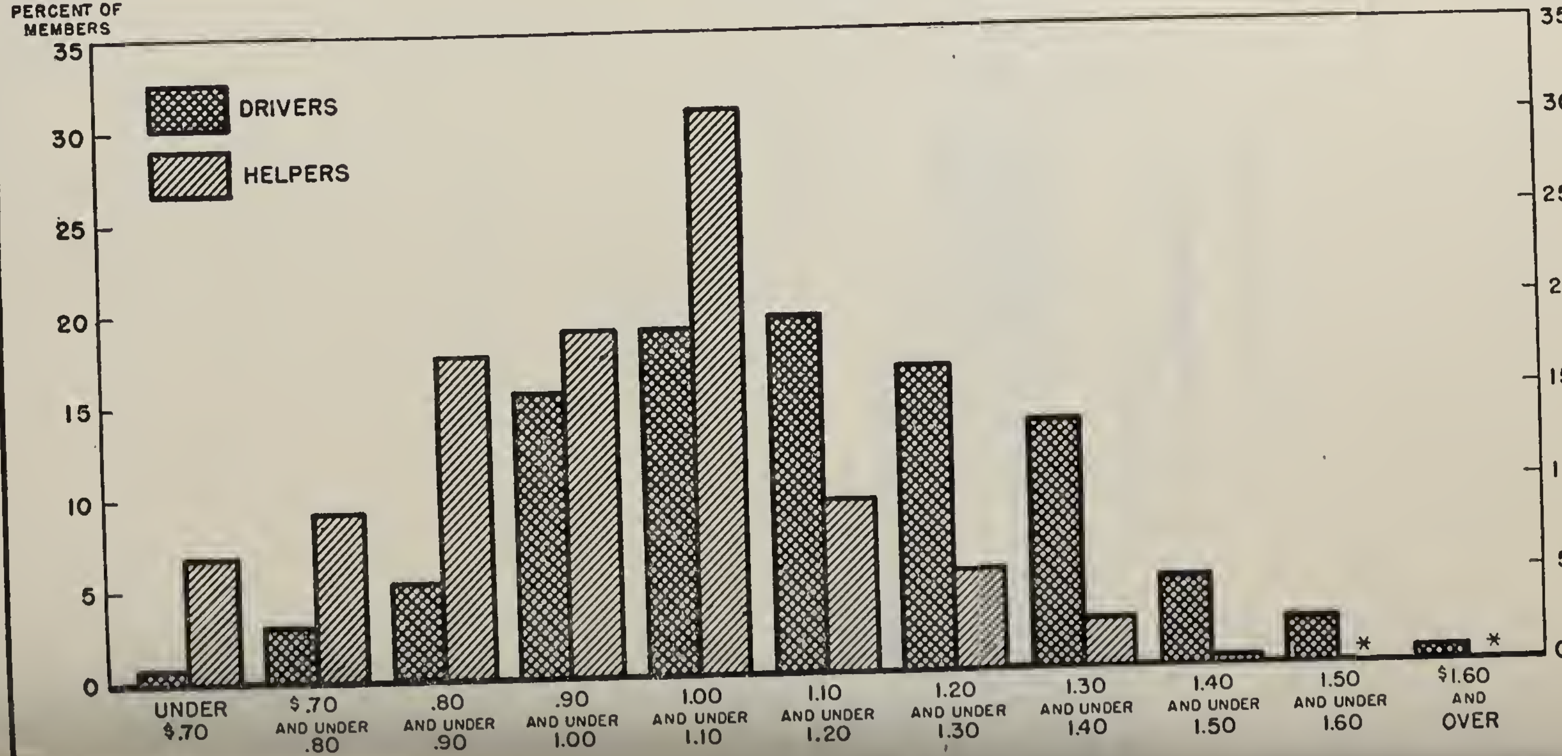
DISTRIBUTION OF UNION MOTORTRUCK DRIVERS AND HELPERS ACCORDING TO HOURLY RATES

JULY 1, 1946



BUREAU OF LABOR STATISTICS

*LESS THAN .05 OF ONE PERCENT

lletin No. 911 of the
ited States Bureau of Labor Statistics

Union Wages and Hours of Motortruck Drivers and Helpers, July 1, 1946

Summary

Jnion motortruck drivers in 75 cities averaged $1.13 an hour
July 1, 1946, an increase of 11 percent in the union wage scale
r July 1, 1945. Helpers who rode on the trucks averaged 96
ts an hour, an advance of about 12 percent. About 9 of every
drivers received an increase, as contrasted with only about 3
of every 10 during the previous year. The rates for over four-
hs of the helpers also advanced between 1945 and 1946. Rates
ween $1.00 and $1.20 were paid to almost 40 percent of the
vers. Of the 75 cities studied, Seattle had the highest average
.36), Jackson ($0.76) and San Antonio ($0.79) had the lowest.
traight-time weekly hours on July 1, 1946, averaged 44.7 for
vers and 43.8 for helpers. For drivers this represents an aver-
reduction of 2 percent since 1945. Forty hours constituted the
ight-time workweek for almost 45 percent of the drivers and
r half of all helpers surveyed.

ime and a half was the usual overtime rate for all hours worked
xcess of those stipulated in the union agreement. Double time,
ime and a half was typical for all Sunday work or work on the
consecutive day.

bout 8 of every 10 truck drivers and helpers worked under
eements providing for paid vacations.

Scope and Method of Study

his study is one of a series of annual surveys of union wage
es in selected trades in 75 cities of the United States.[1] Although
n scales for a few driver classifications are available as far
as 1907, the index series showing the general trend of union
es dates back only to 1936. The limited data available for prior

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e data for this study were obtained by field representatives, working from the regional
of the Bureau, through personal interviews with union officials and employers in each
he report covered 218,579 motortruck drivers and 31,465 helpers who rode on the trucks.

years in this industry were insufficient to warrant the compilation of an index series.

All of the figures in this report were based on effective union scales, a union scale being a minimum wage rate and maximum schedule of hours agreed upon through collective bargaining between employers or their bargaining associations and labor unions.[2]

All truck driving in each city is treated as one trade, separation being made only between drivers and helpers.

The survey primarily covered city trucking. Rates for drivers operating trucks on long-distance runs from terminals located in the cities surveyed were included when payment was on an hourly rather than a mileage basis.[3]

Bakery, beer, laundry, and milk drivers were generally paid minimum weekly guarantees plus commissions based on the volume of individual sales. Over-the-road or long distance drivers were usually compensated on a trip or mileage basis. Since such quotations based on commission, trip, or mileage rates could no be converted to an hourly basis, they have been excluded from the computations.

Trend of Union Wage Rates and Weekly Hours [4]

Wage rates.—Union wage rates for truck drivers advance slightly more than 11 percent between July 1, 1945 and July 1 1946. Most of the increase took place after VJ-day and represente the largest advance recorded in any of the 10 years for whic comparable data are available. The largest previous increases too place during the period between the beginning of World War I and the effective date of Federal wage stabilization orders. Thes increases amounted to 6.8 percent between 1941 and 1942 and 5. percent between 1942 and 1943. Rates for drivers' helpers show slightly greater percentage increase.

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[2] Some union members may receive rates in excess of the minimum agreed upon because seniority, special skills, or other personal reasons. These rates were not considered in preparation of this report.

[3] No Nation-wide combination has been made of the scales which prevail for differ commodities (such as coal, ice, building materials, beer, general commodities, baggage expr heavy freight, and other items) or for different sizes of trucks. Local rate differentials h developed over a period of years through local collective bargaining and there is, as a res considerable variation from city to city. For example, building material drivers in one may have higher rates than drivers who handle general commodities, while in another the reverse may be true.

[4] In computing the index series (1939 = 100) which indicates the trend of wage rates, annual percentage change from year to year is derived from aggregates of union quotati for identical classifications in two successive years. The membership weights in both of aggregates used for each year-to-year comparison are those reported for the second year. obtain the index for the current year, the total of the current aggregates is divided by previous year's aggregates and the ratio thus obtained is multiplied by the previous ye index numbers. The indexes are computed on this basis in order to minimize the effec changes in union membership which might obscure the real changes in wages.

Weekly hours.—Average straight-time weekly hours[5] for truck rivers dropped 2 percent during the period from July 1, 1945 to uly 1, 1946. This reflected reductions in straight-time hours from 8 or 44 to 40 per week to conform with the hours generally ef- ective in industry. Straight-time hours for drivers have been ropping steadily since 1937 (except for an insignificant increase etween 1941 and 1942) the first year for which comparable data re available.

TABLE 1.—*Indexes of hourly wage rates and weekly hours for union motortruck drivers and helpers, 1936–46*

[1939 = 100]

Year	Drivers and helpers		Drivers		Helpers	
	Wage rates	Hours	Wage rates	Hours	Wage rates	Hours
6	88.5	101.8	(1)	(1)	(1)	(1)
7	94.4	100.9	94.5	100.8	94.2	101.2
8	97.8	100.9	97.9	100.8	97.5	101.2
9	100.0	100.0	100.0	100.0	100.0	100.0
0	102.0	99.1	102.1	99.2	102.0	98.7
	106.1	98.5	105.9	98.5	107.0	98.1
	113.6	98.8	113.1	98.6	116.4	100.0
	119.8	98.6	119.2	98.4	123.0	99.8
	122.6	98.5	121.9	98.3	126.8	99.8
	125.2	98.3	124.5	98.1	129.8	99.7
	139.3	96.3	138.4	96.1	145.5	97.5

nformation not computed separately in 1936.

stribution of Union Members by Hourly Wage Rates, 1946

Organized motortruck drivers averaged $1.13 an hour in the cities surveyed on July 1, 1946. Helpers who rode on the trucks eraged 96 cents an hour. Almost two-fifths of all drivers had es ranging from $1.00 to $1.20, and an additional 37 percent re paid in excess of $1.20. The remaining 25 percent received s than $1.00, with only 6 percent receiving less than 85 cents. nong the wide range of rates reported, the highest was a rate $2.00 an hour covering a few dump-truck drivers in St. Louis l drivers of dump trucks of over 20-yards capacity in Seattle. e lowest scale (50 cents an hour) was for ½-ton retail grocery cks in Chicago. The most frequently quoted rates in order of oortance were $1.00, 90 cents, 95 cents, $1.15, and $1.25.

)ver 30 percent of all helpers received rates between $1.00 and 10 on July 1, 1946, as compared with only about 13 percent eiving these rates on July 1, 1945.

bout 10 percent of all helpers received between $1.10 and 20, while only 8 percent exceeded $1.20. The highest individual

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eekly hours as discussed here refer to the number of hours that may be worked per before overtime rates become effective.

helper scale reported ($1.47) covered heavy hauling freight helpers in Minneapolis and winch truck operators' helpers in St. Paul. The lowest rate reported (50 cents) included quotations for helpers on ice trucks in Kansas City, milk drivers' helpers in Providence and helpers on beer transport trucks in Tampa.

TABLE 2.—*Percentage distribution of union motortruck drivers and helpers by hourly wage rates, July 1, 1946*

Union scale	Drivers and helpers	Drivers	Helpers
	Percent	*Percent*	*Percent*
Under 65 cents	0.7	0.3	3.6
65 and under 70 cents	.7	.4	3.1
70 and under 75 cents	1.0	.7	2.9
75 and under 80 cents	2.8	2.3	6.2
80 and under 85 cents	2.8	2.1	8.3
85 and under 90 cents	3.9	3.1	9.1
90 and under 95 cents	8.3	7.8	12.0
95 cents and under $1.00	7.6	7.7	6.8
$1.00 and under $1.05	12.9	12.1	17.6
$1.05 and under $1.10	7.5	6.7	13.2
$1.10 and under $1.15	8.5	9.3	3.2
$1.15 and under $1.20	9.6	10.1	6.0
$1.20 and under $1.25	7.1	7.6	3.1
$1.25 and under $1.30	8.0	8.9	2.1
$1.30 and under $1.35	6.8	7.7	.7
$1.35 aud under $1.40	5.1	5.5	1.8
$1.40 and under $1.45	2.3	2.7	(1)
$1.45 and under $1.50	1.9	2.1	.3
$1.50 and under $1.55	1.3	1.5	
$1.55 and under $1.60	.6	.7	
$1.60 and over	.6	.7	
Total	100 0	100.0	100.0
Average hourly rate	$1.109	$1.130	$0.961

[1] Less than .05 of 1 percent.

Weekly Hours[6]

Straight-time weekly hours for union truck drivers in 75 cities averaged 44.7 on July 1, 1946. The average was somewhat less (43.8 hours) for helpers. Forty hours constituted the straight-time workweek for almost 45 percent of the drivers and over half of all helpers surveyed. Many of the members had a 48-hour week (27.5 percent of the drivers and 29.4 percent of the helpers) Approximately 10 percent of both drivers and helpers worke under contracts providing for a 44-hour week. Although about 1 percent of the drivers had a workweek in excess of 48 hours, onl 7 percent of the helpers were reported in this category. Thirty-five hours was the shortest workweek reported and 60 hours th longest. For the most part, workers on the maximum hour schedule were engaged in operating long-distance or over-the-roa trucks under the regulations of the Interstate Commerce Commission.

A considerable number of the union drivers and helpers covere in the present study were employed by establishments engage entirely in intrastate commerce. Consequently they were not sub ject to the provisions of the Fair Labor Standards Act, whic requires premium pay at the rate of time and one half for hours worked in excess of 40 per week. Moreover, trucking oper

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[6] See footnote 5.

ions involving interstate commerce are specifically exempted
rom the provisions of this Act. The Interstate Commerce Com-
aission, however, exercises jurisdiction over trucking operations
n interstate commerce with respect to conditions affecting the
afety of operations. The Commission has ruled that employers of
rivers operating vehicles in interstate commerce may not require
heir drivers to remain on duty more than 60 hours in a period
f 168 consecutive hours. Various exceptions are allowed regarding
aily and weekly hours.[7]

ABLE 3.—*Percentage distribution of union motortruck drivers and helpers by straight-time hours per week, July 1, 1946*

Hours per week	Percent of union members		
	Drivers and helpers	Drivers	Helpers
der 40	0.4	0.4	0.4
	45.7	44.8	50.9
er 40 and under 44	.1	.2	------
	10.1	10.3	9.2
er 44 and under 48	2 2	2 0	3.6
	27.7	27.5	29.4
er 48 and under 51	.6	.6	.6
	6.4	7.1	1.1
er 51 and under 54	.3	.4	------
	3.6	3.5	4.3
Over 54 and under 60	0.1	0.1	(1)
60	2.5	2.7	.5
Not specified in union agreement	.3	.4	(1)
Total	100.0	100.0	100.0
Average weekly hours	44.6	44.7	43.8

[1] Less than .05 of 1 percent.

Changes in Wage Rates and Hours, From 1945 to 1946

Wage rates.—About 9 of every 10 truck drivers studied ob-
ined wage increases between July 1, 1945 and July 1, 1946. The
ates for over four-fifths of the helpers also advanced during this
ame period. The amount of increase for a majority of the drivers
nged from 5 to 20 percent, with a fifth receiving 10 to 15 percent
creases and an additional fifth getting between 15 and 20 per-
ent. The rates for approximately 1 driver in 10 advanced less
an 5 percent, while gains of as much as 25 percent were limited
1 of every 20 drivers. About one-fifth of the helpers had rate
lvances between 5 and 10 percent and an additional fifth received
creases of at least 10 but less than 15 percent. Gains of 25 per-
ent or better involved about 1 helper in 10, while only a few of
e helpers had increases of less than 5 percent.

An essential difference between the hour regulations of the Interstate Commerce Com-
ssion and of the Fair Labor Standards Act should be noted. Whereas the Interstate Com-
rce Commission regulations specify maximum hours which may not be exceeded, the
gulations under the Fair Labor Standards Act merely specify the maximum hours that
y be worked at straight-time rates, and do not limit the total number of hours that may
worked, provided time and a half is paid for all hours in excess of the specified week. (See
erstate Commerce Commission: Motor Carrier Safety Regulations Revised).

Weekly hours.—Between July 1, 1945 and July 1, 1946, about 14 percent of the union motortruck drivers and 17 percent of the helpers benefited by a reduction in their straight-time workweek. Increases in straight-time hours during this period were comparatively minor, affecting only about 1 percent of all drivers and helpers. A great majority (85 percent) of all union workers covered in the industry reported no change in hours since the previous study.

TABLE 4.—*Extent of increases in wage rates of motortruck drivers and helpers and percent of members affected, July 1, 1946*

Occupation	Percent of members whose wage rates were—		Percent of total members affected by increase of—							
	Not changed	Increased	Less than 5 percent	5 and under 10 percent	10 and under 15 percent	15 and under 20 percent	20 and under 25 percent	25 and under 30 percent	30 and under 35 percent	35 percen and over
Truck drivers and helpers	14.2	85.8	9.9	17.3	22 1	21.6	9.3	3.1	1.4	1 1
Drivers	14.0	86.0	10.5	16.8	22.2	22.8	8.9	2 8	1.2	
Helpers	16.0	84.0	5.7	20.8	20.3	14.1	11.9	5.3	2.6	3 3

Average Wage Rates and Changes by City [8]

Average wage rates.—Union motortruck drivers in Seattle hac the highest average ($1.36) of any of the 75 cities surveyed as o July 1, 1946. San Francisco ($1.32) was the next highest, followe closely by New York ($1.31). The averages for 9 additiona cities were in excess of the $1.13 an hour average for all citie combined (table 5). Twenty other cities had averages in exces of $1.00 per hour, while the averages for 21 ranged between 9 cents and $1.00. Of the remaining cities, 18 had averages betwee 80 and 90 cents, while Jackson, Miss. ($0.76) and San Antoni ($0.79) had the lowest of the 75 cities studied.

Percentage changes.—All of the 75 cities studied registered in creases in basic rates between July 1, 1945 and July 1, 1946. Th largest relative increases were recorded for Nashville (22 percer or about 15 cents per hour); Oklahoma City (21 percent or 1 cents); Jackson, Miss., and Birmingham (20 percent or 18 ar 13 cents, respectively).

The large increase in hourly rates for Nashville reflected pr marily an increase in rates for local freight delivery drivers fro 62 to 80 cents an hour, while in Oklahoma City rates for transf storage drivers advanced from 60 to 75 cents. In Birmingha city pick-up and delivery drivers' rates were raised from 65 ce o 80 cents. In Jackson, Miss., rates for railway express drivers ncreased from 92 cents to $1.10.

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[8] The average rate shown for each city is a composite of all rates quoted for each diffe t type of truck driver weighted by the number of union members covered by each rate.

Seventeen other cities had increases of at least 15 percent, while he averages for 23 additional cities exceeded the 11 percent averge increase for all cities combined. The lowest average increases ere indicated for Portland, Maine (3 percent or 2½ cents) and Ianchester, N. H. and Wichita (4 percent or about 3 cents an our).

TABLE 5.—*Average hourly rates of union motortruck drivers, by city, July 1, 1946, and percent of increase over previous year*

City	Average hourly rate	Percent increase	City	Average hourly rate	Percent increase
ttle, Wash	$1.358	15.6	Baltimore, Md	$0.979	15 1
Francisco, Calif	1.322	18.0	Erie, Pa	.977	14 8
York, N. Y	1.308	7.0	Jacksonville, Fla	.973	12.3
vark, N. J	1.278	6.8	Binghamton, N. Y	.972	11.8
Angeles, Calif	1.245	14.7	Madison, Wis	.969	13.5
kane, Wash	1.241	13.7	Springfield, Mass	.968	5.7
roit, Mich	1.227	16.1	Duluth, Minn	.960	17.4
enix, Ariz	1.191	18.3	Denver, Colo	.958	15 8
tland, Oreg	1.176	8.8	Worcester, Mass	.953	7.8
te, Mont	1.164	15 4	Scranton, Pa	.937	10.3
veland, Ohio	1.164	13.9	Reading, Pa	.935	12.8
ton, Mass	1.135	17.1	Norfolk, Va	.934	10.6
rage for all cities	*1.130*	*11.2*	Oklahoma City, Okla	.930	21.1
cago, Ill	1.119	8.7	Indianapolis, Ind	.924	9.1
pa, Fla	1.104	17.2	Little Rock, Ark	.922	8.6
sburgh, Pa	1.101	7.6	Des Moines, Iowa	.913	8.9
ia, Ill	1.086	14.0	El Paso, Tex	.910	18.8
h Bend, Ind	1.070	16.2	Charleston, S. C	.888	15 7
alo, N. Y	1.069	10.7	Birmingham, Ala	.883	19.9
do, Ohio	1.062	10.8	Atlanta, Ga	.881	15.1
mbus, Ohio	1.061	13.1	Louisville, Ky	.881	12.6
vaukee, Wis	1.053	10.6	Portland, Maine	.880	3.0
ton, Ohio	1.048	17.2	Dallas, Tex	.879	8.8
neapolis, Minn	1.047	10.9	Houston, Tex	.879	14 2
ngstown, Ohio	1.047	11.9	Rock Island (Ill.) district [1]	.877	6 6
Paul, Minn	1.044	12.1	York, Pa	.867	6.9
innati, Ohio	1 035	12 8	Mobile, Ala	.862	6.0
leston, W. Va	1.034	10.3	Omaha, Nebr	.854	6.8
delphia, Pa	1.031	9.0	Manchester, N. H	.842	3 6
Haven, Conn	1.018	7.9	Nashville, Tenn	.834	21.7
ouis, Mo	1.018	11.1	Charlotte, N. C	.831	16.8
ington, D. C	1.009	12.6	Memphis, Tenn	.824	12.7
Lake City, Utah	1.008	14 0	Richmond, Va	.811	6.8
idence, R. I	.994	9 2	New Orleans, La	.807	14.3
as City, Mo	.987	16.1	Wichita, Kans	.803	3.9
d Rapids, Mich	.984	12 8	San Antonio, Tex	.787	14 9
ester, N. Y	.981	12.2	Jackson, Miss	.755	20 0

ncludes Rock Island and Moline, Ill. and Davenport, Iowa.

Regional Differences in Wage Rates

Average union wage rates (table 6), were higher in the North l Pacific region than in the South and Southwest, except for all cities. Differences in favor of the North and Pacific region re 26 cents in cities of 250,000—500,000 population and 12 ts among cities of 100,000—250,000. The difference in favor the South and Southwest in the smallest size (40,000—100,000) es amounted to 9 cents.

Helpers' averages for all city size groups were higher in the North and Pacific region than in the South and Southwest, the advantage amounting to 25 cents for group III cities, 22 cents for group IV cities, and only 1 cent for group V cities (see table 6).

TABLE 6.—*Average union wage rates for motortruck drivers and helpers, by region and population group, July 1, 1946*

Occupation	Cities in population group [1]—										
	I [2]	II [2]	III			IV			V		
	North and Pacific	North and Pacific	All cities	North and Pacific	South and South-west	All cities	North and Pacific	South and South-west	All cities	North and Pacific	South and South-west
Drivers and helpers	$1.181	$1.093	$1.051	$1.097	$0.822	$0.962	$0.981	$0.839	$0.990	$0.954	$1.045
Drivers	1.202	1.117	1.074	1.114	.850	.977	.992	.873	1.013	.976	1.068
Helpers	1.033	.955	.889	.957	.708	.832	.875	.653	.759	.762	.752

[1] Group I includes cities over 1,000,000 population; group II, 500,000 to 1,000,000; group III, 250,000 to 500,000; group IV, 100,000 to 250,000; and group V, 40,000 to 100,000.

[2] No city of this size in the South or Southwest.

Overtime and Sunday Rates

Practically all of the drivers (93 percent) received pay at the rate of time and a half for all hours worked beyond those stipulated in the union contract (table 7). Most of the others worked indefinite hours without premium overtime rates. Double time rates were paid to a very few, and overtime was prohibited in a negligible number of cases.

The situation was somewhat different with regard to Sunda work. About half of the drivers received double pay if they wer required to work on Sunday or for the seventh consecutive da Over a third received time and a half, but for 14 percent no speci rate was specified for Sunday work. Sunday work was prohibite for only a few drivers.

TABLE 7.—*Overtime and Sunday rates for truck drivers and helpers provid in union agreements, effective July 1, 1946*

Item	Percent of members affected—			Item	Percent of members affected—		
	Drivers and helpers	Drivers	Helpers		Drivers and helpers	Drivers	Help
By overtime rate:				By Sunday rate:			
No overtime rate specified	5.4	3.6	5.1	No Sunday rate specified	13.7	15.3	[illegible]
Time and one-half	93.4	94.7	93.7	Time and one-half	37.7	31.0	[illegible]
Double time	.7	.7	.7	Double time	46.7	49.9	[illegible]
Other overtime rates	.4	.4	.4	Other Sunday rates	.7	2.3	[illegible]
Overtime work prohibited	.1	.6	.1	Sunday work prohibited	1.2	1.5	[illegible]

Paid Vacations for Truck Drivers

More than 9 out of every 10 truck drivers and helpers included
ı the study worked under collective bargaining contracts that
rovided for vacations with pay (table 8). More than a third
eceived a vacation of 1 week after 1 year of service with an
dditional week after 5 years. Over a fourth of the drivers and
elpers worked under agreements calling for a week of paid vaca-
on after 1 year of service without any provision for additional
ıcation time per year regardless of length of service. Nearly 8
ercent of the workers were given paid vacations of 2 weeks if
nployed for 1 year. The others, entitled to this benefit, received
ıid vacations under various plans such as 1 week after 1 year
ıd 2 weeks after 2 years of service; 1 week after 1 year and 2
eeks after 3 years, etc.

TABLE 8.—*Percentage distribution of truck drivers and helpers according to vacation with pay provisions*

Vacation with pay provision	Drivers and helpers
	Percent of members affected:
Total	100 0
1 week after 1 year	28.1
2 weeks after 1 year	7 5
1 week after 1 year, and 2 weeks after 2 years	4.4
1 week after 1 year, and 2 weeks after 3 years	5 8
1 week after 1 year, and 2 weeks after 5 years	36.5
1 week after 6 months, and 2 weeks after 1 year	.2
1 week after 1 year, 2 weeks after 5 years, and 3 weeks after 15 years	.1
Other than any of above listed	10.4
No paid vacation	6.0
No information	1.0

Post-Survey Rate Changes

Available information, though limited, indicates that many rate
ɛreases have become effective for the trucking industry since
ly 1, 1946. Gains of 25 cents an hour were reported for drivers
oil trucks in St. Louis, coal drivers in Peoria, and biscuit driv-
in Baltimore. More substantial advances were reported for
nored car drivers in New York, general freight and soda bev-
ıge drivers in Chicago, provision drivers in Los Angeles, and
rist drivers in St. Paul. In New York, truck drivers engaged
general intracity delivery service received an increase of $7.40
week coupled with a reduction in the workweek from 44 hours
40, resulting in an advance in basic hourly rates of 30 cents.
edo coal drivers and helpers, Milwaukee furniture drivers,

Portland, Oreg. wholesale grocery trailer drivers, Denver fish drivers, Detroit petroleum drivers, and Duluth wholesale-drug drivers registered gains amounting to at least 20 cents an hour. Among those receiving increases between 15 and 20 cents, were building material drivers in Jacksonville, Los Angeles, and Louisville; coal and ice drivers in Dayton and Grand Rapids; parcel and pick-up drivers in Portland, Oreg. and Denver; laundry teamsters in Detroit and Peoria; produce drivers in Los Angeles; and furniture and piano movers in Chicago. Increases of at least 10 cents were reported for Denver and Jacksonville beer drivers; Binghamton furniture movers; Charlotte grocery, meat, and produce drivers; Los Angeles bakery and ice drivers; Pittsburgh and Louisville creamery teamsters; Duluth plate glass drivers; Chicago excavating drivers; and Minneapolis linen supply drivers. Smaller gains were reported for special commodity teamsters in 13 cities.

Union Scales of Wages and Hours, by City

The rates of wages per hour and hours per week on July 1, 1946 and July 1, 1945, for each classification of union motortruck driver and helpers in selected cities are shown in table 9.

In a number of cities there are two or more union rates for th same type of truck driving. This may be due to the existence o two or more unions having different scales, to a single union havin different agreements with different employers for various reason or to both these situations. Where more than one union rate is i effect for the same type of trucking, rates are listed in the follow ing table with the designations "Agreement A," "B," "C," et The designations "Rate A," "B," "C," etc., are used wheneve two or more otherwise unclassified rates appear in the same agre ment. The sequence of the alphabetical designations is in no wa intended to indicate the relative importance of the agreemen or rates.

When a union agreement guarantees a minimum workwe which includes a limited number of hours paid for at an overti rate (e.g., a guaranteed workweek of 48 hours, 40 of which a at straight time and 8 at time and a half), the hours and t rates shown in table 9 do not reflect the premium payment. Sin previous reports reflected the total guaranteed hours and overti payment, the 1945 rates will not in all cases be consistent wi those reported in Bulletin No. 874.

TABLE 9.—*Hourly wage rates and weekly hours of union motortruck drivers and helpers, by cities, July 1, 1946 and July 1, 1945*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Atlanta, Ga.				
aggage	$0.800	40	$0.710	40
Helpers	.750	40	.660	40
akery—Cracker and cooky	.865	48	.790	48
eer—Keg drivers	1.090	40	1.090	40
uilding material	.600	40	.550	40
eneral—Freight, city delivery	.730	51	.660	51
Helpers	.610	51	.540	51
rocery—Chain store:				
Agreement A	.775	40	.680	40
Helpers	.700	40	.600	40
Agreement B	.650	48	.650	48
After 30 days	.700	48	.700	48
Wholesale:				
Agreement A	.785	40	------	------
After 30 days	.835	40	------	------
Agreement B	.650	40	.600	40
rd and vegetable products—Packing house:				
Over-the-road	.890	48	.680	48
City drivers	.850	40	.640	40
eat—Packing house:				
Agreement A	1.000	48	.790	48
Agreement B	.910	60	.700	60
wspaper:				
irst 3 months	.800	40	.624	50
to 6 months	.850	40	.672	50
to 12 months	.900	40	.720	50
3 to 14 months	.950	40	.768	50
fter 14 months	1.000	40	------	------
:				
irst 6 months	.806	40	.690	40
to 12 months	.831	40	.721	40
3 to 18 months	.852	40	.748	40
9 to 24 months	.875	40	.777	40
4 to 30 months	.900	40	.808	40
1 to 36 months	.921	40	.834	40
7 to 42 months	.944	40	.863	40
3 to 48 months	.967	40	.892	40
9 to 54 months	.990	40	.921	40
5 to 60 months	1.012	40	.949	40
fter 5 years	1.039	40	.981	40
way express:				
ck-up and delivery	1.102	44	.917	44
oney pick-up	1.287	44	1.102	44
Baltimore, Md.				
eduction	1.015	40	.915	40
elpers	.875	40	.785	40
ry—Biscuit	.900	40	.900	40
s—Wooden	.900	40	.700	40
elpers	.750	40	.550	40
ding:				
nstruction:				
Concrete-mixers	1.050	40	.859	44
Dump and excavating	1.000	44	.750	44
Helpers	.875	44	.650	44
ntractors' drivers:				
Agreement A	1.000	40	.813	40
Agreement B	1.000	40	.850	40
Agreement C	1.000	40	.688	40
Agreement D	1.000	40	.770	40
Agreement E	1 000	40	.813	40
Helpers	.875	40	.688	40
terial:				
greement A	.875	40	.875	40
Helpers	.750	40	.750	40
greement B	.700	40	.700	40
Helpers	.600	40	.600	40
sbestos and pipe covering	1.000	40	.688	40
Helpers	.875	40	.550	40
sphalt	1.000	40	------	------
Helpers	.875	40	------	------
umber	1.000	40	.875	40
Helpers	.875	40	.763	40
Baltimore, Md.—Con.				
Building—Continued				
Material—Continued				
Plumbing and heating:				
Agreement A	$1.000	40	$0.813	40
Helpers	.875	40	.700	40
Agreement B	1.000	40	.813	40
Helpers	.875	40	.688	40
Roofing	1.000	40	.875	40
Tile	1.000	40	.875	40
Helpers	.860	40	.800	40
Scaffolding	1.000	40	1.000	40
Candy—Wholesale	1.000	40	.850	40
Road	1.125	40	------	------
Department store	1.000	44	.826	46
Distillery	1.050	40	.913	40
Factory:				
Agreement A (machinist and foundry)	1.100	40	.800	40
Agreement B	1.000	40	.875	40
Agreement C (furniture)	1.000	40	.875	40
Helpers	.875	40	.763	40
Agreement D (casket):				
City	.815	40	.815	40
Road	.900	40	.900	40
Agreement E (steel)	1.000	40	.875	40
Helpers	.830	40	.750	40
Agreement F (steel)	1 000	40	.813	40
Helpers	.830	40	.700	40
Furniture—Retail	.860	48	.760	48
Helpers	.756	48	.656	48
General—Freight:				
Regular drivers	.875	48	.825	48
Extra drivers	.910	48	.860	48
Helpers	.755	48	.705	48
Heavy hauling:				
Tractor and trailer	1.100	40	1.000	40
Truck drivers	.900	40	.810	40
Helpers	.865	40	.680	40
Glass (bottles)	1.000	40	.850	40
Helpers	.875	40	.700	40
Grocery:				
Retail:				
City drivers	.896	48	.833	48
Road drivers	1.000	48	.938	48
Helpers	.792	48	.698	48
Wholesale	.888	40	.850	40
Helpers	.663	40	.625	40
Ice:				
City transfer (less than a ton)	1.000	48	.785	48
Refrigeration drivers	1.000	48	.767	48
Route delivery drivers	1.000	48	.826	48
Helpers	.730	48	.563	48
Route foremen	1.100	48	.958	48
Meat—Packing:				
City	1.160	40	.963	40
Road	1.235	40	1.075	40
Milk and ice cream:				
Swing men	1.083	48	1.083	48
Helpers, route	.615	48	.563	48
Special delivery	.677	48	.625	48
Route foremen	1.396	48	1.188	48
Municipal	.880	48	.830	48
Foremen	.900	48	.850	48
Sanitary trash collectors	.860	48	.810	48
Newspaper:				
City	.940	40	.863	40
Road	1.110	40	1.013	40
Oil:				
Agreement A (transport)	1.000	48	.850	48
Agreement B	1 150	40	1.000	40
Agreement C:				
Fuel oil	1.250	40	1.000	40
Gasoline	1.250	40	1.065	40
Stake truck	1.080	40	.920	40

TABLE 9.—*Hourly wage rates and weekly hours of union motortruck drivers and helpers, by cities, July 1, 1946 and July 1, 1945*—Con.

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Baltimore, Md.—Con.				
Oil—Continued				
Agreement D:				
Starting rate	$0.960	40	$0.832	40
After 6 months	1.010	40	.880	40
After 1 year	1.060	40	.932	40
After 2 years	1.110	40	.996	40
After 3 years	1.160	40	1.024	40
After 4 years	1.241	40	1.082	40
Paper—Wholesale:				
Agreement A	1.000	40	.850	40
Agreement B	1.000	40	.800	40
Railway express	1.160	44	.975	44
Helpers	1.060	44	.875	44
Tobacco:				
Wholesale	1.000	40	.900	40
Hotel and restaurant supply	.750	40	.680	40
Warehouse and storage	.950	40	.790	40
Binghamton, N. Y.				
Building:				
Concrete-mixer trucks	1.100	40	.900	40
Dump trucks	.950	40	.875	40
General—Freight:				
Over-the-road	1.050	60	.950	60
City drivers	.950	50	.843	50
Peddle runs	1.000	50	.900	50
Helpers	.820	50	.700	50
Moving—Furniture	.860	50	.754	54
Helpers	.760	50	.685	54
Produce	.750	40	.700	40
Helpers	.700	40	.650	40
Railway express	1.087	44	.902	44
Birmingham, Ala.				
Bakery—Cracker	.850	40	------	------
Building—Construction:				
Concrete-mixer trucks:				
3 yard capacity	.935	40	------	------
Over 3 to 5 yard capacity	.985	40	------	------
Dump trucks:				
1½ to 3 yard spread	1.125	40	------	------
3 to 5 yard spread	1.250	40	------	------
Euclids	1.500	40	------	------
Factory	.990	40	.805	40
Furniture	.650	40	.550	40
Helpers	.550	40	.500	40
General—Freight:				
City pick-up and delivery	.800	54	.650	54
Helpers	.670	54	.540	54
Transfer:				
Agreement A	.758	40	.695	40
Helpers	.658	40	.595	40
Agreement B	.550	44	.500	48
Grain:				
Agreement A	.550	40	.500	40
Helpers	.530	40	.480	40
Agreement B	.630	40	.580	40
Helpers	.550	40	.500	40
Agreement C (interstate)	.550	40	.500	40
Agreement D	.625	40	.550	40
Helpers	.575	40	.500	40
Grocery—Chain store	.700	40	.600	40
Helpers	.650	40	.550	40
Hardware:				
Agreement A	.550	40	.500	40
Agreement B (interstate)	.650	40	.550	40
Helpers	.600	40	.500	40
Meat—Packing house:				
Agreement A	.760	40	.600	40
Agreement B	.810	40	.650	40
Agreement C	.845	48	.685	48
Trailer trucks	.900	48	.740	48
Milk—Special delivery	.650	40	.600	40
Moving—Furniture:				
Pick-up and delivery	.720	40	.620	54
Local	.750	40	.650	54
Birmingham, Ala.—Con.				
Moving—Furniture—Con.				
Long haul	$0.770	40	$0.670	54
Automatic trailers, heavy hauling	.740	40	.620	54
Helpers	.640	40	.530	54
Newspaper	.750	40	.590	40
Railway express:				
Pick-up and delivery	1.102	44	.917	44
Money pick-up	1.177	44	.992	44
Boston, Mass.				
Armored cars	.927	48	.927	48
Baggage:				
Rate A	.917	48	.854	48
Rate B	.854	48	.792	48
Helpers	.802	48	.740	48
Bakery:				
Cooky and cracker:				
Agreement A	1.015	45	.940	45
Agreement B	.985	45	.884	45
Hebrew bakery:				
Agreement A	1.056	54	.889	54
Agreement B	1.056	54	.963	54
Agreement C	1.056	54	.741	54
Transport trucks:				
Under 3 tons	.885	48	.815	48
3 to 5 tons	.909	48	.839	48
5 tons and over	.980	48	.910	48
Special delivery	.765	48	.693	48
Route builders:				
First 6 months	.685	54	.630	54
After 6 months	.778	54	.722	54
Helpers:				
First 6 months	.574	54	.519	54
After 6 months	.704	54	.565	54
Beer:				
Bottle and keg drivers	1.225	40	1.050	40
Helpers	1.150	40	.975	40
Beer and liquor (small distributors)	1.000	40	.930	40
Helpers	.900	40	.830	40
Building:				
Construction:				
Concrete-mixer:				
Trucks—Over 1½ tons	1.100	40	1.000	40
Dump trucks:				
1½ tons or less	1.100	40	.800	40
Over 1½ tons	1.100	40	.930	40
Helpers	1.050	40	.800	40
Materials	1.000	40	.900	40
Helpers	.950	40	.850	40
Door and window	1.100	40	.925	40
Lumber, truck and tractor	.930	40	.853	40
Helpers	.880	40	.828	40
Wrecking:				
1½ tons or less	.930	40	.825	44
Over 1½ tons	1.100	40	.900	44
Coal	1.100	40	1.000	40
Helpers	1.000	40	.900	40
Department store	1.111	39½	1.010	39½
Helpers	.934	39½	.833	39½
Food service:				
Retail	.623	48	.623	48
Wholesale:				
Agreement A	1.160	40	1.000	40
Agreement B:				
Under 3 tons	1.180	40	1.000	40
3 to 5 tons	1.250	40	1.050	40
Helpers	1.010	40	.850	40
Fruit and vegetables:				
Wholesale:				
Under 3 tons	1.100	48	.896	48
3 to 5 tons	1.250	48	.917	48
Over 5 tons	1.250	48	.979	48
Helpers	1.000	48	.875	48

TABLE 9.—*Hourly wage rates and weekly hours of union motortruck drivers and helpers, by cities, July 1, 1946 and July 1, 1945—Con.*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Boston, Mass.—Con.				
Furniture—Retail	$1.062	44	$0.880	46
Helpers	.966	44	.750	46
Garbage disposal:				
Drivers and helpers	1.000	40	1.000	44
General:				
Local hauling:				
Under 3 tons	1.066	48	.891	48
3 to 5 tons	1.086	48	.911	48
5 tons and over	1.149	48	.974	48
Helpers	1.045	48	.870	48
rocery:				
Chain store:				
Under 7 tons	1.205	48	.955	48
7 tons or over	1.205	48	1.018	48
Helpers	1.101	48	.851	48
Wholesale:				
¾ ton to 1½ tons	.910	45	.860	45
2½ to 3½ tons	.930	45	.880	45
Helpers	.800	45	.750	45
e:				
Agreement A	1.225	40	------	------
Helpers	1.000	40	------	------
Agreement B	1.025	40	.875	40
Helpers	.925	40	.775	40
Agreement C (dry ice)	1.150	40	.963	40
Helpers	.875	40	.750	40
aundry—Wholesale	1.000	48	.900	48
eat—Packing house:				
Agreement A	1.160	40	1.050	44
Agreement B	1.198	40	.962	40
oving—Piano and household	.950	48	.842	48
Trailer trucks	1.000	48	.875	48
ewspaper:				
Day	1.200	40	1.094	40
Night	1.371	42	1.250	42
Magazine—Route drivers	1.200	40	1.094	40
l:				
Agreement A (interstate)	1.000	48	.940	48
Agreement B (after 30 months)	1.150	40	1.000	48
Agreement C (after 30 months)	1.340	40	1.150	40
Agreement D (after 30 months)	1.380	40	1.170	40
Agreement E (after 30 months)	1.320	40	1.120	40
Agreement F (fuel oil—retail)	1.000	40	.950	40
Agreement G (road oil)	1.150	40	.900	40
Helpers	.950	40	.720	40
per	1.283	40	1.033	40
Trailer trucks	1.333	40	1.084	40
Helpers	1.232	40	.981	40
ilway express:				
1½ tons or less	1.119	44	.934	44
1½ to 5 tons	1.240	44	1.055	44
Helpers—Perishable and dry freight	1.066	44	.881	44
ndering	1.000	40	1.000	40
rap iron and metal	1.100	40	.930	40
ft drink	.937	40	.750	40
Helpers	.710	40	.600	40
arehouse—Retail	1.063	44	.949	44
Helpers	.909	44	.795	44
aste paper:				
2½ tons or less	1.250	40	.750	40
Over 2½ tons	1.250	40	.800	40
Truck and tractor	1.250	40	.850	40
Helpers	1.100	40	.850	40
Buffalo, N. Y.				
er:				
Keg	1.225	40	1.063	40
Helpers	1.200	40	1.038	40
Utility	1.200	40	1.038	40
Buffalo, N. Y.—Con.				
Building:				
Construction:				
Carry-all or winch trucks	$1.325	45	$1.150	49
Concrete-mixer trucks	1.250	40	1.100	40
Dump trucks	1.150	49	1.000	60
Lynn drivers (caterpillar wheels)	1.210	40	1.060	60
General contractors' drivers	1.125	44	1.000	44
Material	1.100	40	1.000	40
Helpers	.950	40	.850	40
Lumber	1.100	40	.950	40
Coal	1.000	40	.850	40
Helpers	.720	40	.650	40
Flour, feed, and cereal	1.100	40	.925	40
Food service	1.100	40	.950	40
Fruit and vegetable:				
Wholesale	.950	40	.850	40
Furniture:				
Agreement A (pick-up and delivery)	1.100	48	------	------
Helpers	1.020	48	------	------
Agreement B	.950	48	.950	48
Helpers	.780	48	.780	48
General—Freight:				
Local	1.000	48	.930	48
Peddle runs	1.040	48	.970	48
Grocery—Chain stores and wholesale:				
Agreement A	1.050	51	.950	54
Helpers	.950	51	.800	54
Agreement B	.950	40	.850	40
Helpers	.900	40	.800	40
Ice	.850	48	.800	48
Helpers	.750	48	.700	48
Ice cream (special delivery drivers)	.910	40	.760	48
Over-the-road	1.065	40	.963	48
Laundry:				
Linen supply	.938	48	.938	48
Wholesale	.900	48	.900	48
Liquor	1.000	48	.900	48
Meat—Packing house:				
Agreement A	1.000	40	.920	40
Agreement B (sausage)	.950	40	.870	40
Milk:				
Over-the-road	.925	40	.833	48
City—tractor and trailer	.905	40	.813	48
Oxygen and acetylene	1.205	40	1.205	40
Helpers	.980	40	.980	40
Package	.900	48	.900	48
Railway express	1.179	44	.994	44
Soft drink:				
Helpers	.900	40	.850	40
Utility drivers	1.050	40	.988	40
Butte, Mont.				
Bakery	1.169	48	1.000	48
Beer:				
Brewery	1.300	40	1.150	40
Distributor	1.294	40	1.125	40
Building construction:				
Concrete-mixer trucks	1.419	40	1.250	40
Material—Lumber	1.169	48	1.000	48
Factory:				
1½ to 3 tons	1.294	40	1.125	40
3 tons and over	1.450	40	1.281	40
General—Freight:				
Local—Association agreement:				
¾ ton and under	1.106	48	.956	48
Over ¾ ton to 3 tons	1.169	48	1.000	48
3 to 6 tons	1.200	48	1.031	48
6 tons and over	1.363	48	1.194	48

TABLE 9.—*Hourly wage rates and weekly hours of union motortruck drivers and helpers, by cities, July 1, 1946 and July 1, 1945—Con.*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Butte, Mont.—Con.				
General—Freight—Con.				
Local—Nonassociation:				
3 to 6 tons	$1.200	40	$1.031	40
6 tons and over	1.363	40	1.194	40
Over-the-road:				
Truck and trailer or semitrailer	1.150	48	1.150	48
Intercity freight hauling:				
Solo, 4-wheel	1.185	56	1.000	56
Solo, 6-wheel	1.210	56	1.025	56
Truck and trailer or semitrailer	1.348	56	1.162	56
Grocery:				
Agreement A	.938	48	.802	48
Agreement B—Chain store	1.350	48	1.188	48
Hardware	1.169	40	1.000	40
Laundry:				
¾ ton and under	1.106	40	.956	40
Over ¾ ton and under 3 tons	1.169	40	1.000	40
Meat—Butcher:				
Retail	1.256	48	1.088	48
Wholesale	1.256	40	1.088	40
Milk	1.169	48	1.000	48
Railway express	1.223	44	1.038	44
Soft drink:				
Agreement A	1.169	48	1.000	48
Agreement B	.938	48	.938	48
Textiles—Retail	1.000	42	.881	42
Charleston, S. C.				
Building—Construction:				
1½ tons or less	.650	40	.600	40
Over 1½ tons	.800	40	.750	40
Concrete-mixer trucks	.800	40	.750	40
General—Freight, local:				
Pick-up and delivery	1.059	44	.874	44
Helpers	.978	44	.793	44
Charleston, W. Va.				
Beer:				
Road drivers, single axle	1.050	55	------	------
Tandem	1.150	55	------	------
Keg route drivers	1.200	40	.700	40
Route drivers' helpers	.700	40	.600	40
Building:				
Contractors:				
Association:				
Pick-up (less than ¾ ton)	1.000	40	.750	40
3 tons and under	1.100	40	.825	40
Over 3 tons	1.250	40	1.000	40
Concrete-mixer trucks:				
3 cu. yd. and under	1.250	40	1.000	40
Over 3 cu. yd	1.400	40	1.250	40
Dumpster and Euclid	1.400	40	1.250	40
Independent:				
Pick-up (less than 3 tons)	.750	40	.750	40
3 tons and under	.750	40	.750	40
Over 3 tons	.825	40	.825	40
Concrete-mixer trucks:				
3 cu. yd. and under	.825	40	.825	40
Over 3 cu. yd	1.250	40	1.250	40
Material:				
First year:				
Pick-up	.850	40	.750	40
3 tons and under	.950	40	.825	40
Over 3 tons	1.100	40	1.000	40
Helpers	.850	40	.750	40
Concrete-mixer trucks:				
3 cu. yd. and under	1.100	40	1.000	40
Over 3 cu. yd	1.300	40	1.250	40
Charleston, W. Va.—Con.				
Building—Continued				
Material—Continued				
Second year:				
Pick-up	$0.900	40	$0.800	40
3 tons and under	1.000	40	.875	40
Over 3 tons	1.150	40	1.050	40
Helpers	.900	40	.800	40
Concrete-mixer trucks:				
3 cu. yd. and under	1.150	40	1.050	40
Over 3 cu. yd	1.350	40	1.300	40
After 2 years:				
Pick-up	950	40	------	------
3 tons and under	1.050	40	------	------
Over 3 tons	1.200	40	------	------
Helpers	.950	40	------	------
Concrete-mixer trucks:				
3 cu. yd. and under	1.200	40	------	------
Over 3 cu. yd	1.400	40	------	------
Adey and Turner operators	1.625	40	1.625	40
Dumpster and Euclid	1.400	40	1.250	40
Factory:				
Chemicals:				
Agreement A	1.300	40	1.120	40
Agreement B	1.410	40	1.220	40
Agreement C	1.190	40	1.085	40
Helpers	1.080	40	1.020	40
Agreement D:				
First 12 months	1.251	40	1.081	40
After 12 months	1.300	40	1.130	40
Miscellaneous:				
Agreement A	1.160	40	1.045	40
Agreement B	1.100	40	1.000	40
Agreement C	1.100	40	.910	40
Agreement D	1.200	40	1.070	40
Agreement E	.850	37½	------	------
Furniture	.804	48	.704	48
Helpers	.708	48	.608	48
General:				
Freight:				
Local	.825	60	.825	60
Over-the-road	.900	60	.900	60
Peddle runs	.850	60	.850	60
Transfer and storage:				
Local	.800	54	.800	54
Over-the-road	.875	60	.875	60
Helpers (furniture)	.800	54	.800	54
Grocery—Wholesale	.875	54	.850	54
Helpers	.725	54	.700	54
Meat—Packing house:				
Rural	1.054	40	.844	40
City	.950	40	.740	40
Milk:				
Special delivery	.635	48	.601	48
Relief	.959	48	.815	48
Oil:				
Agreement A (tank line)	.900	48	.825	48
Agreement B	.875	40	------	------
Agreement C:				
First year	1.102	40	------	------
Second year	1.133	40	------	------
Third year	1.205	40	------	------
After 3 years	1.246	40	------	------
Charlotte, N. C.				
Bakery—Biscuit	.746	55	.682	55
General—Freight:				
Agreement A:				
Intercity peddle runs	.700	48	.611	60
City pick-up and delivery	.680	48	.561	60
Agreement B	.735	54	.600	60
Helpers	.650	54	.550	60

ABLE 9.—*Hourly wage rates and weekly hours of union motortruck drivers and helpers, by cities, July 1, 1946 and July 1, 1945—Con.*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Charlotte, N. C.—Con.				
neral—Freight—Con.				
Agreement C:				
City—Out of town runs	$0.690	48	$0.570	60
City pick-up and delivery	.680	48	.561	60
Peddle runs	.700	48	------	------
ocery—Road	.780	50	.750	50
ilway express	1.059	44	.874	44
Chicago, Ill.				
nored cars	1.200	40	1.015	48
omobile supply and accessory, city-wide	.813	40	.813	40
ggage:				
ity delivery	.975	48	.975	48
Depot to hotel	.888	48	.888	48
kery:				
ommissary	1.042	48	.958	48
racker	1.156	45	1.022	45
ie—Truck and supply	1.375	40	1.213	40
Transport	1.271	48	1.125	48
east	1.450	45	1.156	45
:				
elpers:				
Bottle	1.081	40	.935	40
Keg	1.211	40	1.050	40
ewery and distributor:				
Extra and transfer drivers	1.330	40	1.150	40
Bottle helpers	1.080	40	.935	40
Keg helpers	1.210	40	1.050	40
ding:				
onstruction:				
4-wheel—2 tons or less	1.150	40	1.100	40
6-wheel	1.400	40	1.350	40
cavating, paving, grading, asphalt, sewer, and plastering:				
4-wheel—2 tons or less	1.150	40	1.100	48
4-wheel—over 2 tons	1.250	40	1.200	48
6-wheel	1.400	40	1.350	48
aterial:				
Agreement A:				
4 tons or less	1.090	40	.970	48
Over 4 tons	1.150	40	1.030	48
-wheel over 7 tons	1.300	40	1.210	48
Helpers	1.000	40	.835	48
Cement	1.000	40	.885	48
Face brick	1.090	40	.970	48
Agreement B (brick hauling):				
4-wheel	1.250	45	.980	45
6-wheel	1.280	45	1.060	45
Helpers	1.080	45	.900	45
Agreement C (roofing material):				
1 ton and under 2 tons	.941	51	.694	54
2 tons and under 3 tons	.971	51	.722	54
3 tons and under 5 tons	.990	51	.741	54
5 and under 7 tons	1.039	51	.787	54
7 and under 10 tons	1.090	51	.833	54
Tractors, under 5 tons; semitrailers, over 5 tons	1.039	51	.778	54
Contractors' drivers	1.200	40	.900	40
Distributors	1.400	51	1.000	54
r and eggs:				
olesale:				
Delivery drivers:				
1 ton	1.063	48	.969	48
2 tons	1.083	48	.990	48
eement A:				
½ tons	1.240	40	1.050	48
tons	1.270	40	1.080	48
Chicago, Ill.—Con.				
Coal—Continued				
Agreement A—Continued				
Over 2 tons and tractor used with same trailer	$1.300	40	$1.110	48
6-wheel—over 12 tons	1.370	40	1.180	48
Tractor used with different trailer	1.440	40	1.250	48
Tractor—trailer drivers	1.300	48	1.250	48
Commission house:				
1 ton or less	1.035	40	1.013	40
2 tons	1.055	40	1.035	40
3 tons	1.075	40	1.056	40
4 tons	1.095	40	1 078	40
5 tons and over	1.115	40	1.100	40
Helpers	.925	40	.894	40
Department store:				
Agreement A:				
Under 2 tons	.960	40	.866	40
Trailer trucks	1.000	40	.905	40
Agreement B	1.041	48	.910	48
Film carriers	1.375	48	------	------
Helpers	1.031	48	------	------
Florists—Retail:				
1 and under 2 tons	.820	40	.820	40
2 and under 3 tons	.850	40	.850	40
3 and under 5 tons	.880	40	.880	40
Florists—Wholesale:				
1 and under 2 tons	.800	40	.800	40
2 and under 3 tons	.820	40	.820	40
3 and under 5 tons	.850	40	.850	40
Food and commissary:				
Wholesale	.787	54	.787	54
Furniture—Retail	1.008	48	1.008	48
Helpers	.879	48	.879	48
General:				
Cartage:				
1 and under 2 tons	.944	51	.904	51
2 and under 3 tons	.973	51	.933	51
3 and under 5 tons	.993	51	.953	51
5 and under 7 tons	1.042	51	1.002	51
7 and under 10 tons	1.091	51	1.051	51
10 tons and over	1.130	51	1.090	51
Semitrailers, 5 tons and over	1.042	51	1.002	51
Motorcycles—½ ton or less	.885	51	.845	51
Motorcycles—Over ½ ton	.944	51	.904	51
Trucking by firms not in the cartage business:				
1 and under 2 tons	.928	40	.888	40
2 and under 3 tons	.957	40	.916	40
3 and under 5 tons	.976	40	.936	40
5 and under 7 tons	1.024	40	.984	40
7 and under 10 tons	1.072	40	1.032	40
10 tons and over	1.110	40	1.073	40
General hauling:				
South side:				
1½ tons	1.020	48	.980	48
2 tons	1.060	48	1.020	48
3 tons	1.080	48	1.040	48
5 tons	1.108	48	1.068	48
7 tons	1.150	48	1.110	48
10 tons and over	1.184	48	1.144	48
Parcel delivery:				
Under 3 tons	.933	51	.833	51
3 to 4 tons	.970	51	.873	51
Tractor-trailers	1.030	51	.931	51
Grocery and meat:				
Commissary	.787	54	.787	54
Retail:				
Delivery from store	.500	54	.500	54
Market pick-up	.555	54	.555	54
Hay and grain:				
2 and under 3 tons	.970	44	------	------
3 and under 5 tons	.990	44	------	------
5 and under 7 tons	1.080	40	.938	40
7 and under 10 tons	1.090	44	------	------
Helpers	.820	40	.709	40

TABLE 9.—*Hourly wage rates and weekly hours of union motortruck drivers and helpers, by cities, July 1, 1946 and July 1, 1945—Con.*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Chicago, Ill.—Con.				
Ice:				
Railroad-car icing	$1.000	40	$0.945	40
Helpers	.927	40	.873	40
Ice cream—Special delivery	1.028	45	.958	45
Lumber—Box and shaving:				
1½ to 4 tons and semi-trailers	1.040	48	.950	48
4 tons and over	1.040	48	.990	48
Meat:				
Jobbers—Wholesale	1.201	48	1.042	48
Retail	1.000	60	.870	60
Packing house:				
Local:				
1 ton and under	1.120	48	.960	48
Over 1 and under 3 tons	1.180	48	1.020	48
3 to 5 tons	1.240	48	1.080	48
Over 5 tons	1 260	48	1.100	48
Helpers	1.160	48	1 000	48
City tractors	1.260	48	1.100	48
Dump-cart tractors	1.035	48	.875	48
Delicatessen and special delivery	1.120	48	.960	48
Long distance:				
Under 3 tons	1.290	48	1.130	48
3 tons and over	1.340	48	1.180	48
Milk:				
Tank trucks:				
Day	1.350	48	1.230	48
Night	1.370	48	1.250	48
Wholesale (noncommission men)	1.440	48	1.318	48
Retail:				
Route foremen	1.260	54	1.148	54
Assistant route foremen	1.220	54	1.111	54
Store routemen	1.130	54	1.019	54
Moving:				
Furniture	1.108	48	1.008	48
Helpers	1.025	48	.925	48
Extra helpers	1.020	48	.920	48
Piano	1.233	48	1.113	48
Helpers and extra helpers	1.180	48	1.080	48
Machinery:				
1 and under 2 tons	.990	51	.950	51
2 and under 3 tons	1.010	51	.972	51
3 and under 5 tons	1 050	51	1.011	51
5 and under 7 tons	1.100	51	1.060	51
7 and under 10 tons	1.150	51	1.109	51
10 tons and over	1.190	51	1.149	51
Newspaper and magazine:				
Afternoon papers	1.271	51	1.098	51
Morning papers	1.451	45	1.222	45
Magazines	1.271	51	1.098	51
Oil	1.250	40	1.090	48
Railway express:				
1 to 2½ tons	1.206	44	1.021	44
3 to 5 tons	1.309	44	1.124	44
Helpers:				
1 to 2½ tons	1.104	44	.919	44
3 to 5 tons	1.179	44	.994	44
Refuse:				
Private scavengers	1.056	54	1.000	54
Helpers	.889	54	.883	54
Rendering, bone and tallow:				
Hotel and restaurant routes (chauffeurs)	1.468	40	------	------
Helpers	1.344	40	------	------
Routemen	1.485	40	------	------
Market route	1.370	40	1.193	40
Helpers	1.315	40	.983	40
Routemen	1.690	40	1.509	40
Dead animal—City drivers	1.468	40	------	------
Country drivers	.885	40	------	------
Routemen	1.485	40	------	------
Scrap iron and metal:				
1 ton and under 2 tons	.850	40	------	------
2 tons and under 5 tons	.900	40	------	------
5 tons and over	1.000	40	------	------
Chicago, Ill.—Con.				
Soft drink and mineral water:				
Extra drivers	$1.000	48	$0.833	51
Helpers	.650	48	.500	51
Street railway maintenance:				
Construction line, emergency line, and wreck truck	1.240	40	.990	40
Wreck truck helpers and service truck chauffeurs	1.190	40	.940	40
Service truck helpers	1.140	40	.890	40
Working supervisors	1.290	40	1.040	40
Tobacco and candy	1.000	40	.830	40
Tobacco and cigarette:				
Agreement A:				
Small trucks	1.000	48	.899	48
Large trucks	1.000	48	.943	48
Helpers	.750	48	.650	48
Agreement B:				
Small trucks	1.000	40	.830	40
Large trucks	1.000	40	.870	40
Cincinnati, Ohio				
Air reduction	.950	40	.900	40
Helpers	.880	40	.830	40
Bakery:				
Cracker	1.025	49	.840	54
Transport	.950	51	.900	51
Yeast:				
Agreement A	1.106	48	1.007	48
Agreement B	1.034	48	.935	48
Beer:				
Keg	1.177	40	.992	40
Helpers:				
Bottle	1.076	40	.891	40
Keg	1.105	40	.920	40
Coal and excavating:				
4-wheel trucks	1.040	48	.940	48
6-wheel trucks	1.140	48	1.040	48
Heavy machinery	1.240	48	1.140	48
Helpers	1.040	48	.940	48
Commission house:				
First 30 days	.750	40	.700	40
After 30 days	.850	40	.800	40
Department store:				
Package	.980	40	.824	40
Furniture and pick-up	.980	40	.861	40
Helpers	.860	40	.738	40
Film	1.000	48	------	----
Helpers	.930	48	------	----
Road	1.050	48	------	----
Furniture	.958	48	.802	48
Helpers	.875	48	.719	48
General—Freight:				
Local cartage	1.000	51	.900	48
Helpers	.930	51	.830	51
Specialty trucks	1.000	40	.900	51
Helpers	.930	40	.830	51
Peddle runs	1.000	60	.870	60
Straight truck	1.050	60	.970	60
Tandem	1.120	60	.970	60
Double bottom	1.170	60	.970	6
Grocery	1.050	48	.920	4
Semitruck	1.100	48	.970	4
Ice	.994	54	.859	5
Helpers	.949	54	.821	5
Ice cream:				
Trucks or motorcycles	.944	54	.889	5
Laundry:				
Towel	1.000	48	------	---
Dry cleaning:				
Interstore drivers	.833	48	.469	4
Helpers	.750	48	.396	4
Carpet	.650	48	.396	4
Meat—Packing house	1.110	48	.900	4
Milk:				
Truck with trailer	1.037	54	.907	
Milk skippers	.944	54	.889	

TABLE 9.—*Hourly wage rates and weekly hours of union motortruck drivers and helpers, by cities, July 1, 1946 and July 1, 1945—Con.*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Gincinnati, Ohio—Con.				
Moving—Furniture:				
Local	$1.100	48	$0.980	48
Helpers	1.000	48	.910	48
Long distance—Drivers and helpers	.950	60	.860	60
Newspaper:				
1 ton and under	1.093	40	.900	40
1½ tons	1.112	40	.922	40
2 tons	1.132	40	.944	40
3 tons	1.158	40	.967	40
4 and 5 tons	1.202	40	1.011	40
Helpers:				
3 tons and under	1.027	40	.833	40
Over 3 tons	1.047	40	.856	40
il (after 30 days)	1.210	40	1.030	40
Highway drivers:				
Agreement A	1.000	40	------	------
Agreement B	1.150	60	.950	60
ailway express	1.170	44	.985	44
Helpers	1.067	44	.890	44
oft drink and mineral water:				
Over-the-road—6-wheel trucks	1.050	48	.900	48
Route helpers	.583	48	.503	48
Cleveland, Ohio				
akery	1.150	48	.943	48
Transport	1.080	48	.930	48
Part-time driver	1.120	48	.920	48
Biscuit	1.150	40	1.000	40
Pretzel	1.080	48	.920	48
Yeast (after 6 months):				
Agreement A	.961	48	.961	48
Agreement B	1.058	48	1.058	48
er—Keg and bottle:				
Helpers:				
Agreement A	1.000	40	.805	40
Agreement B	1.000	40	.803	40
ilding:				
onstruction:				
Excavating trucks	1.250	40	------	------
Special tractor type	1.525	40	1.400	54
Concrete-mixer trucks	1.200	40	1.050	44
aterial:				
Building supply	1.150	40	1.000	44
nitractors	1.250	40	1.100	44
al	1.080	40	.980	40
elpers	.980	40	.880	40
niture	1.125	48	.950	48
elpers	1.075	48	.900	48
eral:				
ocal trucking:				
Single unit	1.120	48	.970	48
Trailers, trucks and semitrailers	1.200	48	1.050	48
r-the-road:				
Local and peddle runs	1.200	60	.970	60
Riggers and erectors	1.500	48	------	------
eery—Wholesale	1.150	40	.960	48
	1.181	44	.958	48
oute foremen	1.243	44	1.036	48
elpers	.901	44	.708	48
eream—Transport	1.125	48	.950	48
ndry	.924	48	.924	48
ag supply	.925	48	.925	48
:				
eavy transport	1.125	48	.950	48
ver-the-road	.950	51	.870	------
Tractor drivers	1.030	51	.950	------
ing:				
ocal	1.225	48	1.100	48
Helpers	1.175	48	1.050	48
ong distance:				
Agreement A:				
Drivers	1.100	60	1.025	60
Drivers with helpers	1.000	60	.925	60
Helpers	.950	60	.875	60
Cleveland, Ohio—Con.				
Moving—Continued				
Long distance—Con.				
Agreement B:				
First 3 months	$0.583	60	$0.583	60
After 3 months	.750	60	.666	60
Municipal:				
City	1.100	48	1.050	48
Board of Education	1.100	40	1.050	40
County	1.150	40	1.050	40
Newspaper and magazine:				
Agreement A:				
Routemen	1.170	40	1.000	40
Foremen	1.350	40	1.250	40
Agreement B:				
Day:				
Routemen	1.396	48	1.188	48
Relaymen	1.236	48	1.028	48
Night:				
Routemen	1.489	45	1.266	45
Relaymen	1.299	45	1.076	45
Magazine:				
Agreement A	1.100	40	.972	40
Agreement B	1.100	40	.975	40
Oil transport:				
City:				
1 year or less	1.089	40	.916	40
1 to 4 years	1.158	40	.974	40
Over 4 years	1.225	40	1.031	40
Lake county:				
First year	.997	40	.740	40
Second year	1.034	40	.769	40
After 2 years	1.071	40	.798	40
Over-the-road	1.050	50	.955	60
Produce:				
Fruits and vegetables	1.150	40	1.043	40
Railway express	1.240	44	1.054	44
Soft drink—Helpers	.750	50	.750	50
Waste paper	.970	40	.875	40
Helpers	.710	40	.650	40
Wine—City delivery	1.000	40	.800	40
Columbus, Ohio				
Bakery—Biscuit:				
City	.925	50	.850	50
Over-the-road	.975	54	.900	54
Beer—Brewery	1.100	40	.900	40
Helpers	.925	40	.720	40
Building—Truck drivers and concrete:				
Pipe haulers	1.050	40	.970	40
Furniture—Retail	1.000	54	.850	54
Helpers	.950	54	.775	54
General—Freight:				
Agreement A:				
Local cartage:				
1 to 6 months	.925	48	.875	48
7 to 12 months	.950	48	.900	48
After 1 year	.975	48	.925	48
Helpers:				
1 to 6 months	.825	48	.775	48
7 to 12 months	.850	48	.800	48
After 1 year	.875	48	.825	48
Highway drivers:				
Peddle runs	1.000	60	.970	60
Single axle	1.050	60	------	------
Double axle	1.170	60	------	------
Tandem	1.120	60	------	------
Agreement B	.975	54	.925	54
Meat—Packing house:				
Agreement A	1.130	48	.970	48
Agreement B	1.100	50	------	------
Newspaper	.900	40	.850	40
Railway express	1.102	44	.917	44
Dallas, Tex.				
Bakery—Feeder trucks	.875	48	------	------
Department store	.825	40	.750	40

TABLE 9.—*Hourly wage rates and weekly hours of union motortruck drivers and helpers, by cities, July 1, 1946 and July 1, 1945*—*Con.*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Dallas, Tex.—Con.				
Factory:				
Agreement A (prefabricated houses):				
First 6 months	$0.975	40	$0.850	40
After 6 months	1.125	40	1.000	40
Agreement B	.850	40	------	------
Food	.800	40	------	------
General freight:				
Agreement A—City drivers	.770	54	.750	54
Agreement B	.750	54	.711	54
Road drivers	.900	54	.806	54
Agreement C	.800	54	.750	60
Road drivers	.970	54	.900	60
Grocery—Chain store:				
Day:				
First 6 months	.800	40	.700	40
7 to 12 months	.850	40	.750	40
Second year	.900	40	.800	40
After 2 years	.950	40	.850	40
Night:				
First 6 months	.850	40	.750	40
7 to 12 months	.900	40	.800	40
Second year	.950	40	.850	40
After 2 years	1.000	40	.900	40
Liquid Carbonic	1.050	40	.900	40
Helpers	.900	40	.750	40
Railway express	1.156	44	.971	44
Davenport, Iowa (See Rock Island (Ill.) District.)				
Dayton, Ohio				
Beer—Helpers	1.125	40	.954	40
Building:				
Construction:				
Concrete-mixer trucks:				
2 yards	1.000	40	.900	40
3 yards	1.100	40	1.000	40
4 yards and over	1.150	40	1.050	40
Dump trucks	1.050	40	.900	40
Material	1.000	40	.850	40
Helpers	.900	40	.760	40
Coal and ice	.800	55	.800	55
Helpers	.650	55	.650	55
Furniture—Retail	1.000	48	.800	50
Helpers	1.000	48	.700	50
General—Freight:				
Local cartage	1.000	48	.850	54
Over-the-road:				
Single axle	1.050	60	------	------
Tandem	1.120	60	------	------
Double bottom	1.170	60	------	------
Peddle runs	1.000	60	.870	60
Grocery	1.000	48	.850	54
Helpers	.900	48	.750	54
Chain store	1.000	40	------	------
Wholesale	.900	40	------	------
Ice cream—Special delivery:				
After 3 months	.800	48	.750	48
Paper:				
First 6 months	.900	40	.700	50
After 6 months	1.000	40	.700	50
Railway express:				
½ ton	1.075	44	.890	44
Over ½ ton	1.129	44	.944	44
Storage	1.050	48	.950	48
Denver, Colo.				
Bakery:				
Biscuit:				
Agreement A	.915	48	.842	48
Agreement B	.940	40	.800	40
Chain store	1.082	45	.910	45
Route foremen	1.194	45	1.022	45
Denver, Colo.—Con.				
Bakery—Continued				
Yeast:				
First 3 months	$0.818	45	$0.697	48
4 to 6 months	.870	45	.745	48
7 to 9 months	.923	45	.793	48
10 months and over	.972	45	.841	48
Beer	.990	40	.903	40
Helpers	.940	40	.854	40
Building:				
Construction:				
Dump trucks:				
Less than 6 yards	1.200	40	1.000	40
6 yards or more	1.350	40	1.000	40
Flat rack and semi-trailer	1.200	40	1.000	40
Euclid, Koebring, lumber carrier, and concrete-mixer trucks	1.350	40	1.000	40
Lowboy trucks	1.600	40	1.500	40
Helpers	1.000	40	.800	40
Material:				
Brick only	.915	40	.795	48
Lumber and plumbing supply:				
First 4 months	.800	40	------	------
5 to 8 months	.850	40	------	------
9 to 12 months	.900	40	------	------
After 1 year	1.000	40	------	------
Cheese	.840	40	------	------
Cleaners and dyers	.900	44	------	------
Coal	.640	48	.640	48
Fish	.800	40	.750	40
Furniture—Retail:				
Agreement A	.825	48	.785	48
Helpers	.700	48	.650	48
Agreement B	.950	44	------	------
Helpers	.800	44	------	------
General:				
Freight:				
Local pick-up and delivery	.900	54	.800	48
Short-line or local runs	.900	54	.850	60
Winch trucks	1.100	54	1.050	48
Package delivery:				
Furniture	.771	48	.748	48
Helpers	.650	48	.602	48
Parcel	.802	48	.769	48
With helper	.750	48	.717	48
Pick-up and bulk	.760	48	.727	48
Helpers	.600	48	.550	48
Transfer:				
Local cartage:				
Less than 6 months:				
Under 2 tons	.800	54	.750	60
2 tons and over	.850	54	.800	60
Helpers	.750	54	.750	60
After 6 months:				
Under 2 tons	.850	54	.750	60
2 tons and over	.900	54	.800	60
Helpers	.800	54	.750	60
Household goods:				
Van drivers:				
Less than 1 year	.900	54	.850	60
After 1 year	.950	54	.850	60
Helpers	.850	54	.790	60
Long distance	1.000	------	.870	------
Piano	1.000	54	------	------
Helpers	.900	54	------	------
Moving heavy industrial equipment:				
2 to 5 tons	.950	54	.850	60
5 tons and over	1.000	54	.900	60
Low bed 20M lb. pay load or over	1.100	54	------	------
Winch trucks	1.100	54	.930	60
Helpers:				
Less than 1 year	.850	54	.750	60
After 1 year	.950	54	.750	60

ABLE 9.—*Hourly wage rates and weekly hours of union motortruck drivers and helpers, by cities, July 1, 1946 and July 1, 1945—Con.*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
enver, Colo.—Con.				
ocery and coffee:				
Wholesale	$0.865	40	$0.790	40
Over-the-road	.975	40	.900	40
—Route drivers	.694	40	.648	40
Car-icing	.870	40	.750	40
quid Carbonic	.870	40	.780	40
eat—Packing house:				
Agreement A	1.035	48	.875	48
Extra drivers	.895	48	.735	48
Agreement B:				
First 60 days	.863	40	.700	40
After 60 days	.925	40	.863	40
Agreement C:				
Country drivers	1.150	48	.769	48
Relief drivers	1.085	48	.925	48
City drivers	1.028	40	.868	40
Relief drivers	1.025	40	.865	40
greement D:				
Local:				
1 to 1½ tons	1.035	40	.880	40
2 to 2½ tons	1.048	40	.888	40
Long distance:				
Semitrailer	1.098	40	.938	40
k:				
etail:				
Class A—Driver salesmen	.938	54	.765	54
Class B—Relief salesmen	.810	54	.722	54
holesale—Relief salesmen	.852	54	.744	54
oute drivers selling to Government reservations	.810	54	.661	54
ght special delivery	.650	40	.556	54
eavy special delivery	.750	40	.648	54
ing—Household goods:				
n drivers:				
Less than 1 year	.900	54	.850	60
After 1 year	.950	54	.850	60
Helpers	.850	54	.790	60
Long distance	1.000	------	.870	------
Piano	1.000	54	------	------
Helpers	.900	54	------	------
e house—Drivers and lpers	1.000	35	.900	35
r supply—Wholesale	.950	40	.770	40
uce:				
er 1 year	.780	44	.730	44
ray express	1.156	44	.971	44
Helpers	1.075	44	.890	44
	.770	40	.660	40
and liquor	.870	40	.820	40
es Moines, Iowa				
ry	.800	48	.700	48
cuit:				
Agreement A	.925	48	.792	48
Agreement B	.925	48	.750	48
ast:				
Agreement A (after 6 months)	.833	48	.833	48
greement B:				
First 3 months	.787	54	.639	54
After 3 months	.889	54	.767	54
ing:				
nstruction	1.100	40	.900	40
-unit, semi or tandem trucks	1.200	40	1.100	40
oncrete-mixer trucks	1.200	40	1.100	40
pers	1.050	40	.850	40
erial:				
oncrete-mixer trucks	1.000	40	.850	40
umber	.800	40	.675	47
lumbing—Wholesale:				
Agreement A:				
First 6 months	.750	40	.710	40
7 to 12 months	.850	40	.750	40
After 1 year	.910	40	.790	40
Des Moines, Iowa—Con.				
Building—Continued				
Material—Continued				
Plumbing—Continued				
Agreement B:				
First 6 months	$0.625	40	$0.540	40
7 to 12 months	.700	40	.603	40
13 to 18 months	.770	40	.665	40
After 18 months	.950	40	.790	40
Coal	.755	48	.755	48
Feed—Wholesale	.800	40	.730	40
Flour—Milling	.950	40	.740	40
Film—City pick-up and delivery	.790	54	.790	54
Route drivers	.790	60	.790	60
Gasoline—Transport trucks	.900	60	.900	60
General:				
Freight:				
City pick-up and delivery	.840	54	.840	54
Package delivery	.840	54	.750	54
Grocery—Wholesale:				
First 30 days	.749	40	.648	40
30 to 60 days	.837	40	.724	40
After 60 days	.925	40	.800	40
Ice (after 2 months)	.870	40	.750	40
Helpers	.750	40	.637	40
Laundry:				
Towel service:				
First 4 months	.729	54	.677	54
5 to 8 months	.781	54	.729	54
9 to 12 months	.833	54	.781	54
After 1 year	.938	54	.833	54
Dry cleaning:				
Retail and commercial	.599	48	.599	48
French (after 4 months)	.577	52	.577	52
Moving—Furniture:				
First 6 months	.870	48	.740	48
7 to 12 months	.920	48	.790	48
After 1 year	.970	48	.840	48
Machinery and supply:				
Agreement A	1.000	40	.790	40
Agreement B (after 18 months)	.950	40	.790	40
Meat—Retail:				
Light meat and grocery drivers	.771	48	------	------
Heavy meat and grocery drivers	.833	48	------	------
Byproducts (after 60 days)	.900	40	.850	40
Packing house	.940	40	.740	40
Municipal—Street department	.900	44	.900	44
Helpers	.900	44	.850	44
Newspaper—Intrastate:				
Day	.850	54	.800	54
Night	.900	54	.850	54
Oil—Tank trucks:				
Agreement A:				
First 6 months	.870	40	.727	40
7 to 12 months	.903	40	.767	40
13 to 18 months	.953	40	.819	40
After 18 months	1.052	40	.894	40
Agreement B (after 1 year)	1.026	40	.894	40
Agreement C:				
First 6 months	.794	40	.692	40
7 to 12 months	.827	40	.721	40
After 1 year	.976	40	.851	40
Paper—Wholesale:				
First 6 months	.750	40	.710	40
7 to 12 months	.850	40	.750	40
After 1 year	.910	40	.790	40
Railway express:				
Under 3 tons	1.099	44	.914	44
Over 3 tons	1.110	44	.925	44
Dual axle	1.126	44	.941	44

TABLE 9.—*Hourly wage rates and weekly hours of union motortruck drivers and helpers, by cities, July 1, 1946 and July 1, 1945*—Con.

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Detroit, Mich.				
Air reduction	$1.300	40	$1.150	40
Helpers	1.150	40	1.000	40
Bakery:				
Wholesale	1.100	48	1.000	48
Helpers	.950	48	.850	48
Retail:				
Agreement A	1.100	48	1.000	48
Helpers	.950	48	.850	48
Agreement B	.970	40	.920	40
Agreement C:				
Drivers:				
Starting rate	.900	40	------	------
After 3 months	.950	40	------	------
After 6 months	1.040	40	------	------
After 9 months	1.090	40	------	------
After 1 year	1.140	40	------	------
Helpers:				
Starting rate	.800	40	------	------
After 3 months	.850	40	------	------
After 6 months	.950	40	------	------
Biscuit—Wholesale:				
Agreement A	1.130	45	1.000	45
Agreement B—Starting rate	1.019	45	.889	45
After 30 days	1.130	45	1.000	45
Pie and cake—Wholesale	1.042	48	.938	48
Special delivery	1.042	48	------	------
Yeast:				
Agreement A:				
3 to 6 months	.986	48	.986	48
After 6 months	1.058	48	1.058	48
Agreement B:				
3 to 6 months	1.034	48	.833	48
After 6 months	1.106	48	.958	48
Special delivery	1.042	48	.729	48
Bakers' supply	1.050	40	1.000	40
Helpers	.900	40	.850	40
Beer:				
Distributors and drivers:				
Agreement A	1.280	40	1.000	40
Helpers	1.180	40	.950	40
Agreement B	1.000	40	1.000	40
Building:				
Construction:				
Concrete-mixer trucks	1.350	40	1.150	55
Excavating and road construction	1.375	40	1.150	40
Material:				
1½ ton trucks	1.250	40	1.000	40
Dump truck	1.300	40	1.150	40
Lumber	1.150	40	1.000	40
Helpers	1.000	40	.950	40
Semitrailer	1.200	40	1.050	40
Plumbing and mill supply	1.235	40	1.000	40
Chemicals:				
Agreement A	1.300	40	1.000	40
Helpers	1.200	40	.950	40
Agreement B	1.300	40	1.200	40
Helpers	1.200	40	1.100	40
Cleaners and dyers:				
Service drivers	1.150	40	.822	45
Coal:				
Under 6 tons	1.300	40	1.050	40
6 tons and over	1.300	40	1.100	40
Semitrailers	1.300	40	1.050	40
Helpers	1.150	40	.900	40
Drugs:				
Agreement A (wholesale)	1.100	40	1.000	40
Agreement B	1.050	40	1.000	40
Electrical supply	1.345	40	1.000	40
Factory:				
Automobile:				
Agreement A	1.330	40	1.150	40
Utility drivers	1.380	40	1.200	40
Agreement B:				
Light trucks	1.205	40	1.020	40
Heavy trucks	1.255	40	1.070	40
Trailer trucks	1.305	40	1.120	40
Detroit, Mich.—Con.				
Factory—Continued				
Automobile—Continued				
Agreement C:				
Large road trucks	$1.265	40	$1.080	40
Agreement D	1.250	40	1.200	40
Agreement E	1.235	40	1.050	40
Agreement F:				
Starting rate	1.150	40	.970	40
After 6 months	1.250	40	1.070	40
Agreement G	1.170	40	.985	40
Automobile parts:				
Agreement A	1.275	40	1.090	40
Agreement B	1.260	40	1.080	40
Agreement C:				
Spring division	1.250	40	1.070	40
Frame division	1.340	40	1.070	40
Agreement D	1.285	40	1.100	40
Brass and copper:				
Agreement A	1.315	40	1.130	40
Agreement B	1.245	40	1.060	40
Agreement C	1.205	40	1.020	40
Agreement D	1.235	40	1.050	40
Steel:				
Agreement A	1.320	40	1.150	40
Agreement B	1.210	40	1.000	40
Tool and die	1.200	40	1.000	40
Miscellaneous:				
Agreement A	1.375	40	1.190	40
Agreement B	1.300	40	1.125	40
Agreement C	1.285	40	1.100	40
Agreement D:				
Large truck and tractor	1.345	40	1.160	40
Courtesy drivers	1.365	40	1.180	40
New car	1.175	40	.990	40
Agreement E	1.230	40	1.050	40
Agreement F	1.130	40	1.070	40
Agreement G	1.415	40	1.180	40
Agreement H	1.250	40	1.030	40
Agreement I	1.210	40	1.000	46
Helpers	1.090	40	.900	46
Agreement J	1.235	40	1.050	40
Agreement K	.950	40	.850	40
Agreement L	1.285	40	------	------
Food specialty	1.100	40	1.000	40
Furniture	1.150	40	1.050	40
Helpers	1.050	40	.950	40
General:				
Local cartage:				
Pick-up—½ ton	1.150	48	.950	48
Single-bottom trucks	1.150	48	1.050	48
Double-bottom trucks	1.200	48	1.100	48
Over-the-road local runs	1.020	60	.970	60
Grain and feed	1.100	48	1.100	48
Grocery:				
Retail	1.050	40	.971	40
Semitrailers	1.100	40	1.028	40
Helpers	.950	40	.910	40
Chain store	1.250	48	1.150	48
Wholesale	1.250	48	1.100	48
Grocery, candy, and tobacco:				
Wholesale	1.145	40	1.045	40
Semitrucks	1.200	40	1.100	40
Helpers	.969	40	.869	40
Ice and coal	1.150	48	1.050	48
Ice cream—Highway drivers	1.240	40	1.060	40
Laundry—Carpet cleaning:				
First 4 weeks	.729	48	.625	48
5 to 8 weeks	.833	48	.729	48
9 to 12 weeks	.938	48	.833	48
After 12 weeks	1.042	48	.900	48
Helpers:				
First 4 weeks	.552	48	.521	48
5 to 8 weeks	.594	48	.552	48
9 to 12 weeks	.625	48	.583	48
After 12 weeks	.667	48	.625	48
Liquid Carbonic	1.200	40	1.100	40

TABLE 9.—*Hourly wage rates and weekly hours of union motortruck drivers and helpers, by cities, July 1, 1946 and July 1, 1945—Con.*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Detroit, Mich.—Con.				
Meat:				
Light johbers	$1.300	40	$0.940	40
Heavy jobbers	1.400	40	1.125	40
Poultry	1.150	40	1.000	40
Sausage	1.000	40	1.000	40
Milk:				
Agreement A	1.260	40	1.080	40
Helpers	1.190	40	1.010	40
Agreement B:				
Branch tractors	1.260	48	1.080	48
Tank trucks	1.320	48	1.140	48
Supply to factories and schools	1.160	48	.980	48
Agreement C:				
Downtown salesmen	1.563	40	------	------
Relief or utility drivers	1.240	40	------	------
Moving:				
Furniture and pianos	1.125	40	1.000	40
Helpers	1.075	40	.950	40
Long distance	1.100	60	.975	60
Helpers	1.000	60	.875	60
Municipal:				
Sanitary drivers starting rate	1.185	40	1.025	40
After 6 months	1.235	40	1.085	40
Helpers:				
Starting	1.130	40	1.050	40
After 6 months	1.185	40	------	------
Newspaper and magazine:				
Newspaper:				
Agreement A	1.300	40	1.113	40
Reliefmen	1.300	40	1.267	40
Jumpers	1.000	40	.660	40
Agreement B	1.340	40	1.340	40
Helpers	1.000	40	.850	40
Magazine	1.300	40	1.100	40
il:				
Agreement A—After 18 months	1.392	40	1.183	40
Agreement B:				
Starting	1.210	40	1.025	40
After 6 months	1.270	40	1.075	40
After 12 months	1.330	40	1.125	40
After 18 months	1.400	40	1.180	40
Agreement C	1.360	40	1.150	40
Agreement D:				
First 6 months	1.053	40	.892	40
6 to 18 months	1.191	40	1.007	40
After 18 months	1.335	40	1.125	40
Agreement E:				
Single unit	1.050	54	1.000	54
Double unit	1.150	54	1.100	54
Agreement F	1.200	40	1.050	40
Agreement G	1.200	40	1.105	48
Agreement H				
First 6 months	.950	48	.950	48
After 6 months	1.050	48	1.050	48
Agreement I:				
First 6 months	1.145	40	------	------
6 to 18 months	1.254	40	1.059	40
After 18 months	1.392	40	1.180	40
Agreement J:				
12 to 18 months	1.323	40	1.116	40
After 18 months	1.392	40	1.180	40
Agreement K—After 18 months	1.302	40	1.183	40
Agreement L:				
6 to 18 months	1.191	40	.921	40
After 18 months	1.335	40	1.036	40
Agreement M—After 18 months	1.150	48	------	------
Agreement N	1.180	54	------	------
Agreement O—After 30 days	1.200	48	------	------
Agreement P—After 18 weeks	1.250	40	------	------
Agreement Q	1.150	54	------	------
Oxygen tanks	$1.200	48	$1.100	48
Paper supply	.950	40	.850	40
Helpers	.850	40	.750	40
Produce—Eastern and western	.943	48	.943	48
Helpers	.878	48	.878	48
Railroad truck drivers:				
Medium and heavy trucks	1.140	48	.955	48
Light pick-up	1.008	48	.823	48
Railway express	1.274	44	1.089	44
Scrap iron	1.180	40	1.000	40
Sign painters	1.250	40	1.000	40
Soft drink:				
Highway	1.130	40	1.000	40
Helpers	.830	40	.700	40
Waste paper	1.150	48	1.000	48
Wine and liquor	1.125	40	1.125	40
Duluth, Minn.				
Bakery	.767	54	.767	54
Yeast	.750	54	.750	54
Building:				
Construction:				
1½ tons or less	.975	48	.850	48
Concrete-mixer trucks	1.000	40	.775	40
Heavy construction—Highway and railroad:				
¾ ton service drivers	1.050	48	.900	48
Up to 6 cu. yd.	1.150	48	1.000	48
Material:				
Lumber:				
Agreement A (retail)	.920	40	.800	48
Agreement B (retail)	.920	40	.750	48
Agreement C (wholesale)	.920	40	.750	40
Agreement D	.775	40	.775	40
Semitrailer	.900	40	.900	40
Agreement E (retail)	.800	40	.750	48
Cement	1.000	40	.775	40
Plumbing supply	.875	40	.725	40
Cheese	1.000	40	------	------
Coal:				
Agreement A	.990	40	.815	40
Helpers	.950	40	.775	40
Agreement B	1.000	40	.775	48
Helpers	.950	40	.725	48
Department store:				
Agreement A	.900	42	.762	42
Agreement B	.945	40	.762	48
Drug—Wholesale	.935	40	.855	40
Fish	.900	48	.750	48
Flour milling	.950	40	.800	40
Flower—Store	.800	48	.500	48
Fruit—Wholesale	.830	40	.730	40
Furniture	.935	44	.700	48
Helpers	.875	44	.640	48
General—Freight:				
Local—City	.825	48	.750	48
Helpers	.775	48	.700	48
Transfer	.720	48	.720	48
Helpers	.670	48	.670	48
Grocery—Wholesale:				
City	.950	40	.775	40
Over-the-road	1.000	40	.825	40
Helpers	.850	40	.675	40
Hardware—Wholesale	.895	40	.755	40
Ice and fuel	1.000	40	.800	48
Semitrailer	1.025	40	.825	48
Helpers	.950	40	.750	48
Liquor—Wholesale	.900	40	.750	40
Machinery:				
1½ ton trucks	.770	40	.720	40
2½ ton trucks	.850	40	.800	40
Meat—Wholesale	1.000	40	.800	40

TABLE 9.—*Hourly wage rates and weekly hours of union motortruck drivers and helpers, by cities, July 1, 1946 and July 1, 1945*—*Con.*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Duluth, Minn.—Con.				
Milk:				
Semitrailer or transport drivers	$1.020	40	------	------
Newspaper—City	.805	40	$0.779	38½
Oil:				
Agreement A (after 2 months)	1.035	40	.900	40
Trailer units—Gasoline	1.060	40	.925	40
Agreement B (after 1 year)	1.089	40	.930	40
Paint	.830	40	.625	40
Paper—Wholesale	.930	40	.775	40
Plate glass	.830	40	.750	40
Railway express	1.156	44	.971	44
Scrap iron	1.000	40	.700	40
Soft drink:				
Agreement A	1.000	40	.920	40
Agreement B	1.148	40	.968	40
Helpers	1.074	40	.894	40
Steel:				
Agreement A (steel and wire)	1.040	40	.855	40
Agreement B (rolled and stamped steel)	1.000	40	.775	40
El Paso, Tex.				
General—Freight:				
Dock and pick-up	.870	48	.720	48
Peddle runs	.900	------	------	------
Lime drivers:				
2-axle trucks	1.150	60	1.075	60
Over 2-axle trucks	1.200	60	1.075	60
Lumber	.750	40	------	------
Railway express	1.102	44	.917	44
Erie, Pa.				
Beer	1.130	40	------	------
Tractor and trailer	1.230	40	------	------
Helpers:				
Agreement A	.900	40	.738	40
Agreement B	.980	40	------	------
Building and road construction:				
Dump trucks	1.050	40	.800	48
Concrete-mixer trucks	1.100	40	.850	48
Department store	.931	46	.750	48
Electrical supply	1.050	40	.920	40
Trailer	1.185	40	.920	40
Plant and city	1.065	40	.880	40
General—Freight:				
Parcel delivery and pick-up	.880	60	.830	60
Helpers	.780	60	.730	60
Over-the-road	.910	60	.830	60
Milk:				
Pick-up and special delivery	.720	48	.720	48
Municipal:				
Street department	.970	48	.860	48
Helpers	.870	48	.760	48
Incinerator department	.970	48	.860	48
Grand Rapids, Mich.				
Building:				
Concrete-mixer trucks	1.010	40	.910	44
Over-the-road:				
Single axle	.950	40	.850	44
Semi-or tandem axle	1.010	40	.910	44
Coal and ice:				
Agreement A	.800	40	.800	40
Helpers	.750	40	.750	40
Agreement B (part time drivers)	.950	40	.840	40
Factory:				
After 3 months	1.100	40	.950	40
Grand Rapids, Mich.—Con.				
General—Freight				
Local cartage	$1.000	48	$0.870	48
Over-the-road (peddle runs)	1.000	60	.870	60
Grocery:				
Wholesale	.930	40	.830	40
Semitruck drivers	.980	40	.880	40
Double bottom	1.030	40	.930	40
Chain store	.970	48	.910	48
Milk—Canned	.950	48	.825	48
Produce	1.100	40	.938	48
Railway express	1.102	44	.917	44
Houston, Tex.				
Bakery:				
Extra drivers	.648	54	.648	54
Biscuit	.938	48	.833	48
Beer:				
Bottle helpers	.875	40	.688	40
Building construction:				
Up to and including 1½ tons	.850	40	.700	40
Dump trucks	.950	40	.800	40
Flat-bed trucks	1.150	40	1.000	40
Concrete-mixer trucks	1.250	40	1.100	40
Confectionery	.750	40	.750	40
Factory—Airco products	.900	40	.750	40
Helpers	.830	40	.700	40
General—Freight:				
Local	.770	54	.650	54
Transport:				
Agreement A	.900	54	.900	54
Helpers	.620	54	.620	54
Agreement B	.780	54	.780	54
Transfer (over-the-road)	.870	54	.870	54
Mail-order house	.810	48	.810	48
Helpers	.625	48	.625	48
Railway express	1.129	44	.944	44
Soft-drink—Helpers	.600	40	.600	40
Indianapolis, Ind.				
Armored cars:				
Agreement A	.850	40	------	------
Agreement B	.900	40	------	------
Bakery—Biscuit:				
Agreement A	.900	48	.825	48
Agreement B	.900	48	.850	48
Agreement C	.900	50	.825	50
Building—Excavating and paving:				
Up to 3 tons	.975	40	.850	40
Special equipment:				
Concrete-mixer trucks, distributors, Euclids, etc	1.125	40	1.000	40
Gravel (under 1½ tons)	.975	40	.850	40
Cannery—Over-the-road	1.000	48	.850	40
Cheese	.900	40	------	------
Coal (over 1½ tons)	.850	40	.708	48
Furniture	1.000	48	------	------
Helpers	.950	48	------	------
General:				
City freight:				
4-wheeler (after 12 months)	.865	48	.865	48
6-wheeler (after 12 months)	.940	48	.940	48
Transfer and storage	1.050	48	1.000	48
Helpers	.900	48	.850	48
Parcel delivery	.950	48	.729	48
Over-the-road	.833	50	.750	60
Peddle runs	1.000	60	.870	60
Grocery:				
Agreement A	.875	40	.825	40
Agreement B	.940	50	.850	50
Over-the-road	1.000	50	.935	50

TABLE 9.—*Hourly wage rates and weekly hours of union motortruck drivers and helpers, by cities, July 1, 1946 and July 1, 1945—Con.*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Indianapolis, Ind.—Con.				
rocery—Continued				
Agreement C—Warehouse	$0.950	40	$0.825	40
Over-the-road	1.000	40	.850	40
elly	.950	45	.800	45
eat—Packing house:				
Agreement A	1.150	40	.975	40
Agreement B	1.150	40	.975	40
Road	1.150	40	1.000	40
Agreement C	1.160	40	.978	40
Country	1.160	48	.878	48
ilk—Condensed	.750	40	.700	40
oving:				
Furniture	1.000	48	.850	48
Helpers	.900	48	.800	48
Out of town	1.050	48	.900	48
Over-the-road:				
First 6 months	.600	60	.583	60
7 to 12 months	.700	60	.683	60
1 to 3 years	.850	60	.833	60
3 to 5 years	.883	60	------	------
After 5 years	.917	60	------	------
oduce—Vegetable:				
Commission house	.850	40	.700	40
Over-the-road	1.020	40	.770	40
ilway express	1.102	44	.917	44
Over-the-road	1.065	44	.877	44
t drink	.833	48	.625	48
rehouse—Merchandise:				
greement A (city)	.940	40	.800	40
greement B	1.000	48	.850	48
Out of town	1.100	48	.950	48
Helpers	.950	48	.800	48
Jackson, Miss.				
ery—Biscuit	.792	48	------	------
eral—Freight:				
ity pick-up (drivers and helpers)	.650	40	------	------
Local runs	.960	60	.825	60
lway express	1.102	44	.917	44
Jacksonville, Fla.				
r—Transport	.850	40	.850	40
lding:				
onstruction:				
Dump trucks:				
Agreement A	.700	40	.700	40
Agreement B	.750	40	.750	40
Concrete-mixer trucks:				
3 cu. yd. and under	.750	40	.750	40
Over 3 cu. yd	1.000	40	1.000	40
tory	.800	40	.700	45
elpers	.700	40	.600	45
eral—Freight:				
ocal pick-up and delivery	.650	40	.600	40
Helpers	.550	40	.500	40
way express	1.226	44	1.041	44
drink—Helpers	.750	40	.750	40
ansas City, Mo.				
ery:				
ead:				
Transport	1.000	48	.870	48
Country drivers	1.075	48	.870	48
Chain store	1.050	48	.863	48
scuit:				
Agreement A	.905	40	.800	40
Agreement B	.938	48	.813	48
ast	.802	48	.802	48
—Helpers	1.000	40	.875	40
ling—Material:				
avy excavating	1.350	40	1.100	48
avy hauling	1.150	40	.950	48
Kansas City, Mo.—Con.				
Building—Material—Con.				
Dump truck	$0.950	40	$0.900	48
Flat-bed trucks	.950	40	.830	48
Concrete-mixer trucks	1.050	40	.975	48
Steel trucks	1.025	40	.925	48
Lumber	.950	40	.830	40
Cheese	.900	40	.900	40
Department store:				
Agreement A	.833	48	.691	48
Agreement B	1.018	48	.850	44
Helpers	.966	48	.800	44
Flour milling:				
Agreement A	1.005	40	.820	40
Helpers	.945	40	.760	40
Agreement B	.995	40	.810	40
Furniture—New	.875	44	.850	44
Helpers	.825	44	.800	44
General—Freight:				
Local pick-up and delivery	.950	54	.800	54
Helpers	.900	54	.750	54
Transfer:				
Agreement A	.950	54	.800	54
Helpers	.900	54	.750	54
Agreement B—Semi-truck drivers	1.025	40	.900	48
Grocery:				
Wholesale	.980	40	.900	40
Chain store	1.050	48	.900	48
Ice:				
Wholesale	.934	50	------	------
Helpers	.630	50	------	------
Wholesale and retail:				
Special delivery, cube and supply drivers	.750	40	.730	40
Helpers	.500	40	.500	56
Ice and fuel—Railroad-car icing	.780	40	.730	48
Helpers	.750	40	.700	48
Ice cream:				
Tank drivers	.950	40	.700	40
Liquor—City delivery	1.100	40	.800	40
Out-of-town	1.150	40	.863	40
Meat:				
Packing house	1.187	40	1.027	40
Wholesale	1.150	48	.850	48
Milk:				
Warehouse and supply	.830	40	.734	48
Tank trucks	.890	40	.797	48
Special delivery	.750	40	.547	48
Moving:				
Tractors	1.000	40	.850	40
Helpers	.950	40	.800	40
Paper house	.950	40	.800	40
Produce	.900	40	.750	40
Railway express	1.177	44	.992	44
Rug	.875	48	.850	48
Soft drink—Semitrailer	.850	40	.750	40
Little Rock, Ark.				
Building—Construction:				
1½ tons or less	.750	40	.650	40
Over 1½ tons	.850	40	.750	40
Semitrailer	1.000	40	.900	40
Concrete-mixer trucks	1.000	40	.900	40
Euclid trucks	1.125	40	1.125	40
Winch trucks:				
1 drum	1.000	40	1.000	40
2 drums	1.250	40	1.250	40
Dump trucks	1.000	40	.900	40
General—Freight:				
City pick-up	.680	40	.640	40
Transfer:				
City drivers	.800	40	.750	40
Helpers (road)	.650	54	.610	54

TABLE 9.—*Hourly wage rates and weekly hours of union motortruck drivers and helpers, by cities, July 1, 1946 and July 1, 1945—Con.*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Los Angeles, Calif.				
Baggage	$1.250	48	$1.000	48
Helpers	1.200	48	.900	48
Bakery	1.025	48	.900	48
Cracker	1.225	40	1.050	40
Hebrew bread	1.406	48	1.042	48
Beer	1.450	40	1.183	40
Helpers	1.375	40	1.128	40
Blueprint house	.950	40	.950	40
Motorcycle	1.100	40	1.100	40
Building—Material:				
Under 6 tons	1.225	40	.950	40
6 to 15 tons	1.250	40	1.000	40
15 to 20 tons	1.375	40	1.175	40
Over 20 tons	1.575	40	1.375	40
Transit-mixer trucks:				
3 cu. yd. or more	1.575	40	1.375	40
Euclid spreaders	1.575	40	1.375	40
Lumber:				
26,000 lb. and under	1.225	40	.950	40
26,000—52,000 lb.	1.325	40	1.050	40
Over 52,000 lb.	1.375	40	1.100	40
Ross carriers	1.360	40	1.050	40
Sand and gravel:				
Flat trucks:				
Under 5 tons	1.050	40	.950	48
5 tons and over	1.150	40	1.000	48
Truck and trailer	1.200	40	1.050	48
Concrete-mixer trucks	1.250	40	1.150	48
4-wheel trucks	1.050	40	.950	48
6-wheel trucks	1.100	40	1.000	48
Eggs and poultry	1.188	40	.945	48
Country	1.250	40	.915	48
Sales drivers	1.188	40	.975	48
Furniture	1.135	40	.950	48
Helpers	1.035	40	.850	48
Long line drivers	1.200	60	1.175	60
Cabinet manufacturers institute	1.100	40	1.050	48
General—Freight:				
Pick-up and delivery	1.025	40	.900	40
Local hauling:				
3 axles or less	1.075	48	.950	48
4 axles	1.145	48	1.020	48
5 axles or more	1.175	48	1.050	48
Crane truck drivers	1.075	48	.955	48
Helpers	1.000	48	.850	48
Over-the-road:				
Short line	1.200	60	1.075	60
Long line	1.325	60	1.200	60
Transfer:				
Agreement A	1.250	48	1.000	48
Helpers	1.200	48	.900	48
Agreement B	1.150	40	.921	48
Agreement C	1.075	48	.950	48
Grocery—Wholesale:				
Under 7½ tons, bed less than 108 in.	1.200	40	.950	40
Under 7½ tons, bed over 108 in.	1.275	40	1.000	40
7½—16 tons	1.325	40	1.075	40
16 tons and over	1.450	40	1.125	40
Helpers	1.100	40	.900	40
Ice—Wholesale	1.075	40	.950	40
Semitruck drivers	1.150	40	1.025	40
Ice cream	1.250	48	1.055	48
Route foreman	1.385	48	1.151	48
Laundry (after 3 months)	1.278	45	1.000	50
Helpers	1.056	45	.850	50
Miscellaneous—Food	1.444	45	1.250	40
Special delivery drivers	1.200	45	1.000	40
Meat:				
Branch house:				
Local	1.298	40	1.038	40
Line drivers	1.348	40	1.200	40
Sales drivers	1.377	45	1.095	45
Packing house:				
Agreement A:				
Local	1.348	40	1.088	40
Extra drivers	1.500	40	1.150	40
Line drivers	1.460	40	1.200	40
Los Angeles, Calif.—Con.				
Meat—Continued				
Packing house—Con.				
Agreement A—Con.				
Sales drivers	$1.377	45	$1.094	45
Agreement B:				
Local	1.273	40	1.063	40
Country	1.323	40	1.113	40
Provision and jobbing house:				
1½ tons or less	1.125	40	1.000	40
Over 1½ tons or line trucks	1.188	40	1.063	40
Rabbits—Sales drivers	1.287	40	1.144	45
Milk:				
Route salesmen	1.250	48	1.055	48
Haulers	1.250	48	1.000	48
Foremen	1.385	48	1.151	48
Moving and storage	1.150	48	1.025	48
Helpers	1.050	48	.925	48
Highway drivers	1.250	60	1.250	60
Helpers	1.150	60	1.150	60
Oil:				
Agreement A—Local	1.147	40	1.050	40
Tank trucks:				
Agreement B—Transport	1.200	60	1.150	60
Agreement C—City delivery (under 2,000 gal.)	1.358	40	------	------
Agreement D:				
Transport (over 2,000 gal.)	1.358	40	1.151	40
City delivery (under 2,000 gal.):				
First 6 months	1.162	40	.978	40
7 to 12 months	1.191	40	1.007	40
13 to 18 months	1.226	40	1.036	40
19 to 24 months	1.260	40	1.064	40
25 to 30 months	1.295	40	1.093	40
After 30 months	1.323	40	1.122	40
Agreement E:				
Transport (over 2,000 gal.)	1.358	40	1.180	40
City delivery (under 2,000 gal.):				
First 6 months	1.208	40	1.007	40
7 to 12 months	1.266	40	1.036	40
After 1 year	1.323	40	1.064	40
Agreement F:				
Transport (over 2,000 gal.)	1.392	40	1.180	40
City delivery (under 2,000 gal.):				
First 6 months	1.174	40	1.007	40
7 to 12 months	1.205	40	1.036	40
13 to 18 months	1.240	40	1.064	40
19 to 24 months	1.274	40	1.093	40
25 to 30 months	1.309	40	1.122	40
After 30 months	1.343	40	1.151	40
Agreement G:				
Transport (over 2,000 gal.)	1.426	40	1.208	40
City delivery (under 2,000 gal.):				
First 6 months	1.188	40	1.007	40
7 to 12 months	1.222	40	1.036	40
13 to 18 months	1.256	40	1.064	40
19 to 24 months	1.290	40	1.093	40
After 2 years	1.323	40	1.122	40
Package	1.358	40	1.151	40
Produce:				
Retail:				
Under 7 tons	1.200	40	1.000	40
7 to 10 tons	1.275	40	1.075	40
Semis with bed length of 25 feet	1.325	40	1.125	40
Truck and trailer	1.450	40	1.250	40
Wholesale (general market drivers)	1.200	40	1.000	4

TABLE 9.—*Hourly wage rates and weekly hours of union motortruck drivers and helpers, by cities, July 1, 1946 and July 1, 1945—Con.*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Los Angeles, Calif.—Con.				
Railway express	$1.204	44	$1.019	44
Rendering and reduction:				
Buying drivers	1.460	40	1.195	40
Packing house pick-up	1.360	40	1.088	40
Helpers	1.260	40	.975	40
Hides and wool	1.348	40	1.088	40
Sawdust:				
First 6 months	1.000	40	.900	40
7 to 12 months	1.100	40	1.000	40
After 1 year	1.200	40	1.050	40
Soft drink:				
Branch delivery drivers	1.275	40	.925	40
Helpers	1.100	40	.700	40
Studio:				
Location rates	1.180	40	1.180	40
Special equipment	1.400	40	1.390	40
Studio rates	1.340	40	1.330	40
Special equipment	1.580	40	1.570	40
Motorcycle riders	1.050	40	1.050	40
Theatrical equipment—Night	1.340	40	1.150	48
Warehouse	1.075	48	.950	48
Wine and liquor:				
7½ tons or less	1.250	40	1.100	40
Louisville, Ky.				
Air reduction	1.000	40	.900	40
Helpers	.900	40	.800	40
Armored cars:				
Agreement A	.800	40	.730	40
Agreement B	.780	40	.730	48
Bakery—Biscuit:				
Agreement A	.800	40	.700	40
Agreement B	.895	48	.813	48
Beer—Helpers	1.000	40	.697	40
uilding:				
Construction:				
Up to 3 tons	1.000	40	.800	40
3 tons and over	1.100	40	.800	40
Euclid, winch and low boy	1.250	40	.800	40
Material:				
Hauling:				
Up to 3 tons	1.000	40	.800	40
3 tons and over	1.100	40	.800	40
Brick (semitrailer)	1.100	40	------	------
Helpers	.850	40	.675	40
Lumber	.750	40	.700	40
Plaster	.750	40	------	------
Helpers	.700	40	------	------
Plumbing and heating	1.000	40	------	------
Sand and gravel	.800	40	.750	40
Crushed stone	.859	40	.850	40
oal	.750	------	.650	------
offee	.800	40	.700	40
Helpers	.750	40	.650	40
istillery	1.050	40	.970	40
ry goods	.800	40	.650	40
our	1.000	40	.750	40
Helpers	.950	40	.700	40
uit	.850	40	.720	40
Helpers	.800	40	.680	40
rniture	.875	48	.700	48
Helpers	.825	48	.650	48
eneral—Freight:				
Local cartage	.850	52	.750	52
Pick-up and delivery	.820	48	.800	48
Helpers	.750	48	.730	48
Storage and transfer	.800	40	.700	40
ocery—Wholesale (road)	1.000	------	.895	------
rdware	.900	40	------	------
Helpers	.800	40	------	------
e:				
Agreement A	.917	48	.729	48
Supply	.800	40	.650	40
Helpers	.750	40	.650	40
Agreement B (supply)	.850	40	.650	40
Louisville, Ky.—Con.				
Iron	$0.850	40	$0.700	40
Liquid Carbonic	.950	40	------	------
Macaroni	.800	40	.700	40
Helpers	.800	40	.650	40
Machinery	1.085	40	.900	40
Meat—Packing house	1.055	40	.825	40
Country drivers	1.105	40	------	------
Milk	.675	40	.650	40
Tank truck	.770	54	.660	54
Newspaper:				
Day	1.000	40	.847	40
Night	1.100	40	.903	40
Split-shift	1.050	40	.875	40
Paint	.850	40	------	------
Paper:				
Day	.790	40	.650	40
Helpers	.680	40	.550	40
Night	.840	40	.700	40
Helpers	.730	40	.600	40
Third shift	.865	40	.725	40
Helpers	.750	40	.625	40
Pickle	.750	40	.680	40
Produce—Fruit:				
Drivers and helpers	.850	40	.700	40
Salt and feed	.720	40	.720	40
Soft drink:				
Agreement A:				
Warehouse supply	.800	40	.700	40
Special delivery	.800	40	.700	40
Agreement B—Helpers	.820	40	------	------
Supply house	.750	40	.700	40
Helpers	.650	40	.600	40
Tobacco:				
Agreement A	1.070	40	.860	40
Helpers	.960	40	.700	40
Agreement B	1.070	40	.825	40
Helpers	.960	40	.700	40
Madison, Wis.				
Building:				
Construction	1.000	40	.850	40
Highway:				
Light pick-up and dump trucks	.850	40	.750	40
1 to 5 tons	1.000	40	.850	40
Semitrailers and special equipment	1.250	40	1.000	40
Material:				
Lumber	.900	40	.800	40
Concrete-mixer trucks	.900	40	.800	40
Food—Warehouse:				
Over-the-road	1.070	51	.950	52
Helpers	.850	40	.720	40
Fruit—Wholesale	.800	40	.730	40
Helpers	.700	40	.630	40
General—Cartage:				
Agreement A:				
Over-the-road	1.020	60	.970	60
Local runs	1.000	60	.870	60
Agreement B	.940	48	.800	48
Grocery—Wholesale	.800	40	.760	40
Helpers	.640	40	.600	40
Liquor—Distributor	.800	40	.680	40
Milk:				
Agreement A:				
Special delivery and route riders	.938	48	.771	48
Route foremen	1.136	48	.969	48
Agreement B—Can milk	.900	40	.800	40
Moving—Furniture	.940	48	.800	48
Helpers	.870	48	.750	48
Oil:				
Agreement A (gasoline transport)	1.010	54	1.010	54
Agreement B	.950	40	.770	40
Railway express	1.075	44	.890	44

TABLE 9.—*Hourly wage rates and weekly hours of union motortruck drivers and helpers, by cities, July 1, 1946 and July 1, 1945—Con.*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Manchester, N. H.				
Building:				
Dump trucks	$1.000	40	------	------
Euclid trucks	1.250	40	------	------
Concrete-mixer trucks	1.100	40	------	------
Helpers	.850	40	------	------
Furniture	1.000	48	------	------
Helpers	.900	48	------	------
General—Freight, fruit, produce, and beer:				
Under 3 tons	.750	48	$0.725	48
3 to 5 tons	.800	48	.775	48
5 tons and over	.850	48	.825	48
Helpers	.700	48	.675	48
Ice cream—Helpers	.850	40	------	------
Meat—Packing house:				
Under 3 tons	.750	48	.725	48
3 to 5 tons	.800	48	.775	48
Railway express	1.089	44	.904	44
Memphis, Tenn.				
Factory:				
Agreement A—(wood products)	.600	40	.520	40
Agreement B—(fence and wire)	.650	40	.550	40
Agreement C—(shoes)	.785	40	.600	40
Agreement D—(fork and hoe)	.685	40	.500	40
Food products (after 2 years)	.600	40	------	------
Fruit—Wholesale:				
City (after 6 months)	.600	40	.550	40
Country	.700	------	.650	------
Furniture	.680	40	------	------
General—Freight:				
Agreement A:				
City	.800	54	.750	54
Over-the-road	.970	60	.900	60
Helpers	.630	54	.610	54
Agreement B:				
Local runs	.790	60	.700	60
City pick-up	.750	52	.680	54
Grocery—Wholesale	.590	40	.590	40
Junk yard:				
Agreement A (2 tons)	.600	40	.500	40
Agreement B (1½ tons)	.570	40	.520	40
Meat—Packing house:				
Agreement A	.760	40	------	------
Agreement B	.760	40	.600	40
Country (interstate)	.821	48	.646	48
Railway express:				
City drivers	1.129	44	.944	44
Over-the-road	1.132	------	------	------
Milwaukee, Wis.				
Armored cars	.960	40	.880	40
Messenger drivers	1.020	40	.910	40
Bakery:				
Wholesale—Transport	1.020	48	.920	48
Special delivery	.900	40	.800	40
Retail store delivery	.900	40	.830	40
Transport	1.020	48	.950	48
Head store drivers	.920	40	.850	40
Cracker	.960	48	.889	48
Yeast	1.042	48	.906	48
Beer:				
Depot drivers, helpers	1.060	48	.745	51
Brewery:				
Keg	1.400	40	1.075	40
Helpers	1.363	40	1.038	40
Bottle	1.400	40	1.125	40
Helpers	1.287	40	.950	40
Plant-to-plant	1.350	40	1.075	40
Extra drivers	1.313	40	1.038	40
Building:				
Paving, excavating, grading	1.200	40	1.050	40
3-axle semitrailers	1.300	40	1.150	40
Milwaukee, Wis.—Con.				
Building—Continued				
Concrete-mixer trucks	$1.150	40	$1.150	40
Material (including sand and gravel)	.970	48	.970	48
3-axle semitrailers	1.050	48	1.050	48
Helpers	.870	48	.870	48
Millwork	1.000	40	.850	40
Lumber	1.100	40	.950	40
Plumbing supply	1.000	40	.920	40
Carbonic gas	.950	40	.800	40
Coal, coke, and oil	1.170	40	.990	40
Helpers	1.050	40	.870	40
Department store	.940	46	.850	46
Furniture	.910	40	.860	40
Helpers	.810	40	.760	40
Package	.890	40	.840	40
Drug:				
Agreement A	.970	46	.820	46
Agreement B	.750	40	.750	40
Agreement C	.730	44	.670	44
Factory (chemicals)	1.050	40	.970	40
Fruit and vegetable:				
Agreement A—Retail	.700	40	.570	40
Agreement B	.850	40	.770	40
Agreement C—Wholesale	1.040	48	.920	48
Helpers	.940	48	.820	48
Over-the-road	1.020	48	.970	48
Furniture—Retail	.920	48	.920	48
Helpers	.847	48	.847	48
General:				
Cartage:				
Less than 75 miles	1.000	48	.920	48
75 miles and over	1.020	48	.970	48
Helpers	.900	48	.820	48
Grocery—Wholesale:				
Agreement A	1.000	48	.900	48
Agreement B	1.000	40	.900	40
Hardware—Wholesale	1.040	40	.825	40
Ice cream:				
Station-to-station	1.000	48	.917	48
Special store route	1.146	48	1.083	48
Laundry:				
Industrial service	.812	48	.812	48
4th year	1.250	48	1.167	48
5th year	1.292	48	1.208	48
Industrial wiper	.975	40	.888	40
Dry cleaning:				
Intracity drivers	.750	48	.659	48
Relay drivers	.833	48	------	------
Rug:				
Agreement A	.810	44	.810	44
Agreement B	1.020	44	1.020	44
Machinery, heavy	1.400	40	1.200	40
Magazine	1.000	44	.764	44
Meat—Packing house:				
Agreement A	1.160	40	.950	40
Country	1.160	40	1.008	40
Agreement B (local)	1.160	40	1.000	40
Milk:				
Tractor	1.175	48	.995	48
Plant-to-plant	1.081	48	.940	48
Moving:				
Furniture	1.000	48	.920	48
Helpers	.900	48	.870	48
Long haul	.950	48	.850	48
Newspaper	.850	46	.850	46
Oil and gas:				
Agreement A:				
First 3 months	1.103	40	.935	40
After 3 months	1.137	40	.964	40
Agreement B—Transport	1.040	48	.990	48
Printing:				
Agreement A	1.125	40	1.075	40
Agreement B	1.025	40	1.025	40
Railway express:				
Under 2½ tons	1.129	44	.944	44
2½ tons and over	1.156	44	.971	44

TABLE 9.—*Hourly wage rates and weekly hours of union motortruck drivers and helpers, by cities, July 1, 1946 and July 1, 1945*—Con.

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
ilwaukee, Wis.—Con.				
oft drink—Local:				
Agreement A	$0.940	40	$0.810	40
Agreement B	1.000	44	.870	44
'ea	1.000	48	.920	48
Helpers	.910	48	.833	48
Vaste paper and junk	1.020	48	.970	48
inneapolis, Minn.				
ir reduction	1.050	40	.975	40
uto haulers:				
Road drivers	1.070	54	------	------
City drivers	1.070	48	------	------
akery:				
Transport:				
Agreement A	.891	40	.891	40
Agreement B	.900	40	.825	40
Biscuit:				
Agreement A	.900	48	.800	48
Agreement B	.970	48	.800	48
auty supply	.970	40	.900	40
er:				
Distributor:				
Stock and special drivers	.950	40	.950	40
Helpers	.900	40	.900	40
Brew manufacturer	1.255	40	1.075	40
Helpers	1.180	40	1.000	40
x—Drivers and helpers	.970	40	.900	40
lding:				
Construction:				
Bituminous distributor	1.150	48	1.000	48
Dump	1.150	40	------	------
Spray operator	1.050	48	.900	48
xcavating:				
Under 6 cu. yd	1.150	48	1.000	48
6 to 8 cu. yd	1.300	48	1.150	48
8 to 16 cu. yd	1.400	48	1.250	48
oncrete-mixer trucks	1.060	44	.990	44
ridge construction	1.020	40	.950	40
eavy construction:				
Tank truck and dumper	1.150	48	1.000	48
aterial:				
Concrete blocks, sand, and gravel	.983	48	.913	48
Lumber and wrecking	.970	40	.900	40
Sash and door	.970	40	.900	40
Plumbing supply	.980	40	.910	40
er:				
ty—Sales drivers	1.150	44	1.100	44
er-the-road drivers	1.020	40	.935	54
ly and tobacco	1.020	40	.950	40
et	.970	40	------	------
se—Freight drivers	1.065	40	.900	48
	1.020	40	.940	40
lpers	.920	40	.840	40
e—Wholesale	.995	40	.925	40
erative services	.970	40	------	------
rtment store	1.000	46	.930	46
lpers	.850	46	.780	46
:				
olesale	1.075	40	1.005	40
ain store	1.040	40	.970	40
rical supply	.970	40	.900	40
ry or miscellaneous delivery:				
eement A (bottles)	1.070	40	1.000	40
eement B (bolts and uts)	1.040	40	.970	40
eement C (asbestos)	.970	40	.900	40
eement D (firebrick)	.983	40	------	------
eement E (metal- are)	1.005	40	.935	40
eement F (knitted ear)	.983	40	.913	40
eement G (copper)	.970	40	------	------
eement H (bags)	.970	40	------	------
eement I (chemical)	1.050	40	.990	40
eement J (chemical)	1.085	40	1.055	40
Minneapolis, Minn.—Con.				
Factory or miscellaneous delivery—Continued				
Agreement K (bottle gas)	$1.075	40	------	------
Agreement L (bottle gas)	.970	48	$0.900	48
Agreement M (excelsior)	1.020	40	.950	40
Agreement N (steel tanks, boilers)	1.050	40	.900	40
Helpers	1.000	40	.850	40
Agreement O (steel tanks, boilers)	1.030	40	------	------
Agreement P (steel tanks, boilers)	1.070	40	------	------
Agreement Q (sheet metal)	1.100	40	------	------
Agreement R (showcase and fixture)	.970	40	------	------
General	.970	40	.900	40
Fish	.970	40	.900	40
Florist:				
Agreement A	.950	48	.850	48
Agreement B	.850	40	.850	40
Flour and feed mill:				
Agreement A	1.085	40	.900	40
Agreement B	1.080	40	.950	40
Helpers	1.040	40	.900	40
Agreement C	1.080	40	.900	40
Agreement D	1.070	40	.920	40
Agreement E	1.040	40	.900	40
Agreement F	1.030	40	.900	40
Furniture—Retail	1.000	46	.930	46
Helpers	.950	46	.880	46
General:				
Package delivery:				
Agreement A	1.000	45	.930	45
Agreement B	1.000	46	.930	46
Helpers	.900	46	.830	46
Freight—Transfer:				
Merchandise and household	.970	48	.900	48
Helpers:				
Merchandise	.870	48	.800	48
Household	.920	48	.850	48
Heavy hauling	1.520	40	1.450	48
Helpers	1.470	40	1.400	48
Car hauling	1.070	40	------	------
Paper hauling	1.250	48	1.090	------
Over-the-road	1.020	54	.970	54
City transfer	.970	48	.920	48
Glass	1.030	40	.960	40
Grocery-Wholesale:				
Agreement A	.970	40	.900	45
Helpers	.870	40	.800	45
Agreement B	.970	40	------	------
Agreement C	1.104	40	.920	40
Hardware:				
Agreement A	.970	40	.900	40
Agreement B:				
Regular	.970	44	.900	44
2 ton steel trucks	.995	44	.925	44
Agreement C	.970	48	.900	48
Ice	.940	40	.870	40
Helpers	.840	40	.770	40
Ice cream—After 9 weeks:				
Agreement A	1.237	40	.856	48
Agreement B	1.236	40	------	------
Industrial supply	.970	40	.900	40
Laundry:				
Family and wholesale:				
Commercial, rug and special relay, diaper service, industrial towels	.900	48	.900	48
Route superintendent	.952	48	.952	48
Linen supply—City and cabinet	.900	48	.900	48
Rural	.952	48	.952	48
Rag	.970	40	.900	40
Helpers	.800	48	.800	48

TABLE 9.—*Hourly wage rates and weekly hours of union motortruck drivers and helpers, by cities, July 1, 1946 and July 1, 1945*—*Con.*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Minneapolis, Minn.—Con.				
Liquid Carbonic	$1.045	40	$0.975	40
Liquor—Drivers and helpers	1.150	40	1.040	40
Machinery:				
Agreement A	1.070	40	------	------
Agreement B	.980	40	.910	40
Agreement C	.970	40	.900	40
Agreement D	1.020	40	.950	40
Market firms:				
Agreement A	.970	40	.900	40
Helpers	.870	40	.800	40
Agreement B	1.020	40	.950	40
Helpers	.920	40	.850	40
Meat—Packing house	1.223	40	1.063	40
Milk—Depot drivers (after 12 weeks)	1.275	40	------	------
Motor parts:				
Agreement A	.970	40	.900	40
Agreement B	.970	44	.900	44
Agreement C	.970	48	.900	48
Newspaper and magazine:				
Newspaper	1.140	40	1.035	40
Magazine:				
Agreement A	1.020	40	.950	40
Agreement B	1.150	48	.990	48
Oil and gasoline:				
Under 2,100 gallons	1.109	40	.900	40
2,100 gallons and over	1.133	40	.920	40
City drivers:				
Starting rate	1.035	40	.848	40
After 6 months	1.070	40	.883	40
After 12 months	1.123	40	.923	40
Paint	.970	40	.900	40
Paper—Wholesale	.970	40	.900	40
Printing	1.000	40	.930	40
Produce	.970	40	.900	40
Railway express	1.177	44	.992	44
Rendering—Hide and tallow	.970	40	.900	40
Scrap iron	.970	40	.900	40
Shipyard	1.150	40	------	------
Soft drink—Helpers	.748	40	.748	40
Spring water:				
Agreement A	.970	40	.900	40
Helpers	.920	40	.850	40
Agreement B	.970	46	.900	46
Helpers	.920	46	.850	46
Tent and awning	1.050	40	.950	40
Warehouse—Merchandise	.970	40	.900	40
Mobile, Ala.				
Building:				
Construction:				
Less than 1½ tons	.750	40	.750	40
1½ to 3 tons	1.000	40	1.000	40
Over 3 tons	1.250	40	1.250	40
Material:				
Agreement A	.750	40	.650	40
Concrete-mixer trucks	.900	40	.800	40
Helpers	.650	40	.550	40
Agreement B	.750	40	.650	40
Concrete-mixer trucks	.950	40	.850	40
Helpers	.650	40	.550	40
Agreement C:				
Sand and gravel	.800	40	.700	40
Concrete-mixer trucks	.950	40	.850	40
Helpers	.650	40	.600	40
General—Freight:				
City pick-up	.650	54	.650	60
Helpers	.600	54	.600	60
Oil—Transport	.850	48	.850	48
Railway express	1.035	44	.874	44
Nashville, Tenn.				
Bakery—Biscuit	.680	52	.630	52
Beer	.650	40	.550	40
Keg salesmen	1.000	40	------	------
Nashville, Tenn.—Con.				
Building—Material:				
Dump trucks:				
Under 1½ tons	$0.750	40	$0.650	40
1½ to 3 tons	.850	40	.750	40
Over 3 tons	1.000	40	.850	40
General—Freight:				
Local delivery	.800	52	.620	52
Over-the-road—Short trips	.790	60	.700	60
Newspaper	.680	40	.588	40
Railway express	1.075	44	.890	44
Soft drink	.950	40	.825	40
Newark, N. J.				
Armored cars	1.219	40	1.219	40
Bakery:				
Over-the-road	1.100	48	1.000	48
Yeast	1.182	44	1.136	44
Beer	1.400	40	1.265	40
Distributor	1.300	40	------	------
Butter and eggs	1.121	40	1.121	40
Department store:				
Package	1.063	40	.978	40
Helpers	.838	40	.711	40
Furniture	1.090	40	1.000	40
Helpers	.832	40	.733	40
Farm feed	1.313	40	1.150	40
Food products:				
First 2 years	1.067	45	.896	48
2 to 5 years	1.111	45	.938	48
After 5 years	1.155	45	.979	48
General:				
4-wheel trucks	1.172	48	1.120	48
Tractor-trailers	1.312	48	1.260	48
Helpers	.845	48	.793	48
Laundry—Linen supply	1.150	40	1.150	40
Market:				
3 tons	1.200	40	------	------
4 tons	1.250	40	------	------
5 tons	1.272	40	------	------
7½ tons	1.326	40	------	------
Tractor and trailer or 6-wheel trucks	1.380	40	------	------
Helpers	1.000	40	------	------
Newspaper	1.215	40	1.215	40
Supply:				
Day	1.449	40	1.449	40
Night	1.494	40	1.494	40
Railway express	1.206	44	1.021	44
Helpers	1.102	44	.917	44
Soft drink	1.170	40	------	------
Interplant drivers—4-wheel vans	1.260	40	1.260	40
Over-the-road	1.260	40	1.260	40
Utility	1.300	40	1.163	40
Route salesmen's helpers	1.000	40	.875	40
New Haven, Conn.				
Bakery—Heavy hauling	.864	44	.795	44
Beer—Brewery	1.125	40	1.094	40
Extra drivers and helpers	1.050	40	1.019	40
Building construction:				
Dump trucks	1.000	40	------	----
Euclid trucks	1.150	40	------	---
Concrete-mixer trucks	1.100	40	.950	40
Winch trucks	1.100	40	------	---
Drug—Warehouse	.925	40	.875	4
General—Freight:				
5 tons and under	.920	48	.870	4
Over 5 tons	.950	48	.900	4
Over-the-road	1.000	48	.950	4
Helpers	.870	48	.820	4
Railway express:				
2½ tons and under	1.113	44	.928	4
Over 2½ tons	1.139	44	.954	4
Helpers	1.071	44	.886	[illegible]

TABLE 9.—*Hourly wage rates and weekly hours of union motortruck drivers and helpers, by cities, July 1, 1946 and July 1, 1945—Con.*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
New Orleans, La.				
ir reduction	$1.000	40	$0.870	40
Helpers	.885	40	.770	40
rmored cars	.800	40	.739	44
akery—Relay	.800	48	.800	48
Extra drivers	.833	------	.833	------
eer—Keg:				
Local	1.000	40	1.000	40
Over-the-road	.950	40	.950	40
Utility	.875	40	.875	40
uilding:				
Construction:				
1 ton and under	.700	40	.700	40
3 to 5 tons	.750	40	.750	40
5 tons and over	1.100	40	1.100	40
Material:				
Dump trucks, stake body trucks	.700	40	.650	40
Concrete-mixer truck and trailer	.750	40	.700	40
Plumbing and roofing (1 to 4 tons)	.750	40	.750	40
gars and tobacco:				
Agreement A	.850	40	.800	40
Agreement B	.950	40	.850	40
partment store:				
City package delivery	.833	48	.583	48
Helpers	.667	48	.375	48
tory—Machine shops:				
½ tons and under	.930	40	.750	40
neral:				
Drayage:				
3 tons and under	.740	48	.640	48
Over 3 tons	.790	48	.690	48
Helpers	.690	48	.590	48
Motor express—City drivers	.750	51	.650	51
ransfer:				
3 tons and under	.750	48	.600	48
Over 3 tons	.800	48	.650	48
Helpers	.700	48	.550	48
cery—Wholesale	.690	48	.590	48
elpers	.630	40	.550	40
lware (3 tons or less)	.650	40	.600	40
	.650	40	.650	40
ailer—Driver	.750	40	.750	40
t—Packing house (3 ns and under)	.650	40	------	------
spaper—Electric delivery service, city:				
y	.675	40	.600	40
ght	.725	40	.650	40
vay express	1.156	44	.971	44
oney pick-up	1.209	44	1.024	44
house—Cold storage nder 3 tons)	.650	40	------	------
ew York, N. Y.				
red cars	1.219	40	1.219	40
ry:				
eement A—Relaymen	1.202	42	1.202	42
eement B—Transort	1.239	44	1.148	44
eement C—Transfer	1.238	40	1.063	40
eement D—Trailerrucks	1.250	44	1.090	48
eement E:				
ransfer	1.200	40	1.063	40
railermen	1.300	40	1.150	40
eement F:				
railermen	1.238	40	1.063	40
to 8 wheel trucks	1.313	40	1.188	40
eement G—Route lesmen	1.146	48	1.042	48
ement H—Italian ecialty bread	.944	54	.833	54
ement I—French ead	1.563	48	1.250	48
ement J—Bakery supplies	1.406	40	1.281	40
lpers	1.231	40	1.106	40
New York, N.Y.—Con.				
Beds and bedding:				
Agreement A	$1.000	40	$0.889	45
Agreement B	1.000	40	.935	40
Agreement C	1.000	40	.778	40
Beer:				
Bottle	1.445	40	1.445	40
Trailer-trucks	1.520	40	1.520	40
Helpers	1.320	40	1.320	40
Keg:				
Agreement A	1.470	40	1.470	40
Trailer-trucks	1.520	40	1.520	40
Helpers	1.395	40	1.395	40
Agreement B	1.470	40	1.345	40
Tractors and trailers	1.520	40	1.395	40
Helpers	1 395	40	1.270	40
Bookbinding and printing	1.350	40	1.125	40
Helpers	.950	40	.750	40
Box:				
Fibre	1.350	40	1.175	40
Helpers	.950	40	.750	40
Paper	1.350	40	1.150	40
Helpers	.950	40	.750	40
Corrugated containers	1.350	40	1.150	40
Helpers	.950	40	.750	40
Building:				
Construction:				
Dump trucks	1 250	40	1.250	40
Material	1.250	40	1.250	40
Helpers	1.000	40	1.000	40
Brick, second hand—5 to 7½ ton dump trucks	1.500	40	1.438	40
Plumbing and heating, wholesale	1.250	40	1 250	40
Sand, gravel, and concrete	1.250	40	1.250	40
Butter and eggs:				
Market trucks:				
2 tons and under	1.361	40	1.238	40
3 tons	1.389	40	1.263	40
4 tons	1.416	40	1.288	40
5 tons	1.444	40	1.313	40
7½ tons	1.485	40	1.350	40
10-wheelers and trailers	1.719	40	1.563	40
Purveyor:				
3 tons and under	1.300	40	1.175	40
3½ tons	1.313	40	1.183	40
4 tons	1.325	40	1.200	40
5 tons	1.350	40	1.225	40
7½ tons	1.413	40	1.288	40
Helpers	1.025	40	.875	40
Clothing:				
Agreement A:				
Drivers and helpers	1.042	48	1.042	48
Agreement B—Dresses	1.213	40	.948	48
Helpers	.888	40	.677	48
Agreement C—Package delivery:				
Dresses	1.238	40	.969	48
Coats	1.263	40	.990	48
Helpers	.938	40	.719	48
Agreement D—General merchandise	1.136	44	1.136	44
Coal:				
Manhattan and Bronx	1.375	40	------	------
Brooklyn yards and water yards in Queens	1.375	40	------	------
Rail yards in Queens	1.333	40	1.176	40
Commissary	1.159	44	1.045	44
Department store	1.200	40	------	------
Helpers	1.075	40	------	------
Flour:				
4-wheel trucks	1.344	45	1.289	45
Helpers	1 167	45	1 111	45
6-wheel trucks	1.456	45	1 400	45
Helpers	1.211	45	1.156	45
Fruit and produce:				
Market trucks:				
3 tons and under	1.438	40	1.261	44
4 tons	1 488	40	1.307	44
5 tons	1.513	40	1.330	44
7½ tons	1.575	40	1 386	44

TABLE 9.—*Hourly wage rates and weekly hours of union motortruck drivers and helpers, by cities, July 1, 1946 and July 1, 1945*—*Con.*

City and classification	July 1, 1946 Rate per hour	July 1, 1946 Hours per week	July 1, 1945 Rate per hour	July 1, 1945 Hours per week
New York, N.Y.—Con.				
Fruit and produce—Con.				
Market trucks—Con.				
Trailer-tractors	$1.638	40	$1.443	44
Helpers	1.288	40	1.125	44
Purveyor	1.300	40	1.095	40
Helpers	.908	40	.764	40
Fur	1.429	35	1.187	37½
Helpers	1.286	35	.973	37½
Furniture:				
Agreement A (association agreement)	1.424	48	1.258	48
Helpers	1.305	48	1.138	48
Agreement B	1.225	40	1.063	40
Helpers	1.100	40	------	------
Agreement C	1.089	45	1.000	45
Helpers	.889	45	.800	45
Agreement D	1.000	40	.909	44
Agreement E (refrigeration unit)	1.250	40	1.011	47
Helpers	1.100	40	.945	47
General:				
Hauling, local:				
1 ton or less	1.169	44	1.169	44
2 tons	1.193	44	1.193	44
3 tons	1.216	44	1.216	44
4 tons	1.239	44	1.239	44
5 tons	1.261	44	1.261	44
7½ tons	1.318	44	1.318	44
Tractor:				
Help load and unload	1.455	44	1.455	44
Do not help load and unload	1.318	44	1.318	44
3-axle trucks—Help load and unload	1.455	44	1.455	44
Helpers	1.057	44	1.057	44
Parcel delivery (after 1 year):				
Furniture	1.080	40	1.080	40
Helpers	.826	40	.826	40
Package	1.063	40	1.063	40
Helpers	.757	40	.757	40
Central station drivers	1.084	40	1.084	40
Grocery—Wholesale	1.250	40	1.150	44
Helpers	1.160	40	1.056	44
Hardware	1.250	40	1.000	40
Laundry:				
Wholesale	.997	51	.899	51
Helpers	.733	51	.635	51
Cleaning and dyeing (retail)	.833	48	.700	50
Linen supply	1.036	51	.938	51
Office (towel supply)	1.033	47	.927	47
Helpers	.842	47	.757	47
Cloth sponging	1.500	40	1.375	40
Helpers	.950	40	.825	40
Meat:				
Purveyor and butcher	1.310	40	1.150	40
Helpers	1.063	40	.775	40
Delivery men (pork)	1.375	40	1.125	40
Poultry	1.198	48	1.198	48
Slaughterhouse:				
Agreement A	1.535	40	1.375	40
Helpers	1.010	40	.805	40
Agreement B	1.500	40	1.375	40
Branch house	1.375	40	1.200	40
Hotel	1.375	40	1.250	40
Milk:				
Retail:				
Foremen	1.575	40	1.313	48
Route riders	1.500	40	1.250	48
Wholesale—Transport	1.463	40	1.219	48
Routemen	1.650	40	1.375	48
Vacation relief drivers	1.750	40	1.458	48
Moving and storage	1.200	40	1.098	44
Helpers	1.010	40	.920	44
Piano moving:				
Agreement A	1.250	44	1.250	44
Agreement B	1.078	44	1.078	44
Helpers	.958	44	.958	44

City and classification	July 1, 1946 Rate per hour	July 1, 1946 Hours per week	July 1, 1945 Rate per hour	July 1, 1945 Hours per week
New York, N. Y.—Con.				
Newspaper:				
Agreement A:				
Day	$1.367	40	$1.242	40
Night	1.483	37	1.348	37
Agreement B—Wholesale:				
Day	1.449	40	1.449	40
Night	1.494	40	1.494	40
Agreement C (day and night)	1.601	40	1.470	40
Oil:				
Agreement A (fuel oil)	1.313	40	1.063	40
Agreement B:				
Less than 1 year	1.060	40	------	------
After 1 year	1.180	40	1.000	40
After 2 years	1.215	40	1.030	40
After 3 years	1.260	40	1.070	40
After 4 years	1.300	40	1.100	40
After 5 years	1.415	40	1.150	40
Paper and twine:				
Distributor:				
Wholesale:				
Small trucks	1.350	40	1.136	40
Helpers	.950	40	.829	40
Large trucks	1.400	40	1.200	40
Helpers	1.050	40	.935	40
Retail:				
1 to 2 tons	1.350	40	1.075	40
Helpers	.950	40	.838	40
Industrial:				
1 to 2 tons	1.350	40	1.250	40
Helpers	.950	40	.875	40
3 to 5 tons	1.400	40	1.309	40
Helpers	1.050	40	.975	40
Miscellaneous	1.350	40	1.105	40
Motorcycles	1.225	40	1.000	40
Helpers	.950	40	.750	40
Plywood	1.325	40	1.155	40
Helpers	1.100	40	.924	40
Provisions—Kosher:				
Special delivery	1.375	40	1.250	40
Refuse:				
Agreement A	1.063	48	1.063	48
Helpers	.938	48	.938	48
Agreement B	1.250	40	.875	48
Helpers	1.125	40	.750	48
Agreement C	1.063	48	.813	48
Helpers	.938	48	.688	48
Rendering	1.125	40	1.000	40
Helpers	1.040	40	.900	4
Routemen	1.320	40	1.200	4
Soft drinks—Wholesale:				
Agreement A (small shops)	1.275	40	1.200	4
Helpers	1.025	40	.950	4
Agreement B (helpers)	1.050	40	.875	4
Theatrical	1.563	48	1.431	4
Helpers	1.438	48	1.306	4
Waste paper:				
1 to 2 tons	1.350	40	1.000	4
3 to 5 tons	1.400	40	1.250	4
10-wheelers and trailers	1.525	40	1.350	4
Wine and liquor	1.275	40	1.225	4
Helpers	1.025	40	.825	4
Norfolk, Va.				
Building—Construction:				
Concrete-mixer trucks	.750	48	.750	
General—Freight:				
Agreement A	.833	48	.833	
Helpers	.781	48	.781	
Tractor-trailer	1.042	48	1.042	
Agreement B	.690	48	.690	
Helpers	.590	48	.590	
Tractor-trailer	.840	48	.840	
Agreement C	.730	------	.730	------
Helpers	.590	------	.590	------

TABLE 9.—*Hourly wage rates and weekly hours of union motortruck drivers and helpers, by cities, July 1, 1946 and July 1, 1945—Con.*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Norfolk, Va.—Con.				
ieneral—Freight—Con.				
Agreement D	$0.750	48	$0.690	48
Helpers	.650	48	.590	48
Tractor-trailer	.850	48	.840	48
loving—Furniture:				
Local	.800	60	.800	60
Helpers	.550	60	.550	60
roduce and grocery	.750	60	.750	60
Tractor-trailer	.850	60	.850	60
Helpers	.650	60	.650	60
Over-the-road	.833	60	.833	60
ilway express	1.129	44	.944	44
Helpers	1.059	44	.874	44
klahoma City, Okla.				
kery—Biscuit:				
irst 30 days	.729	48	------	------
0 to 60 days	.771	48	------	------
0 to 90 days	.813	48	------	------
fter 90 days	.875	48	------	------
r:				
ong haul	1.165	40	.980	40
lot shot and special delivery	1.000	40	.813	40
eral—Freight:				
ity	.770	54	.650	54
ransfer	.750	40	.600	40
Helpers	.700	40	.600	40
cery and food products:				
rst 6 months	.825	40	.600	40
to 12 months	.875	40	.650	40
ter 1 year	.975	40	.750	40
oute salesmen	.967	50	------	------
reement A	1.290	40	1.095	40
reement B	1.190	40	.955	40
Fleet trucks	1.300	40	1.055	40
reement C	1.060	40	.900	40
vay express	1.156	44	.971	44
Omaha, Nebr.				
ry:				
cuit	.850	46	.725	46
nsport	.975	48	.810	48
ist (after 90 days)	.815	54	------	------
ist, coffee, and gelatin after 90 days)	.887	54	------	------
	1.000	40	.875	40
mit drivers	.825	40	.700	40
ng—Roofing material	.850	40	.700	40
ure	.825	51	.775	51
pers	.825	51	.750	51
al—Freight, local	.800	51	.775	51
vy work	1.000	51	.975	51
ry:				
eement A—Chain ore	.900	54	.900	54
ecment B—Ware- house:				
ity	.875	40	.750	40
ountry	.900	40	.775	40
—Packing house:				
eement A	1.060	40	.800	40
eement B	1.060	40	.880	40
eement A	.810	54	.810	54
eement B (after 1 ar)	1.120	54	------	------
Peoria, Ill.				
ene	1.000	48	.950	48
ed car	.813	48	.813	48
:				
ker and cooky	.900	48	.771	48
lesale	.950	50	.950	50
Peoria, Ill.—Con.				
Bakery—Continued				
Yeast:				
1 to 4 months	$0.938	48	$0.833	48
After 4 months	1.000	48	.896	48
Beer:				
Agreement A	1.100	40	.950	40
Helpers	1.000	40	.825	40
Agreement B	1.195	40	1.020	40
Helpers	1.138	40	.950	40
Building:				
Construction:				
4-wheel trucks	1.250	40	1.000	40
Carry-all, winch and 6-wheel trucks	1.500	40	1.250	40
Tractor trucks	1.500	40	1.375	40
Concrete-mixer trucks:				
2 cu. yd. and under	1.350	40	1.250	40
Over 2 cu. yd	1.500	40	1.500	40
Material	1.000	47½	.850	47½
Concrete-mixer trucks	1.150	47½	1.000	47½
Lumber	.900	47½	.750	47½
Roof siding	1.000	44	1.000	44
Coal	1.000	48	.800	48
Department store	.885	48	.833	48
Helpers	.781	48	.729	48
Distillery	1.100	40	.950	40
Helpers	1.000	40	.850	40
Flour milling	.900	40	.850	40
General—Freight:				
City	.920	48	.900	48
Helpers	.800	48	.780	48
Over-the-road	1.020	60	.970	60
Grocery:				
Chain store	1.100	48	.930	48
Wholesale	.880	40	.800	40
Helpers	.810	40	.730	40
Hardware	1.050	40	.863	40
Ice:				
Supply drivers	.800	40	.645	48
Helpers	.750	40	.540	48
Hauling to brewery (night)	1.300	40	1.030	40
Laundry—Linen and towel	.875	48	.875	48
Meat—Packing house:				
City:				
First month	.970	40	.813	40
After 1 month	1.160	40	.875	40
Over-the-road	1.243	48	1.046	48
Milk:				
Heavy trucks	.954	48	.779	48
Special delivery	.892	48	.717	48
Municipal:				
Garbage	1.000	40	.950	40
Helpers	.950	40	.900	40
Sewer	.950	48	.900	48
Street	.950	48	.900	48
Helpers	.800	48	.750	48
County	.900	48	.830	48
Park	.938	48	.875	48
Newspaper	.975	40	.890	40
Oil:				
City:				
1 to 12 months	.856	40	.724	40
13 to 24 months	.964	40	.817	40
After 2 years	1.047	40	.894	40
Over-the-road:				
Semitrailer	.900	60	.900	60
Tank and trailer	1.000	60	1.000	60
Paint and glass	.975	40	.800	40
Produce	.850	40	.850	40
Railway express	1.059	44	.874	44
Part-time drivers	1.075	44	.890	44
Philadelphia, Pa.				
Bakery	.955	44	.864	44
Supply and 5-ton trucks	.970	44	.920	44
Tractor-trailer	1.016	44	.966	44

TABLE 9.—*Hourly wage rates and weekly hours of union motortruck drivers and helpers, by cities, July 1, 1946 and July 1, 1945—Con.*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Philadelphia, Pa.—Con.				
Beer:				
Brewery—Keg drivers	$1.360	40	$1.235	40
Helpers	1.285	40	1.160	40
Distributor—Bottle and keg	1.250	40	1.110	40
Helpers	1.000	40	.810	40
Building:				
Construction—Excavating	.920	48	.920	48
Helpers	.820	48	.820	48
Material	1.060	40	.920	48
Helpers	1.000	44	.805	44
Lumber	.920	44	.920	44
Helpers	.860	48	.860	48
Plumbing supply:				
Local	1.100	40	.900	40
Helpers	.950	40	.800	40
Over-the-road:				
40 to 60 miles	1.380	40	1.163	40
Over 60 miles	1.450	40	1.250	40
Helpers	.980	40	.880	40
Coal	.962	40	.900	48
Helpers	.820	40	.780	48
General, local	.947	40	.885	48
Helpers	.800	40	.740	48
Freight:				
Local	.947	40	.885	48
Helpers	.800	40	.740	48
Over-the-road:				
Agreement A:				
40 to 60 miles	1.060	40	1.010	48
Over 60 miles	1.135	40	1.083	48
Agreement B:				
40 to 60 miles	1.090	48	1.010	48
Over 60 miles	1.330	48	1.083	48
Ice	1.000	40	.833	48
Helpers	.875	40	.687	48
Ice cream	1.000	40	.875	48
Tractor-trailer	1.050	40	.925	48
Laundry:				
Wholesale routemen	.900	50	.800	50
Linen supply—Wholesale	.960	50	.860	50
Helpers	.760	50	.660	50
Cleaning and dyeing:				
Wholesale-rug drivers	1.125	40	.795	44
Helpers	.750	40	.544	44
Meat and produce	1.160	40	1.000	40
Helpers (meat)	1.000	40	.750	40
Milk	1.005	40	.888	48
Moving and storage:				
Local	.947	40	.885	48
Helpers	.800	40	.740	48
Long distance:				
Driver with relief driver	.750	40	.700	48
Lone Eagle drivers	.947	40	.885	48
Newspaper and magazine:				
Day:				
Agreement A	1.250	40	1.130	40
Agreement B	1.250	40	1.131	42
Agreement C	1.250	40	1.000	40
Magazines	1.250	40	.924	46
Night	1.313	40	1.095	42
Day and night	1.313	40	1.150	40
Supply men (day):				
Agreement A	1.250	40	1.130	40
Agreement B	1.250	40	1.063	40
Railway express	1.235	44	1.050	44
Helpers	1.106	44	.921	44
Rendering	1.150	40	1.010	40
Helpers	.990	40	.840	40
Scrap iron and steel	.775	48	.775	48
Helpers	.625	48	.625	48
Phoenix, Ariz.				
Bakery—Special delivery	.950	48	.725	48
Beer and liquor:				
Local	1.150	40	.933	45
Over-the-road	1.300	45	1.056	45
Interstate transport	1.300	------	1.200	------
Phoenix, Ariz.—Con.				
Building:				
Construction:				
Distributor	$1.250	40	------	------
Dump trucks:				
Less than 4 cu. yards	1.075	40	------	------
4 to 8 cu. yards	1.100	40	------	------
8 to 12 cu. yards	1.150	40	------	------
12 to 16 cu. yards	1.225	40	------	------
16 cu. yards or more	1.425	40	------	------
Other trucks:				
Less than 6 tons	1.075	40	------	------
6 to 10 tons	1.100	40	------	------
10 to 15 tons	1.150	40	------	------
15 to 20 tons	1.225	40	------	------
20 tons or more	1.425	40	------	------
Spreader and Ross carrier	1.425	40	------	------
Water trucks:				
Under 2,500 gal	1.125	40	------	------
2,500 gal. and over	1.250	40	------	------
Steel:				
Diesel	1.350	40	$1.200	40
¾ ton pick-up	1.075	40	.750	40
2-axle (under 6 tons)	1.075	40	.900	40
Winch trucks	1.200	40	.975	40
Cheese and food products	1.500	40	1.188	40
Special delivery	1.050	40	------	------
General—Freight:				
Pick-up and delivery:				
Regular drivers	1.000	48	.850	48
Extra drivers	1.000	48	.900	48
Short line—Any type equipment	1.200	60	1.075	60
Grocery—Wholesale, local:				
2-axle trucks	1.050	40	.900	48
Other trucks	1.150	40	.950	48
Ice:				
Special delivery	.880	40	.780	40
Supply trucks:				
Single unit	.925	40	.825	40
Semitrailer	.975	40	.875	40
Ice cream—Special delivery	.800	40	.710	48
Meat:				
Agreement A:				
City branch	.950	40	.798	55
Livestock trucks	1.050	40	.950	40
Intrastate transport	1.050	------	.950	----
Helpers (route salesmen)	1.042	48	------	----
Agreement B:				
City branch	.950	55	.798	55
Livestock trucks	1.050	40	.950	40
Intrastate transport	1.050	------	.950	----
Helpers	.833	60	.750	60
Agreement C—Livestock:				
Large Diesel trucks	1.100	------	1.000	----
Gasoline trucks (intrastate)	1.100	------	.825	----
Milk—Special delivery	.850	48	.650	4
Moving—Van and storage:				
Single unit	1.000	48	.825	48
Helpers	.900	48	.725	48
Extra drivers	1.000	48	.900	4
Helpers	.900	48	.750	4
Winch drivers	1.250	48	1.025	4
Semitrailer (5-axle or more)	1.250	48	------	----
Paper	1.000	40	.750	4
Produce—Wholesale:				
Local	.900	40	.800	4
Pittsburgh, Pa.				
Bakery:				
Bread:				
Wholesale drivers (no sales)	.870	48	.770	4
Feeder trucks (wholesale and retail)	1.005	48	.905	

TABLE 9.—*Hourly wage rates and weekly hours of union motortruck drivers and helpers, by cities, July 1, 1946 and July 1, 1945—Con.*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
ittsburgh, Pa.—Con.				
akery—Continued				
Biscuit:				
Agreement A	$1.150	42	$1.024	42
Agreement B	1.150	40	1.075	40
Pretzel	.950	40	.950	40
Yeast:				
Agreement A	1.000	48	.938	48
Foremen	1.052	48	.990	48
Agreement B	1.199	48	1.101	48
Foremen	1.311	48	1.213	48
Assistant route foremen	1.291	48	1.194	48
edding	.950	40	.950	40
Helpers	.850	40	.850	40
eer:				
Agreement A	1.313	40	1.158	40
Helpers	1.243	40	1.088	40
Semitrailer	1.375	40	1.158	40
Helpers	1.313	40	1.158	40
Agreement B	1.130	40	1.050	40
Tractor-trailer	1.230	40	1.150	40
Helpers	.980	40	.900	40
Supply	1.175	40	1.000	40
ox:				
Agreement A	1.000	40	.948	48
Agreement B	1.050	48	.950	48
Trailer driver	1.150	48	1.050	48
Agreement C	1.050	40	.875	48
Trailer driver	1.100	40	.925	48
Agreement D	1.070	40	.948	48
ilding:				
onstruction:				
Heavy:				
Concrete-mixer trucks	1.125	40	.975	40
Carry-all	1.400	40	1.250	40
Excavating	1.100	40	.950	40
Dump trucks	1.250	40	1.100	40
Light:				
Excavating and dump trucks	.950	40	.950	40
laterial and supply:				
Plumbing	1.135	40	.950	40
Helpers	1.060	40	.875	40
Dump trucks	1.100	40	.950	40
Concrete-mixer trucks	1.125	40	.975	40
Helpers	1.000	40	.850	40
Lumber	1.000	40	.850	40
Trailer drivers	1.050	40	.900	40
Helpers	.900	40	.750	40
ket	1.120	40	.950	40
ering	1.100	48	.950	48
micals:				
greement A (soap)	1.140	40	.940	40
Helpers	1.040	40	.840	40
greement B (gas cylinder)	1.150	40	1.030	40
Helpers	1.000	40	.880	40
mission house	1.178	40	.940	40
elpers	1.088	40	.820	40
tra drivers	1.121	40	.893	40
Helpers	1.014	40	.786	40
artment store:				
arting rate	.830	46	.830	46
ter 1 year	.852	46	.852	46
ter 2 years	.874	46	.874	46
ter 3 years	.896	46	.896	46
ter 4 years	.917	46	.917	46
ter 5 years	.939	46	.939	46
ter 6 years	.961	46	.961	46
lk helpers:				
Beginners	.689	46	.689	46
After 1 year	.711	46	.711	46
After 2 years	.733	46	.733	46
After 3 years	.754	46	.754	46
ckage helpers:				
After 1 year	.608	46	.608	46
After 2 years	.624	46	.624	46
After 3 years	.640	46	.640	46
After 4 years	.657	46	.657	46
Pittsburgh, Pa.—Con.				
Department store—Con.				
Exhibitors service:				
Day	$1.200	48	$1.200	48
Helpers	1.050	48	1.050	48
Night	1.250	48	1.250	48
Helpers	1.100	48	1.100	48
Factory:				
Agreement A	1.100	40	.900	40
Agreement B	1.000	48	.900	48
Agreement C	1.150	40	1.000	40
Helpers	1.050	40	.900	40
Agreement D	1.185	40	1.000	40
Helpers	1.085	40	.900	40
Agreement E	1.150	40		
Agreement F	1.000	40	1.000	40
Agreement G	1.235	40	1.050	40
Helpers	1.135	40	.945	40
Agreement H	1.250	40	1.000	40
Fish	1.000	44	.900	44
Helpers	.900	44	.800	44
Flour	1.250	48	1.150	48
Helpers	1.150	48	1.050	48
Furniture—Retail	1.043	46	.966	46
Helpers	.875	46	.761	46
General—Freight:				
City:				
General transfer	1.000	48	1.000	48
Tractor and tractor-trailers	1.055	48	1.055	48
Helpers	.900	48	.900	48
Winch drivers	1.265	48	1.265	48
Helpers	1.050	48	1.050	48
Truck and dolly	1.110	48	1.110	48
Heavy hauling:				
Trailer-trucks	1.295	48	1.295	48
Winch trucks	1.265	48	1.265	48
Winch trucks, not on winch jobs	1.000	48	1.000	48
Trucks using dolly	1.110	48	1.110	48
Helpers	.900	48	.900	48
Road hauling	1.000	48	1.000	48
Trailer-trucks	1.050	48	1.050	48
Grocery:				
Wholesale	1.333	40	1.203	40
Trailer-trucks	1.398	40	1.260	40
Helpers	1.230	40	1.105	40
Chain store	1.050	40	1.000	40
Tractors	1.100	40	1.050	40
Helpers	.975	40	.925	40
Hardware	1.135	40	.950	40
Ice and fuel	.920	50	.800	50
Ice only	.800	50	.800	50
Coal only	1.000	48	.900	48
Laundry and dry cleaning:				
Linen supply foremen	1.446	46	1.059	46
Helpers	.808	46	.700	46
Laundry	.900	48	.863	48
Cleaning and dyeing:				
Chain store	.795	44	.773	44
Rug and furniture	.875	48	.850	44
Helpers	.775	48	.750	44
Meat:				
Agreement A	1.360	40	1.200	40
Helpers	1.110	40	.949	40
Agreement B	1.200	44	1.050	44
Helpers	1.000	44	.850	44
Meat and provisions	1.253	40	1.050	44
Helpers	1.023	40	.850	44
Milk:				
Creamery	.925	48	.855	48
Tank and can	1.080	48	.881	48
Semitrailer	1.195	48	.993	48
Special delivery	1.044	48	.800	48
Bottle and supply	1.069	48	.825	48
Eskimo pie	1.044		.800	
Moving—City	1.050	54	1.050	54
Helpers	.950	54	.950	54

TABLE 9.—*Hourly wage rates and weekly hours of union motortruck drivers and helpers, by cities, July 1, 1946 and July 1, 1945—Con.*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Pittsburgh, Pa.—Con.				
Newspaper:				
Agreement A	$1.350	48	$1.250	48
Helpers	1.200	48	1.100	48
Agreement B:				
Day	1.300	48	1.200	48
Helpers	1.150	48	1.050	48
Night	1.350	48	1.250	48
Helpers	1.200	48	1.100	48
Oil and gas:				
First year	1.190	40	.970	40
1 to 2 years	1.260	40	1.040	40
2 to 3 years	1.330	40	1.110	40
3 to 4 years	1.360	40	1.140	40
After 4 years	1.400	40	1.180	40
Paint and glass	1.100	40	.925	40
Paper	.900	40	.877	40
Helpers	.850	40	.842	40
Wholesale	1.000	40	.910	44
Helpers	.910	40	.810	44
Provision	1.250	44	1.050	44
Tractor-trailer	1.300	44	1.100	44
Refuse	1.000	48	.950	------
Helpers	.950	48	.900	------
Soft drink	1.050	48	.900	48
Helpers	.950	48	.750	48
Portland, Maine				
General—Freight:				
5 tons and under	.820	54	.800	54
5 to 8 tons	.870	54	.850	54
Over 8 tons	.920	54	.900	54
Helpers	.820	54	.800	54
Fruit produce:				
5 tons and under	.800	40	------	------
Over 5 tons	.850	40	------	------
Railway express	1.098	44	.913	44
Portland, Oreg.				
Armored cars	.639	54	.639	54
Auto parts:				
Delivery:				
Under ¾ ton	.997	40	.920	40
Motorcycle	.947	40	.860	40
Pick-up-motorcycles	.947	40	.750	40
Beer—Distributor	1.413	40	1.250	40
Helpers	1.375	40	1.200	40
Building:				
Construction:				
Dump truck:				
4 yards and under	1.150	40	1.100	40
4 to 6 yards	1.200	40	1.150	40
6 to 8 yards	1.250	40	1.200	40
8 yards	1.300	40	1.250	40
Over 8 and including 10 yards	1.350	40	1.300	40
Concrete-mixer truck:				
1½ to 3 yards	1.150	40	1.100	40
3 yards and over	1.250	40	1.200	40
Euclid truck:				
9 yards and under	1.450	40	1.400	40
Over 9 yards	1.550	40	1.500	40
Ross carrier	1.400	40	1.375	40
Dumpster	1.350	40	1.325	40
Concrete buggies	1.150	40	1.100	40
Solo flat-bed and miscellaneous body truck:				
1 to 4 tons	1.150	40	1.100	40
Over 4 tons	1.250	40	1.200	40
Semitrailer, over 10 tons	1.250	40	1.250	40
Material and gravel:				
Dump and batch truck:				
5 cu. yards and under	1.200	40	1.100	40
Over 5 to 7 cu. yards	1.300	40	1.200	40
Over 7 cu. yards	1.400	40	1.300	40
Portland, Oreg.—Con.				
Building—Continued				
Material and gravel—Continued				
Concrete-mixer truck:				
3 cu. yards and under	$1.200	40	$1.100	40
4 cu. yards	1.300	40	1.200	40
5 cu. yards	1.350	40	1.275	40
6 cu. yards	1.400	40	1.350	40
Flat-bed truck	1.200	40	1.100	40
Semitruck and trailer	1.250	40	1.150	40
Furniture (3 tons and over)	1.113	48	1.113	48
Helpers	1.000	48	1.000	48
Parcel delivery	1.050	48	1.050	48
General:				
Freight:				
City pick-up	1.125	48	1.031	48
Long-distance:				
125 miles or less:				
Under 8 tons	1.188	------	1.069	------
Tractor-trailer or semitrailer	1.250	------	1.131	------
Over 125 miles:				
Tractor-trailer or semitrailer	1.375	------	1.256	------
Transfer and drayage:				
1 ton and under	1.000	40	1.000	40
1½ and 2½ tons	1.050	40	1.050	40
3 tons and over	1.081	40	1.081	40
Tractor and semitrailer	1.113	40	1.113	40
Helpers	1.000	40	1.000	40
Parcel service:				
1 ton and under	1.000	48	------	------
1½ and 2½ tons	1.050	48	------	------
3 tons and over	1.081	48	------	------
Helpers	1.000	48	------	------
Grocery	1.000	48	.938	48
Wholesale:				
1 ton and under	1.000	40	1.000	40
1½ to 5 tons	1.063	40	1.063	40
Truck and trailer or semitrailer	1.125	40	1.125	40
Ice:				
Retail	1.125	48	1.000	48
Wholesale—Freight and transport:				
1½ tons and over	1.225	40	1.100	40
Tractors and 6-wheelers (13-ft. bodies)	1.275	40	1.150	40
Semitrailer (over 13 ft. bodies)	1.325	40	1.200	40
Helpers	1.175	40	1.050	40
Ice cream	1.150	48	1.000	48
Relief salesmen	1.213	48	1.063	48
Special drivers	1.100	48	.950	48
Lumber:				
Agreement A:				
Hauling from mills	1.250	40	1.050	40
Agreement B:				
City hauling (2 to 6 tons)	1.250	40	1.050	40
Out of town (over 6 tons)	1.208	40	1.075	40
Hauling from box factories	1.150	40	1.000	40
Mayonnaise and cheese:				
First 4 months	1.136	44	1.075	44
5 to 8 months	1.250	44	1.163	44
After 8 months	1.364	44	1.250	44
Pick-up men	1.014	44	.900	44
Meat	1.188	40	.938	48
Wholesale—Packing and slaughtering:				
2½ tons and under	1.188	40	------	------
3 tons and over	1.219	40	------	------
Semitruck and trailer	1.250	40	------	------
Metal:				
Flat-bed truck	1.180	40	------	------
Semitruck and trailers	1.250	40	------	------

TABLE 9.—*Hourly wage rates and weekly hours of union motortruck drivers and helpers, by cities, July 1, 1946 and July 1, 1945—Con.*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Portland, Oreg.—Con.				
Milk—Fluid:				
Route and special drivers	$1.180	48	$1.007	48
Relief drivers	1.251	48	1.082	48
Creamery:				
Country haulers	1.132	48	.962	48
Semitruck and relief drivers	1.203	48	1.010	48
Newspaper:				
Under 25 miles	1.250	40	1.050	48
25 miles and over	1.281	40	1.081	48
Printing-roll drivers	1.313	40	------	------
Oil:				
Fuel	1.125	48	1.050	48
Helpers	1.075	48	1.000	48
Over-the-road gasoline transport	1.300	------	1.188	------
Railway express	1.213	44	1.028	44
Over-the-road	1.267	44	1.082	44
Soft drink	1.188	48	1.188	48
Helpers	1.125	48	1.125	48
Providence, R. I.				
Armored car	.870	40	.840	40
Bakery:				
Driver salesmen	1.042	48	.833	48
Special delivery	.938	48	.729	48
Biscuit	.950	48	.875	48
Pie—Wholesale:				
Sparemen	.704	54	.704	54
Beer:				
Brewery	1.288	40	1.135	40
Helpers	1.175	40	1.030	40
Distributors	1.100	40	.920	40
Helpers	1.000	40	.850	40
Jobbers	1.125	40	.975	40
Building—Dump trucks	1.000	40	.920	40
Department store:				
Furniture	1.000	48	.828	48
Helpers	.870	48	.703	48
Food products (up to 3 tons)	1.160	40	------	------
General—Freight:				
1 to 5 tons	.920	48	.870	48
Over 5 tons	.950	48	.900	48
Shuttle runs	1.000	48	.950	48
Helpers	.870	48	.820	48
Grocery:				
Chain store	.990	48	.990	48
Helpers	.900	48	.900	48
Wholesale	1.090	48	.990	48
Helpers	.980	48	.925	48
Laundry (after 5 weeks)	1.175	40	1.100	40
Helpers	.938	40	.750	40
Milk—Helpers	.500	54	.500	54
Newspaper	1.000	44	.870	44
Oil:				
Agreement A	1.150	40	------	------
Helpers	.950	40	------	------
Agreement B	1.100	40	.900	40
Helpers	.950	40	.780	40
Agreement C—Fuel	1.180	40	1.100	40
Railway express	1.166	44	.981	44
Reading, Pa.				
akery:				
Junior salesmen	.795	44	.648	44
Bobtail supply	1.016	44	.864	44
Biscuit	.882	48	.842	48
eer:				
Brewery	1.165	40	1.040	40
Contract hauls	1.140	48	1.040	48
Distributor:				
City	1.050	40	.900	40
Road	1.200	40	1.050	40
Helpers	.900	40	.750	40
ilding—Construction:				
Ready mixers, concrete	.950	40	.850	48
Helpers	.850	40	.750	48
Reading, Pa.—Con.				
Building—Construction—Continued				
Dump truck	$0.900	40	$0.800	48
Helpers	.850	40	.750	48
Furniture	.833	48	.729	48
Helpers	.729	48	.625	48
General—Freight hauling and moving:				
Highway drivers:				
Slow jobs	.998	48	.967	48
Fast or turn-around jobs	1.285	40	1.245	40
Terminal-to-terminal runs	.882	48	.845	48
City—Under 18 miles	.825	48	.763	48
Peddle runs—Over 18 miles	.882	48	.842	48
Helpers	.759	48	.706	48
Grocery—Wholesale	1.035	40	.802	48
Helpers	.967	40	.743	48
Meat—Packing house	1.225	40	1.012	42
Municipal	.870	40	.810	40
Paper—Scrap	.850	40	.750	48
Helpers	.800	40	.700	48
Produce:				
Road	1.050	48	.850	48
City	.900	48	.700	48
Helpers	.820	48	.620	48
Railway express	1.129	44	.949	44
Scrap yard	.800	40	.700	40
Helpers	.750	40	.650	40
Richmond, Va.				
Building—Concrete-mixer trucks	.750	48	.750	48
Furniture	.750	48	.750	48
General—Freight and produce:				
City drivers	.700	44	.675	48
Helpers	.650	44	.625	48
Hauling	.700	48	.700	48
Helpers	.650	48	.650	48
Grocery—Chain store	.841	44	.801	44
Bread	.887	44	.847	44
Helpers	.745	44	.705	44
Meat—Packing house	.850	40	.850	40
Country	.875	40	.875	40
Railway express	1.102	44	.917	44
Helpers	1.005	44	.820	44
Rochester, N. Y.				
Beer	1.181	40	1.006	40
Helpers	1.086	40	.911	40
Building:				
Contractor's trucks:				
Mason	1.000	40	.875	44
Road drivers	1.000	40	.820	49
Specialty	1.075	40	.875	40
Dump trucks and sand and gravel	1.000	40	.850	40
Cement block	1.000	40	.800	50
Concrete-mixer trucks	1.050	40	.850	40
Lumber	.890	40	.800	40
Helpers	.860	40	.720	40
Coal	1.015	40	.830	40
Factory—Steel mill	1.075	40	.850	40
Furniture:				
City	.950	48	.920	48
Helpers	.900	48	.870	48
Long distance:				
1 driver	1.060	------	1.030	------
2 drivers	.890	------	.860	------
General—Freight and furniture	.920	48	.890	48
Piano	1.050	48	1.020	48
Semitrailer	.970	48	.940	48
Contract drivers	.850	48	.820	48
Helpers	.808	48	.778	48

TABLE 9.—*Hourly wage rates and weekly hours of union motortruck drivers and helpers, by cities, July 1, 1946 and July 1, 1945—Con.*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Rochester, N. Y.—Con.				
Contract drivers—Con.				
Low-bed trailer—1 driver	$0.970	------	$0.940	------
Low-bed trailer—2 drivers	.920	------	.890	------
Grocery—Wholesale	.990	40	.820	40
Semitrailer	1.020	40	.880	40
Helpers	.920	40	.770	40
Liquor	1.050	40	.875	40
Helpers	1.000	40	.825	40
Macaroni	.920	40	.890	40
Market—Public	.840	40	.770	40
Helpers	.790	40	.720	40
Meat	.950	48	.920	48
Helpers	.900	48	.870	48
Packing house	.960	48	.840	48
Country—Senior	1.060	48	.940	48
Country—Junior	1.040	48	.920	48
Newspaper	.970	40	.940	40
Parcel delivery	.862	48	.832	48
Special delivery	.820	48	------	------
Railway express	1.141	44	.956	44
Rock Island (Ill.) District				
Includes Davenport, Iowa and Moline, Ill.				
Bakery—Bread and cake	.800	51	.800	51
Transport	.700	51	.700	51
Brewery—Drivers and helpers	1.045	40	.900	40
Building:				
Construction:				
2½ tons or less	.900	40	.900	48
Over 2½ tons	1.050	40	1.050	48
6-wheel trucks	1.200	40	1.200	48
Tractor trucks	1.375	40	1.375	48
Carry-all	1.250	40	1.250	48
Helpers	.850	40	.850	48
Concrete-mixer trucks	.900	40	.900	40
Material	.750	40	.700	40
Semitrailers	.850	40	.850	40
Helpers	.700	40	.650	40
Fruit and grocery—Wholesale:				
Country	.800	48	.800	56
City	.750	48	.750	56
Helpers	.750	40	.700	40
General—Transfer and storage	.870	51	.800	51
Grain	.660	40	.660	40
Oil	.900	60	.750	60
Double bottoms	1.050	60	.900	60
Railway express	1.101	44	.917	44
St. Louis, Mo.				
Automobile—Transport, metropolitan area	.880	48	.800	48
Bakery:				
Bread and cake routemen	1.092	60	1.092	60
Cracker	.850	48	.850	48
Yeast	.865	52	.865	52
Food product	1.000	48	1.000	48
Roll, doughnut and pastry	.833	54	.833	54
Beer:				
Brewery and distributor	1.190	40	1.080	40
Helpers	.920	40	.835	40
Building:				
Construction:				
Dump truck:				
7 cu. yards (level)	1.250	40	1.250	40
7 and less than 8 cu. yards	1.750	40	1.750	40
8 cu. yards and over	2.000	40	2.000	40
St. Louis, Mo.—Con.				
Building—Continued				
Material:				
Agitator or mixer:				
3½ cu. yards or less	$1.080	40	$1.060	49
Over 3½ cu. yards	1.230	40	1.210	40
Dry batch truck:				
3½ cu. yards or less	1.000	40	1.000	40
Over 3½ cu. yards	1.210	40	1.210	40
Flat-bed or open truck:				
8 tons and under	1.000	40	1.000	40
Over 8 tons	1.210	40	1.210	40
Lumber	.915	45	.845	45
Tractor and trailer truck	.945	45	.870	45
Ross carrier	1.000	45	------	------
Cheese	1.118	48	.958	48
Coal	.900	48	.760	48
Commission house	.870	40	.770	40
Helpers	.770	40	.670	40
Department store	.958	48	.792	48
Big trucks	.979	48	.813	48
Helpers (junior)	.625	48	.474	48
Combination drivers—Furniture and bulk	1.042	48	.875	48
Helpers	.958	48	.833	48
Fish—Special delivery	.784	51	------	------
Fixture	.729	48	.729	48
Helpers	.667	48	.667	48
Flower—Wholesale	1.000	40	------	------
Furniture	1.100	44	.938	48
Helpers	1.020	44	.865	48
General—Freight:				
Local	.920	48	.870	48
Transfer:				
½ ton to 5 toos	.958	48	------	------
5 toos and over	1.083	48	------	------
Helpers	.883	48	------	------
Tractor:				
½ ton to 5 tons	1.000	48	------	------
5 tons and over	1.083	48	------	------
Grocery—Chain store	1.125	48	1.000	48
Helpers	.958	48	.852	48
Ice	.917	48	.792	48
Helpers	.792	48	.667	48
Ice cream—Route foremen	1.219	54	1.107	54
Laundry:				
Cleaning and dyeing:				
Relay drivers	.647	48	.647	48
Overall (utility drivers)	.963	50	.800	50
Towel supply	.704	50	.704	50
Mattress—Wholesale	1.068	44	.906	48
Meat:				
Poultry	.780	40	.718	40
Packing house	1.118	48	.958	48
Milk:				
Route foremen	1.219	54	1.028	54
Relief route riders	1.091	54	.917	54
Tractor or tank drivers	1.119	48	.994	48
Relay drivers	1.083	48	.958	48
Moving	.950	45	.950	45
Helpers	.900	45	.900	45
Long distance (loading and unloading)	.900	60	.900	60
Vans—Over-the-road:				
First 6 months	.583	60	------	------
7 to 12 months	.667	60	------	------
After 1 year	.750	60	------	------
Newspaper:				
Day	1.000	48	.828	48
Helpers	1.000	48	.609	48
Night	1.100	48	.911	48
Oil and gasoline	1.330	40	1.125	40
Transport	1.330	40	1.213	40
Service stations	1.430	40	------	------
Road oil	.900	40	.900	40
Railway express	1.177	44	.991	44
Helpers	.989	44	.805	44

TABLE 9.—*Hourly wage rates and weekly hours of union motortruck drivers and helpers, by cities, July 1, 1946 and July 1, 1945*—*Con.*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
St. Paul, Minn.				
uto haulers:				
City	$1.060	48	$0.900	48
Road	1.060	48	.913	48
akery:				
Relief drivers—Retail	.679	60	.679	60
Trausport—Wholesale	.900	40	.825	40
Yeast	1.042	48	.979	48
er	1.150	40	1.076	40
Helpers	1.075	40	1.005	40
ilding:				
Construction:				
Under 6 cu. yards	1.150	48	1.000	48
6 to 8 cu.yards	1.300	48	1.150	48
8 to 16 cu. yards	1.400	48	1.250	48
16 cu. yards and over	1.500	48	1.350	48
Service truck—¾ ton	1.050	48	.900	48
Concrete-mixer truck	1.020	48	.950	48
Hauling:				
Concrete	1.150	48	1.000	48
Heavy:				
Winch	1.520	48	1.000	48
Helpers	1.470	48	.950	48
Material:				
Concrete blocks	.970	48	.900	48
Sand and gravel	1.020	48	.950	48
Lumber	.970	40	.900	40
Plumbing supply—Wholesale	.970	48	.900	48
ter (other than salesmen)	.886	48	.731	48
ese (after 1 year)	.810	40	.730	40
l—Retail	1.020	48	.950	48
tory:				
greement A—General manufacturing	.970	40	.900	48
Helpers	.920	40	.850	48
greement B—Cylinder gas	1.100	44	------	------
ist	.575	48	.575	48
iture	.970	48	.900	48
elpers	.920	48	.850	48
eral—Freight:				
ocal transfer	.970	48	.900	48
Helpers	.920	48	.850	48
ver-the-road	1.020	54	.970	54
ty pick-up and delivery	.970	48	.920	48
ckage delivery	.970	48	.900	48
Helpers	.920	48	.850	48
eel machinery and heavy hauling	1.020	48	.950	48
Helpers	.970	48	.900	48
ery:				
holesale	.970	40	.900	40
Helpers	.920	40	.850	40
tail	.770	48	.700	48
ware—Wholesale	.970	48	.900	48
tail	.867	54	.790	54
holesale	1.015	40	.888	40
ream—Special delivery	.855	40	.840	48
dry and dry cleaning	.900	48	.900	48
ket and produce	.970	40	.900	40
lpers	.920	40	.850	40
:				
holesale	1.223	40	1.063	40
king house, country drivers	1.230	48	1.028	48
sage (sales under ,500 lb.)	1.063	48	------	------
—Depot delivery and upply	.979	48	.880	48
paper and magazine	1.100	45	.940	48
untry drivers	1.150	45	.990	48
it-shift drivers	1.150	45	.990	48
pers	1.100	45	------	------
d gasoline:				
eement A—Fuel oil	1.020	48	.950	48
Helpers	.920	48	.850	48
eement B:				
nder 2,100 gal	1.109	40	.900	40
100 gal. and over	1.133	40	.920	40
St. Paul, Minn.—Con.				
Oil and gasoline—Continued				
Agreement C (after 1 year)	$1.123	40	$0.923	40
Paper—Wholesale	.970	40	.900	40
Helpers	.920	40	.850	40
Railway express	1.177	44	.992	44
Salt Lake City, Utah				
Bakery	1.000	48	1.000	48
General—Freight:				
Local cartage:				
1½ tons	.950	48	.820	48
2 tons	1.000	48	.870	48
3-axle trucks	1.050	48	.920	48
Less than 6 months' experience	.870	48	------	------
Short lines:				
Agreement A	.940	48	.890	48
Agreement B	.940	60	.850	60
Pick-up and delivery:				
Agreement A	.925	48	.825	48
Agreement B	.925	48	.750	48
Grocery—Warehouse:				
Agreement A	.900	40	.800	40
Agreement B—Chain store	.900	40	.800	40
Country	1.000	48	.900	48
Meat—Packing house:				
Agreement A:				
First year	1.060	40	.800	40
After 1 year	1.210	40	1.000	40
Agreement B:				
First year	1.035	40	------	------
After 1 year	1.123	40	------	------
Mine and smelter supply	.800	40	.750	40
Moving and storage:				
Local van:				
First year	1.000	48	.920	48
After 1 year	1.050	48	.920	48
Helpers	.960	48	.830	48
Long distance van:				
First year	1.100	------	1.020	------
After 1 year	1.150	------	1.020	------
Oil:				
Tank transport	1.420	40	1.200	40
Package or flat-rack equipment operators	1.140	40	.965	40
Paper—Warehouse	.900	40	.750	40
Produce and fruit—Warehouse	.800	40	.800	40
Railway express	1.156	44	.971	44
Warehouse:				
First 6 months	.870	48	------	------
After 6 months	.950	48	.820	48
San Antonio, Tex.				
Beer:				
Agreement A	1.060	40	1.060	40
Special delivery	1.003	40	1.003	40
Helpers	.773	40	.773	40
Agreement B:				
Route	.980	40	.980	40
Other	.890	40	.890	40
Helpers	.690	40	.690	40
General—Freight:				
Local	.770	54	.650	54
Helpers	.720	54	.520	54
Over-the-road—Transport	1.000	------	.900	------
Peddle run	.900	------	.850	------
Moving—Furniture:				
Drivers and helpers	.620	54	.620	54
San Francisco, Calif.				
Armored cars	1.000	40	------	------
Automotive parts and accessories	1.047	40	.842	40

TABLE 9.—*Hourly wage rates and weekly hours of union motortruck drivers and helpers, by cities, July 1, 1946 and July 1, 1945—Con.*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
San Francisco, Calif.—Con.				
Baggage	$1.250	48	$1.000	48
Bakery	1.281	48	1.131	48
Transport drivers—Night	1.406	48	1.194	48
Feeder trucks	1.323	48	1.173	48
Yeast	1.333	45	1.089	45
Student drivers (first 60 days)	1 111	45	------	------
Special delivery:				
First 60 days	.889	45	------	------
After 60 days	1.000	45	------	------
Beer	1.450	40	1.265	40
Helpers	1.375	40	1.208	40
Building:				
Construction:				
Pick-up and flat trucks	1.150	40	1.125	40
Water and oil trucks	1.225	40	1.125	40
Winch trucks	1.295	40	1.200	40
Excavating and dump trucks:				
2 cu. yards or less	1.150	40	.969	40
3 cu. yards	1.150	40	1.031	40
4 to 6 cu. yards	1.263	40	------	------
6 to 8 cu. yards	1.375	40	------	------
8 cu. yards and over	1.725	40	------	------
Concrete-mixer trucks:				
2 cu. yards or less	1.344	40	------	------
3 cu. yards	1.419	40	.987	40
4 cu. yards	1.500	40	------	------
5 cu. yards	1.545	40	------	------
6 cu. yards	1.581	40	1.095	40
Material:				
Less than 4 cu.yards	1.281	40	------	------
4 to 6 cu. yards	1.406	40	------	------
6 to 8 cu. yards	1.500	40	------	------
8 cu. yards and over	1.875	40	------	------
Ross lumber carrier	1.500	40	------	------
Butter and egg	1.279	45	1.125	45
Supervisors	1.330	45	1.176	45
Special delivery	1.125	45	.882	45
Commission market (after 1 year)	1.500	40	1.125	40
Helpers	1.225	40	1.125	40
Fish (less than 2,500 lb. capacity)	1.188	40	.938	48
Food specialty:				
Candy:				
First 60 days	1.250	40	.875	40
3 to 12 months	1.375	40	1.125	40
After 1 year	1.500	40	------	------
Cheese	1.444	45	1.089	45
First 3 months	1.222	45	.817	45
Special delivery	1.056	45	.962	45
Coffee	1.333	45	1.000	45
Potato chips:				
First 60 days	1.250	40	1.000	40
3 to 12 months	1.375	40	1.250	40
After 1 year	1.500	40	------	------
Sirup	1.222	45	1.022	45
Miscellaneous—Standard Brands	1.333	45	1.089	45
Fruit:				
Agreement A—Retail	1.000	48	.792	48
Agreement B:				
Starting at 8 a.m.	1.375	40	1.188	45¾
Starting before 8 a.m.	1.438	40	1.250	45¾
Furniture	1.438	47	1.250	47
Helpers	1.375	47	1.188	47
Garage and service station:				
Motorcycle drivers	1.125	40	.835	40
Public garages—Tow cars	1.125	48	.908	48
Motor-car dealers—Tow cars	1.225	40	.919	40
General:				
Under 2,500 lb	1.188	40	.938	45¾
2,500 to 4,500 lb	1.250	40	1.000	45¾
4,500 to 6,500 lb	1.313	40	1.063	45¾
6,500 to 15,500 lb	1.375	40	1.125	45¾
15,500 to 20,500 lb	1.437	40	1.188	45¾
Over 20,500 lb	1.500	40	1.250	45¾
San Francisco, Calif.—Con.				
General—Continued				
Motorcycle:				
Under ½ ton	$1.125	40	$0.875	45¾
½ ton and over	1.188	40	.938	45¾
Boom truck	1.500	40	1.250	45¾
Freight—Highway:				
Long runs	1.385	60	1.200	60
Short runs	1.250	60	1.075	60
Parcel delivery and furniture	1.350	48	1.006	48
Motorcycle	1.200	48	.934	48
Helpers:				
Bulk	.975	48	.695	48
Package	.750	48	.551	48
Ice:				
Retail	1.200	40	1.079	48
Wholesale—Drivers and helpers	1.250	40	1.079	48
Ice cream:				
Special delivery	1.350	40	1.088	48
Transport trailers	1.563	40	1.150	48
Meat:				
Wholesale:				
Small trucks	1.150	40	.871	40
Large trucks	1.275	40	.980	40
Truck with helper	1.394	40	1.041	40
Retail:				
First year	1.063	40	.666	49
After 1 year	1.063	40	.771	49
Combination drivers and cutters	1.250	40	.901	49
Jobbers	1.350	40	.959	49
Butcher	1.468	40	1.266	45
Poultry—Wholesale:				
Under 2 tons	1.350	40	1.000	48
2 tons and over	1.500	40	1.063	48
Milk	1.279	45	1.125	45
Relief	1.381	45	1.187	45
Highway	1.355	45	1.138	45
Truck and trailer	1.432	.45	1.202	45
Newspaper:				
Day	1.594	40	1.256	40
Night	1.681	40	1.281	40
Magazine	1.500	40	1.194	40
Photo service—Motorcycle drivers	1.200	48	.934	48
Printing and publishing:				
Agreement A	1.125	40	------	------
Agreement B	1.125	40	1.006	40
Motorcycle	1.000	40	.863	40
Railway express:				
1 ton	1.265	44	1.080	44
2 tons and coin trucks	1.292	44	1.107	44
3 tons	1.345	44	1.160	44
Money guard drivers	1.217	44	1.032	44
Helpers	1.071	44	.886	44
Refuse	1.000	40	1 000	40
Rendering	1.066	45	.949	45
Helpers	1.015	45	.897	45
Soft drink	1.209	48	1.125	48
Helpers	1.159	48	1.000	48
Special delivery	1.209	48	1.010	48
Shipping drivers	1.271	48	1.125	48
Water:				
Distilled	1.209	40	1.209	40
Filter	1.209	40	1.088	40
Scranton, Pa.				
Bakery:				
Transfer and transport	.825	48	.825	4
Helpers	.650	44	.650	4
Cooky	.880	44	.730	4
Beer	.963	40	.963	4
Helpers	.888	40	.888	4
Distributor—Keg beer	1.250	40	1.100	4
Helpers	1.150	40	1.025	4
Building construction:				
Concrete-mixer trucks	.750	44	.750	

TABLE 9.—*Hourly wage rates and weekly hours of union motortruck drivers and helpers, by cities, July 1, 1946 and July 1, 1945—Con.*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Scranton, Pa.—Con.				
Butter, eggs, and produce	$0.750	40	$0.655	54
Candy and tobacco—Wholesale	.700	40	.700	40
Department store—Package delivery	.977	44	.781	48
Fish and sea food	.833	48	.573	48
Furniture	1.011	44	.833	48
Helpers	.955	44	.781	48
General:				
Freight:				
Road	.980	60	.900	60
City	.770	48	.770	48
Peddle run	.810	48	.810	48
Helpers	.720	48	.720	48
Drayage—Local transfer	.950	50	.825	54
Helpers	.825	50	.700	54
Riggers	.825	50	.825	54
Hide and tallow	.950	40	.730	50
Milk:				
Under 3 tons	.833	48	.736	48
3 tons and over	.958	48	.878	48
Foremen	1.083	48	.898	54
Tank:				
Semitrailers—City	1.006	------	1.006	------
6-wheel unit—Road	.833	------	.833	------
Newspaper	1.044	40	.870	40
Produce	.813	40	.664	40
Railway express	1.086	44	.901	44
Part-time drivers	1.112	44	.927	44
Seattle, Wash.				
Armored car	1.050	40	.683	48
Automobile supply	1.175	40	.950	40
Baggage	1.219	48	1.063	48
Bakery:				
Special delivery	1.302	48	1.198	48
Crackers:				
2½ tons or less	1.375	40	1.150	40
Over 2½ tons	1.425	40	1.200	40
Beer	1.413	40	1.250	40
Helpers	1.338	40	1.175	40
Building:				
Construction:				
Pick-up trucks	1.400	40	1.100	40
Cement haulers	1.650	40	1.250	40
Dump trucks:				
5 yards or less	1.500	40	1.350	40
6 to 12 yards	1.700	40	1.550	40
13 to 20 yards	1.850	40	1.625	40
Over 20 yards	2.000	40	1.850	40
Koering dumpsters	1.700	40	1.550	40
Material	1.500	40	1.200	40
Sand, gravel, and concrete hauling	1.550	40	1.400	40
Over 3 yards	1.700	40	------	------
Flat or warehouse trucks	1.400	40	1.250	40
oal:				
1 to 5 tons	1.219	48	1.125	48
Over 5 tons and semi-trucks	1.345	48	1.250	48
rug—Motorcycle drivers	1.175	48	.950	48
actory:				
Day	1.475	40	1.295	40
Night	1.535	40	1.355	40
ood distributor—Retail	1.500	40	1.375	40
urniture and parcel delivery	1.219	48	1.000	48
arage—Motorcycle	1.175	40	.950	40
eneral:				
Drayage for hire:				
Furniture	1.219	48	1.063	48
Helpers	1.156	48	1.000	48
Under 1,500 lb	1.094	48	.938	48
¾ to 1 ton	1.125	48	.969	48
1 to 2½ tons	1.156	48	1.000	48
2½ to 4 tons	1.188	48	1.031	48
4 to 5 tons	1.219	48	1.063	48
Seattle, Wash.—Con.				
General—Continued				
Drayage for hire—Con.				
Over 5 tons	$1.250	48	$1.094	48
Helpers	1.094	48	.938	48
Freight:				
Under 125 miles:				
Under 4 tons	1.156	48	1.000	48
4 to 6 tons	1.188	48	1.031	48
6 to 8 tons	1.219	48	1.063	48
Over 8 tons	1.250	48	1.094	48
Trailer or semitrailer	1.281	48	1.125	48
Over 125 miles:				
Under 4 tons	1.188	48	1.031	48
4 to 6 tons	1.219	48	1.063	48
6 to 8 tons	1.250	48	1.094	48
8 to 10 tons	1.281	48	1.125	48
Over 10 tons	1.344	48	1.188	48
Trailer or semitrailer	1.406	48	1.250	48
Local pick-up delivery	1.156	48	1.000	48
Private carriers:				
Under ¾ ton	1.250	40	1.050	40
¾ to 1 ton	1.275	40	1.075	40
1 to 2½ tons	1.325	40	1.125	40
2½ to 4 tons	1.363	40	1.150	40
4 to 5 tons	1.400	40	1.200	40
Over 5 tons and semi-trailers	1.438	40	1.238	40
Helpers	1.250	40	1.050	40
Grocery—Retail (after 1 year)	1.075	40	.765	49
Ice:				
Retail	1.275	48	1.050	48
Wholesale	1.310	40	1.090	40
Ice cream	1.375	40	1.125	48
Meat—Packing house:				
5 tons and under	1.325	40	1.125	40
5 to 7 tons—6 wheels	1.388	40	1.189	40
Milk	1.188	48	.900	48
Relief drivers	1.313	48	1.250	48
Other dairy products	1.500	40	1.375	40
Newspaper:				
Day	1.375	40	1.063	40
Night	1.438	40	1.125	40
Over-the-road	1.500	40	1.188	40
Oil and gasoline—After 1 year	1.222	40	1.036	40
Fuel oil	1.380	48	1.175	48
Bulk—Intracity	1.250	48	1.100	------
Railway express	1.253	44	1.068	44
Helpers	1.102	44	.917	44
Soft drink—Retail	1.375	40	1.088	40
Tobacco—Retail	1.500	40	1.375	40
South Bend, Ind.				
Bakery—Biscuit:				
Agreement A	.900	48	.850	48
Agreement B	.900	48	.729	48
Over-the-road	.900	48	.833	48
Agreement C	.900	48	.825	50
Over-the-road	.900	48	.850	50
Agreement D	.900	48	.825	48
Building:				
Construction:				
Dump trucks:				
½ to 2 tons	1.150	40	1.000	40
2 to 3 tons	1.250	40	1.100	40
3 to 5 tons	1.350	40	1.200	40
Material:				
Plumbing supplies	1.100	40	.850	40
Coal	1.150	40	1.000	44
Helpers and yardmen	1.050	40	.900	44
Department store	1.000	48	.850	48
Helpers	.900	48	.750	48
Factory:				
Agreement A	1.215	40	1.030	40
Agreement B	1.210	40	.995	40
Agreement C	.920	40	.800	40

TABLE 9.—*Hourly wage rates and weekly hours of union motortruck drivers and helpers, by cities, July 1, 1946 and July 1, 1945—Con.*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
South Bend, Ind.—Con.				
Furniture:				
Agreement A	$0.950	48	$0.870	48
Agreement B	1.000	48	.750	48
Helpers	.900	48	.650	48
General—Freight:				
City pick-up and delivery	1.000	54	.850	54
Local (75-mile radius) and peddle run	1.000	54	.870	60
Hauling:				
Contract	.950	48	.850	48
Helpers	.850	48	.750	48
Car bodies	1.320	40	1.070	40
Miscellaneous:				
First 30 days	1.000	48	------	------
1 to 6 months	1.100	48	------	------
After 6 months	1.250	48	------	------
Grocery—Warehouse	1.000	40	.950	40
Meat:				
Agreement A—Packing	1.000	40	.900	40
Helpers	.770	40	.750	40
Agreement B:				
City	1.000	40	.900	48
Country	1.152	48	.950	48
Milk	.937	48	.625	48
Relief drivers	1.120	48	.979	48
Oil and gasoline:				
First 6 months	1.018	40	------	------
7 to 12 months	1.052	40	.892	40
13 to 18 months	1.120	40	.949	40
After 18 months	1.188	40	1.010	40
Paper—Warehouse	1.000	40	.950	40
Railway express	1.102	44	.917	44
Foreman	1.156	44	.971	44
Part-time drivers	1.177	44	.992	44
Whisky	1.100	40	.950	40
Spokane, Wash.				
Beer	1.413	40	1.138	40
Helpers	1.338	40	1.038	40
Building—Construction:				
Flat-bed service and supply truck	1.150	40	1.000	40
Dump truck:				
5 yd. and under	1.250	40	1.100	40
5 to 8 yd	1.450	40	1.250	40
Over 8 yd	1.600	40	1.400	40
Transit—Mixer trucks	1.450	40	1.250	40
Lumber carrier and buggymobile	1.450	40	1.250	40
General—Freight:				
125 miles or under:				
Under 4 tons	1.156	48	1.000	48
4 to 6 tons	1.118	48	1.031	48
6 to 8 tons	1.219	48	1.063	48
Over 8 tons	1.250	48	1.094	48
Truck and trailer, or tractor and semitrailer	1.281	48	1.250	48
Over 125 miles:				
Under 4 tons	1.188	48	1.031	48
4 to 6 tons	1.219	48	1.063	48
6 to 8 tons	1.250	48	1.094	48
8 to 10 tons	1.281	48	1.125	48
Over 10 tons	1.344	48	1.188	48
Truck or tractor and semitractor	1.406	48	1.250	48
Freight and transfer	1.170	45	1.000	45
Winch truck—Heavy duty	1.219	45	1.050	45
Furniture	1.114	45	.950	45
Pick-up and delivery	1.094	45	.925	45
Helpers	1.019	45	.850	45
Partsmen	1.094	40	.800	45
Railway express	1.157	44	.972	44
Money drivers	1.164	44	.979	44
Springfield, Mass.				
Bakery—Transport	$0.903	48	$0.833	48
Helpers	.799	48	.729	48
Beer—Distributor	1.000	48	1.000	48
Helpers	.875	48	.875	48
Building construction:				
Transit—Mixer trucks	.950	40	.950	48
Fuel—Oil, coal, etc	.910	48	.890	48
Helpers	.810	48	.790	48
Furniture:				
Agreement A	.960	48	.767	51
Helpers	.841	48	.654	51
Agreement B	.960	48	.815	48
Helpers	.841	48	.708	48
General:				
5 tons and under	.920	48	.870	48
Over 5 tons	.950	48	.900	48
Helpers	.870	48	.820	48
Road drivers	1.000	48	.950	48
Grocery—Chain store	1.000	48	1.000	48
Helpers	.875	48	.875	48
Railway express	1.166	44	.981	44
Soft drinks	.850	40	.800	40
Helpers	.750	40	.700	40
Tampa, Fla.				
Bakery—Relay drivers	.600	40	.600	40
Beer—Transport drivers	.975	40	.900	40
Helpers	.509	40	.450	40
Railway express	1.152	44	.967	44
Toledo, Ohio				
Air reduction	1.080	48	.970	48
Armored car	.900	40	.900	40
Bakery—Biscuit:				
Agreement A	1.095	44	.951	44
Agreement B	1.000	45	.935	45
Agreement C	1.000	48	.854	48
Beer	1.294	40	1.064	40
Helpers	1.111	40	.891	40
Permit-card helpers	1.005	40	.805	40
Over-the-road:				
Single bottom	1.050	60	.970	60
Double bottom	1.180	60	1.100	60
Tandem bottom	1.120	60	------	------
Building:				
Agreement A (truck not for hire):				
Building supply	1.150	48	.950	48
Concrete-mixer truck	1.250	48	1.050	48
Semidump and excavating grader	1.200	48	1.000	48
Agreement B (truck for hire)	.950	45	.950	50
Concrete-mixer truck	1.050	45	1.050	54
Excavating and grading	1.000	45	1.000	50
Lumber	1.150	40	.950	40
Helpers	1.100	40	.900	40
Coal	.950	40	.950	40
Helpers	.900	40	.900	40
Department store:				
Furniture—New	.955	48	.930	48
Helpers	.905	48	.880	48
Package drivers	.925	48	.900	48
Helpers	.660	48	.635	48
Factory:				
Agreement A (gloves)	1.080	40	.946	40
Agreement B (glass)	1.220	40	1.013	40
Factory yard	1.140	40	.913	40
Agreement C (auto parts):				
First 30 days	1.130	40	.950	40
After 30 days	1.200	40	1.000	40
Agreement D	1.240	40	1.060	40
Agreement E	1.214	40	.895	40

TABLE 9.—*Hourly wage rates and weekly hours of union motortruck drivers and helpers, by cities, July 1, 1946 and July 1, 1945*—*Con.*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Toledo, Ohio—Con.				
General—Cartage	$1.100	48	$0.950	48
Helpers	1.050	48	.900	48
Carry-all and winch truck	1.250	48	1.100	48
Grocery:				
Wholesale:				
Agreement A	1.020	40	.865	40
Agreement B	1.020	40	.875	40
Agreement C:				
Less than 3 months	.986	48	.745	48
3 to 6 months	1.058	48	.841	48
After 6 months	1.130	48	.937	48
Agreement D—Chain store:				
Country	1.110	48	.970	48
City	1.110	48	.920	48
Helpers	.970	48	.870	48
Agreement E—Chain store:				
Country	1.120	48	.970	48
City	1.100	48	.950	48
Helpers	.970	48	.900	48
ce:				
First 30 days	.850	40	.750	40
2 to 4 months	.900	40	.800	40
After 4 months	1.000	40	.850	40
e cream	1.150	40	.925	40
Hauling	.900	40	.800	40
on and metal	.875	40	.825	40
aundry:				
Towel supply (after 12 weeks)	.885	48	.740	48
Industrial	.850	44	.800	44
eat	1.138	40	------	------
ilk—Special delivery and supply truck	1.150	40	.925	40
oving—Vans:				
Local	1.150	48	1.000	48
Helpers	1.100	48	.950	48
Long distance	1.100	60	.950	60
Helpers	1.050	60	.900	60
ewspaper:				
Agreement A	1.125	40	.963	40
Agreement B	.950	40	.900	40
l and gasoline:				
Agreement A (petroleum)	1.050	40	1.000	60
Agreement B (tank truck):				
First year	1.028	40	.871	40
Second year	1.062	40	.900	40
After 2 years	1.120	40	.949	40
oduce	.950	40	.880	40
ilway express	1.156	44	.971	44
baceo, candy, and cigarettes—Wholesale	1.050	40	.875	40
Washington, D. C.				
ilding:				
Construction:				
Dump trucks:				
2 tons and under	1.000	40	.850	40
2 to 6 tons	1.000	40	.900	40
Over 6 tons	1.250	40	1.000	40
Dumpster or tractor pull	1.250	40	1.000	40
Euclid bottom dump (11 to 17 yards)	1.250	40	1.250	40
Concrete-mixer trucks	1.000	42½	1.000	42½
Material:				
Drivers	.938	44	.868	44
Helpers	.827	44	.757	44
Extra drivers	.960	44	.890	44
Helpers	.830	44	.760	44
Lumber	.900	44	.800	44
Helpers	.800	44	.700	44
ffee—Wholesale	.750	48	.667	48
Helpers	.667	48	.594	48
Washington, D. C.—Con.				
General:				
Storage and moving:				
Agreement A	$0.900	48	$0.808	48
Helpers	.817	48	.763	48
Agreement B	.890	48	.808	48
Helpers	.830	48	.763	48
Extra drivers	.920	48	.840	48
Helpers	.860	48	.790	48
Freight:				
Regular drivers	.890	48	.825	48
Helpers	.790	48	.710	48
Extra drivers	.940	48	.875	48
Helpers	.825	48	.775	48
Grocery—Retail:				
Agreement A	.973	44	.871	48
Helpers	.825	44	.735	48
Trailer trucks	1.018	44	.913	48
Agreement B	.970	44	.871	48
Helpers	.840	44	.735	48
Trailer trade	1.010	44	.913	48
Meat trucks	1.120	44	1.017	48
Trailer trucks	1.160	44	1.056	48
Extra drivers	1.179	44	1.038	48
Road	1.080	44	.975	48
Agreement C:				
Regular	.875	48	------	------
Helpers	.729	48	------	------
Extra	.930	48	------	------
Helpers	.810	48	------	------
Ice:				
Agreement A:				
Route foremen	1.000	48	.940	48
Driver salesmen	.900	48	.820	48
Helpers	.700	48	.560	48
Agreement B:				
Coal and ice	1.000	48	.852	48
Transfer—Ice	.900	48	.821	48
Route foremen—Ice	1.100	48	.967	48
Coal drivers	.800	48	.675	48
Ice cream	1.176	51	.889	54
Helpers	.971	51	.694	54
Meat:				
Agreement A	1.110	40	.950	40
Agreement B	1.000	40	.800	40
Agreement C	.850	40	.750	40
Transfer:				
Agreement A	.755	48	.755	48
Helpers	.640	48	.640	48
Agreement B	.900	48	.875	48
Helpers	.825	48	.710	48
Meat, poultry, and fish	.850	40	.700	40
Milk:				
Relief or swing men	1.171	48	1.021	48
Feeder truck	.796	48	.646	48
Route foremen	1.275	48	1.125	48
Newspaper:				
Agreement A	.775	40	.675	40
Agreement B:				
First year	.675	40	.523	44
2 to 4 years	.725	40	.568	44
5 years and over	.750	40	.591	44
Trailer truck	.825	40	.725	40
Railway express	1.204	44	1.019	44
Wichita, Kans.				
Building:				
Material	.750	48	.750	48
Concrete-mixer truck	.850	48	.850	48
General:				
Freight:				
Pick-up and delivery	.750	54	.750	54
Transfer and storage	.700	40	.700	40
Furniture	.750	40	.750	40

TABLE 9.—*Hourly wage rates and weekly hours of union motortruck drivers and helpers, by cities, July 1, 1946 and July 1, 1945—Con.*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Wichita, Kans.—Con.				
Grocery—Chain store:				
Agreement A (after 6 months)	$0.900	48	$0.850	48
Agreement B (after 6 months)	.900	48	.850	54
Railway express	1.129	44	.943	44
Worcester, Mass.				
Bakery:				
Transport:				
Under 5 tons	.863	48	.793	48
5 tons and over	.903	48	.833	48
Helpers	.704	54	.650	54
Beer	1.188	40	1.038	40
Helpers	1.113	40	.963	40
Temporary helpers	1.013	40	.913	40
Department store:				
Parcel	.938	48	.792	48
Furniture	.979	48	.833	48
Helpers	.833	48	.708	48
General:				
Freight:				
5 tons and under	.920	48	.870	48
Over 5 tons	.950	48	.900	48
Helpers	.870	48	.820	48
Over-the-road	1.000	48	.950	48
Grocery—Wholesale:				
1 ton and under	.800	40	.720	40
Over 1 ton	.850	40	.770	40
Helpers	.710	40	.630	40
3-axle trucks	.910	40	.830	40
Liquor—Wholesale	1.000	40	.830	40
Helpers	.900	40	.730	40
Milk—Transport	.983	48	.983	48
Railway express	1.166	44	.981	44
York, Pa.				
Bakery—Supply	.760	44	.760	44
Beer	1.130	40	------	------
Tractor-trailer	1.230	40	------	------
Helpers	.980	40	------	------
Brewery—Bottle and keg	.980	40	.855	40
Building construction:				
Flat top and dump truck	1.000	40	.750	48
Service truck	.950	40	------	------
Transit—Mixer truck	1.125	40	------	------
Truck with dump trailer and winch truck	1.150	40	------	------
Furniture—Local	.770	48	.750	48
Helpers	.710	48	.690	48
General:				
Common and contract carriers:				
Local	.770	48	.750	48
Helpers	.710	48	.690	48
Peddle runs—Over 8 miles, no lay-over	.840	48	.830	48
Moving and storage:				
Household	.850	48	.800	48
Helpers	.800	48	.700	48
York, Pa.—Con.				
Moving and storage—Continued				
Over-the-road	$0.950	48	------	------
Railway express	1.102	44	$0.917	44
Youngstown, Ohio				
Bakery:				
Wholesale:				
Special delivery	.833	48	.645	48
Long distance	.920	48	.900	48
Retail—Over-the-road	.920	40	.800	40
Biscuit	1.000	48	.900	48
Yeast:				
First 6 months	.911	48	.839	48
6 months to 3 years	1.016	48	.945	48
3 years and over	1.127	48	1.055	48
Beer	1.090	48½	.970	------
Feeder truck	1.050	48½	.930	------
Building:				
Construction	1.050	40	.850	40
Supply	1.000	54	.850	54
Plumbing	1.050	48	.900	48
Coal	1.000	54	.850	54
Department store	1.050	48	.950	48
Helpers:				
Appliance and heavy items	1.050	48	.950	48
Furniture and heavy paper	.900	48	.800	48
Package drivers	1.000	48	.900	48
Helpers	.700	48	.600	48
Furniture	1.000	48	.900	48
Helpers	.850	48	.750	48
General:				
Freight—Local pick-up and delivery	1.050	57	.950	57
Over-the-road	1.050	60	.970	60
Transfer	1.190	44	1.090	44
Cylinder	1.140	44	1.050	44
Helpers	.980	44	.890	44
Grocery	1.030	48	.925	48
Wholesale	.960	48	.925	48
Helpers	.800	48	.750	48
Transport	1.050	48	.950	48
Helpers	.920	48	.820	48
Laundry—Towel supply	.833	48	.677	48
Meat—Packing house	1.160	40	.900	40
Milk	1.030	54	.950	54
Transport—Over-the-road	1.080	54	.950	54
Helpers	.980	54	.800	54
Moving	1.000	48	1.000	48
Helpers	.950	48	.950	48
Oil and gasoline:				
First year	1.076	40	.978	40
After 1 year	1.137	40	1.036	40
Produce:				
Agreement A	.960	40	.850	40
Helpers	.810	40	.750	40
Agreement B	1.116	48	.938	48
Railway express	1.156	44	.971	44

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UNITED STATES DEPARTMENT OF LABOR
L. B. Schwellenbach, *Secretary*
BUREAU OF LABOR STATISTICS
Ewan Clague, *Commissioner*

Union Wages and Hours in The Printing Trades

July 1, 1946

Bulletin No. 912

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Letter of Transmittal

United States Department of Labor,
Bureau of Labor Statistics,
Washington, D. C., June 30, 1947.

The Secretary of Labor:

I have the honor to transmit herewith a report covering union wages a
hours in the printing trades, as of July 1, 1946.

This report was prepared in the Bureau's Wage Analysis Branch by Anne
V. Simi, James P. Corkery, and Herbert M. Abowitz, under the direction
Donald H. Gerrish.

Ewan Clague, *Commissioner*

Hon. L. B. Schwellenbach,
Secretary of Labor.

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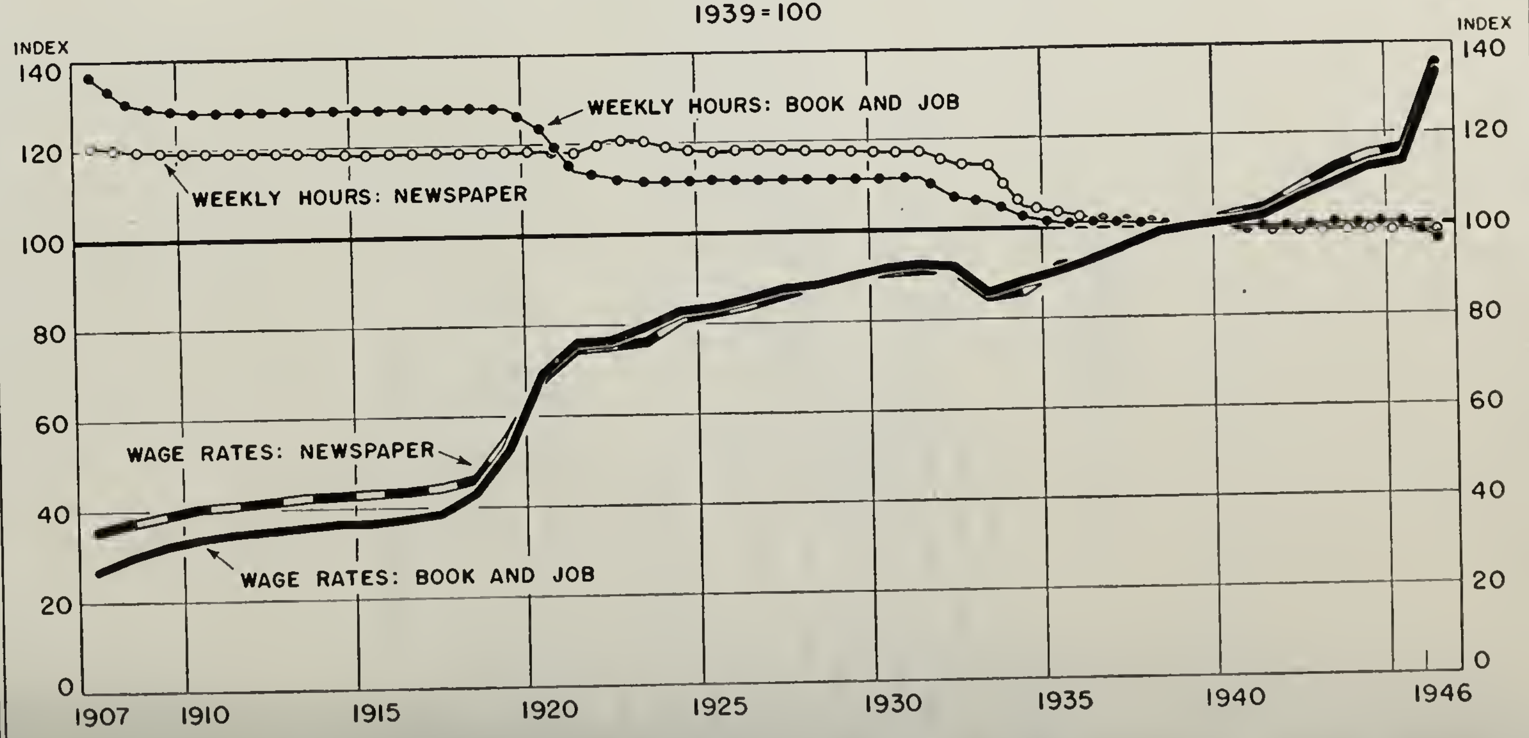
CHART 1

UNION SCALES OF WAGES AND HOURS IN THE PRINTING TRADES

1939=100



UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS

Bulletin No. 912 of the
United States Bureau of Labor Statistics

Union Wages and Hours in the Printing Trades, July 1, 1946

Summary

Union wage rates for all printing trades workers averaged $1.58 an hour on July 1, 1946. Practically all of the organized tradesmen had received substantial wage increases since VJ-day, averaging 17 percent. The average for day shift newspaper workers on July 1, 1946 ($1.69) was 13 percent higher than that for day shift book and job workers ($1.49). Photoengravers recorded the highest averages for both branches of the industry ($1.97 in book and job shops and $2.06 an hour on newspapers). Bindery women had the lowest average in the commercial branch (81 cents) and mailers had the lowest newspaper average ($1.47).

The straight-time workweek averaged 38.3 hours for book and ob workers and 37.5 hours for newspaper workers. There was a ubstantial reduction in straight-time weekly hours during the ear for the job workers, and a slight reduction for newspaper workers.

Almost all printing trades workers received time and a half as he initial overtime rate. Double time rates were provided for 93 ercent of the members in the book and job branch for work perormed on Sunday or the seventh consecutive day, and for 51 perent of the newspaper workers for nonscheduled work on those ays.

Over half of all the printing trades workers studied were covered by union agreements that called for 2 weeks of paid vacation fter 1 year of service.

Introduction

This study was based on union wage scales effective July 1, 46, in 75 cities (ranging in size from 40,000 to over 1,000,000) d covered 11 book and job and 8 newspaper occupations.[1] The union scales studied were the minimum wage rates and maximum number of hours agreed upon through collective bargaining between employers or their associations and trade-unions. Rates in excess of the agreed minima are paid to some workers by reason of seniority, special skills, or for personal or other reasons. Such rates were not used in the preparation of this report. The various averages presented are based on effective union scales weighted by the number of members working at each specific wage rate. Collective bargaining contracts are on file covering over 88 percent of the workers included in this study.

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[1] Almost 2,700 rate quotations covering 71,533 union members in the book and job branch of industry and 34,298 members in the newspaper branch were collected by field representatives king out of the Bureau's regional offices. Bureau estimates of employment in the printing ustry on the survey date indicate 130,100 workers in the newspaper branch and 190,700 kers in the commercial branch.

Union Hourly Wage Rates

TREND OF UNION WAGE RATES

Indicative of the upward wage trend since VJ-day was the 17 percent increase (about 23 cents an hour) in the average rates of union printing trades workers in 75 cities between July 1, 1945, and July 1, 1946. The percentage increase for newspaper workers was just slightly less than that for book and job (16 compared to 18 percent). However, in money terms, average rates of union newspaper workers improved by approximately 25 cents an hour and commercial workers 22 cents.

The wage rate index for all printing trades workers rose more during the 1945–46 period than in any other single year since 1919–20, when it showed an increase of over 28 percent or about 18 cents an hour. Between 1918 and 1919, a period after World War I that may be compared with the current period, rates fo printing trades workers increased about 22 percent or 11 cents an hour.

TREND IN INDIVIDUAL TRADES

During the period between July 1, 1945, and July 1, 1946, th wage rate index of every trade included in the survey rose considerably. The greatest increases registered (22 percent) wer reported for the bindery women in the book and job branch an for mailers in the newspaper branch (14 cents and 27 cents respectively). The smallest percentage increase reported (14 percent, 23 cents), covered the electrotypers in the book and jo branch.

Union wage scales for individual trades in both branches the industry have shown a consistent upward trend since th establishment of the index series, with the exception of a slig drop in the early 1920's and a serious dip between 1932 and 193 Bindery women and mailers, who had the lowest base rates, show

TABLE 1.—*Indexes of union hourly wage rates in all printing trades, 1907–46*

Year	Indexes (1939=100) of hourly wage rates			Year	Indexes (1939=100) of hourly wage rates		
	All printing	Book and job	Newspaper		All printing	Book and job	Newspaper
907	(1)	27.0	35.3	1927	87.0	87.5	86.3
908	(1)	29.9	37.2	1928	88.6	88.7	88.5
909	(1)	32.1	38.8	1929	89.9	89.9	90.0
910	(1)	33.8	40.1	1930	91.3	91.5	90.9
911	36.0	34.7	40.7	1931	91.8	92.1	91.2
912	36.6	35.3	41.4	1932	91.1	91.2	91.0
913	37.3	36.0	42.3	1933	85.7	86.1	85.1
914	38.0	36.8	42.7	1934	87.5	88.5	86.2
915	38.2	36.9	43.0	1935	90.8	90.4	91.5
916	38.6	37.5	43.2	1936	92.9	93.0	92.8
917	39.9	38.8	44.3	1937	96.0	96.0	96.3
918	43.4	43.0	46.4	1938	99.1	99.2	98.8
919	53.1	53.0	56.0	1939	100.0	100.0	100.0
920	68.1	69.1	68.5	1940	101.4	100.9	102.2
921	74.6	76.1	74.5	1941	102.6	102.0	103.6
22	75.4	76.4	75.2	1942	107.0	106.4	108.1
23	77.7	79.4	76.0	1943	110.4	109.3	112.6
24	81.5	82.7	80.6	1944	113.1	112.2	115.1
25	82.7	83.5	82.0	1945	114.6	113.7	116.7
26	84.5	85.4	83.8	1946	134.2	133.7	135.5

[1] Combined data for years 1907–10 not available.

TABLE 2.—*Indexes of union hourly wage rates in each printing trade, 1907 to 1946*
[1939=100]

BOOK AND JOB

Year	Bindery women	Bookbinders	Compositors, hand	Electrotypers	Machine operators	Machine tenders (machinists)	Mailers	Photoengravers	Press assistants and feeders	Pressmen, cylinder	Pressmen, platen
	-------	30.6	32.7	28.5	35.2	-------	-------	-------	25.0	32.5	32.1
	-------	33.9	32.8	28.6	36.5	-------	-------	-------	27.7	34.1	33.2
	-------	34.3	32.8	28.7	37.9	-------	-------	-------	28.1	37.0	34.3
	-------	34.7	34.2	29.9	39.2	-------	-------	-------	28.7	37.2	34.9
	-------	35.3	35.1	31.6	39.6	-------	-------	-------	29.8	38.0	35.6
	-------	35.5	35.9	32.1	40.6	39.7	-------	-------	30.3	38.6	36.1
	-------	36.4	36.3	32.7	41.7	40.3	-------	-------	31.0	39.1	36.8
	-------	37.0	37.2	34.2	42.1	40.4	-------	-------	31.8	40.0	37.4
	33.7	37.1	37.4	34.9	42.2	40.6	-------	-------	32.0	40.0	37.5
	34.3	37.1	38.2	35.9	42.3	40.6	-------	33.1	32.5	40.5	38.3
	36.7	39.4	39.0	37.0	43.3	41.6	-------	36.0	34.2	41.3	40.2
	41.0	44.3	43.0	38.9	46.8	45.7	-------	38.2	39.9	45.8	44.3
	53.1	56.5	52.6	44.6	56.4	56.2	-------	44.5	51.5	55.5	54.4
	73.3	74.3	69.2	63.8	71.8	70.4	-------	61.4	70.7	72.1	73.7
	85.6	81.3	79.4	74.2	81.3	81.4	-------	65.4	76.5	79.6	82.3
	82.9	78.0	80.8	75.7	81.4	80.4	-------	66.0	74.0	77.8	80.5
	86.6	82.8	82.7	80.4	82.9	82.0	-------	66.7	82.9	83.9	83.8
	87.9	86.5	86.4	83.4	86.4	85.6	-------	71.4	82.1	86.4	86.4
	88.9	87.5	85.9	83.1	86.4	85.7	-------	73.2	86.7	87.5	86.8
	87.2	89.0	87.6	83.9	87.4	88.7	-------	77.9	87.7	89.3	90.9
	89.2	90.9	89.2	84.9	90.8	89.2	-------	81.6	88.8	89.4	91.8
	89.7	90.5	90.5	85.6	91.1	89.6	-------	83.9	89.4	90.2	90.2
	90.4	91.5	91.0	87.6	92.6	90.3	-------	85.1	90.2	91.7	91.6
	91.1	92.6	93.0	90.1	95.1	92.0	-------	85.3	91.3	93.4	93.1
	91.5	93.0	93.5	92.1	95.6	92.9	-------	85.5	92.0	94.0	93.6
	89.2	89.6	93.3	91.8	95.6	93.5	-------	88.1	88.0	91.6	91.6
	85.7	86.4	87.6	86.0	89.7	88.0	-------	86.4	82.0	85.9	85.3
	90.1	89.6	88.5	92.0	89.8	90.7	-------	87.7	85.1	88.3	87.6
	90.9	90.8	90.1	93.4	91.3	91.1	-------	93.3	87.0	89.4	88.3

TABLE 2.—*Indexes of union hourly wage rates in each printing trade, 1907 to 1946*—Continued

[1939=100]

BOOK AND JOB

Year	Bindery women	Book binders	Compositors, hand	Electrotypers	Machine operators	Machine tenders (machinists)	Mailers	Photoengravers	Press assistants and feeders	Pressmen, cylinder	Pressmen, platen
1936	92.6	92.0	92.8	93.8	94.4	93.9	-------	95.6	89.9	93.1	91.9
1937	94.0	94.6	96.3	95.0	97.0	96.7	92.8	96.8	94.5	96.4	96.2
1938	98.6	98.1	99.5	99.3	99.7	99.6	98.3	99.2	99.4	99.3	99.1
1939	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1940	100.5	100.5	101.7	100.2	100.7	101.1	102.7	100.8	100.7	100.6	100.6
1941	102.7	102.0	103.2	102.3	101.6	101.9	104.0	101.2	101.7	101.4	101.6
1942	108.8	107.3	107.0	104.1	106.4	106.6	109.4	103.0	107.8	106.4	106.5
1943	112.1	111.3	110.0	107.0	109.5	109.8	111.3	103.5	111.2	109.4	109.9
1944	117.7	112.9	113.5	109.4	110.3	112.3	113.7	108.9	113.7	110.9	111.7
1945	120.1	113.6	114.8	111.6	111.6	114.0	115.8	111.3	115.2	112.1	113.1
1946	146.2	136.0	134.1	127.2	129.9	130.4	140.1	127.0	139.2	131.2	133.5

NEWSPAPER

Year	Compositors, hand	Machine operators	Machine tenders (machinists)	Mailers	Photoengravers	Pressmen, web presses[1]	Stereotypers
1907	35.5	36.2	----------	----------	----------	34.1	37.9
1908	37.4	37.8	----------	----------	----------	36.2	39.9
1909	39.4	39.0	----------	----------	----------	37.8	41.2
1910	41.1	40.2	----------	----------	----------	39.0	42.2
1911	41.9	40.5	----------	----------	----------	39.3	42.5
1912	42.8	41.3	45.0	----------	----------	39.8	43.1
1913	43.5	42.0	45.3	----------	----------	40.7	45.
1914	44.0	42.4	45.6	----------	----------	41.0	46.
1915	44.2	42.8	45.9	----------	----------	41.2	46.
1916	44.4	43.0	46.0	----------	36.3	41.5	46.
1917	45.5	44.3	46.5	----------	37.9	42.3	47.
1918	47.5	45.8	48.8	----------	41.0	45.6	49.
1919	57.1	55.7	61.9	----------	48.3	56.1	56.
1920	69.4	69.1	76.4	----------	55.7	69.4	68.
1921	75.7	73.5	79.7	----------	65.9	74.3	79.
1922	77.4	75.5	80.4	----------	69.0	70.5	78.
1923	78.1	76.3	80.6	----------	68.8	71.4	80
1924	82.3	80.9	85.2	----------	71.6	79.4	82
1925	82.9	82.4	82.9	----------	74.5	83.0	84
1926	84.8	84.5	82.1	----------	80.1	83.0	85
1927	87.7	86.3	86.8	----------	81.2	87.3	86
1928	89.3	89.5	88.8	----------	84.5	89.2	86
1929	90.8	90.5	90.7	----------	84.9	89.5	91
1930	91.7	91.2	91.4	----------	86.2	91.1	91
1931	91.7	91.3	91.6	----------	87.1	91.6	92
1932	90.8	90.7	91.0	----------	88.1	92.8	91
1933	84.8	84.8	84.6	----------	81.5	86.8	86
1934	86.1	85.9	85.7	----------	85.3	87.0	87
1935	91.7	91.6	91.5	----------	89.4	91.8	91
1936	93.3	93.1	93.2	----------	91.6	92.3	9
1937	97.3	97.1	97.2	96.7	93.3	95.3	9
1938	99.3	99.3	99.5	99.3	98.0	97.9	9
1939	100.0	100.0	100.0	100.0	100.0	100.0	10
1940	102.1	101.9	101.9	103.1	101.1	102.4	10
1941	103.4	102.9	103.1	107.2	101.5	103.9	10
1942	107.7	107.3	107.9	114.3	103.6	107.9	10
1943	112.4	111.5	112.4	120.1	104.9	113.2	11
1944	114.5	114.0	114.9	121.9	107.7	116.1	11
1945	116.0	115.2	116.3	123.9	110.0	117.9	11
1946	132.5	132.4	133.7	150.9	126.2	139.2	13

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[1] Includes pressmen-in-charge.

the highest percentage increase since 1939 (46 percent or 25 cents for bindery women, 40 percent or 41 cents for book and job mailers and 51 percent or 50 cents for newspaper mailers). Photoengravers, who had the highest base rates, showed the smallest percentage increases since 1939 (27 percent representing 42 cents in the book and job and 26 percent or 43 cents in the newspaper branch).

CHANGES IN UNION WAGE RATES BETWEEN 1945 AND 1946

Practically all of the organized printing trades workers—book and job 99 percent, newspapers 96 percent—received wage increases during the year. The largest single bloc of members (over a third) registered gains of from 15 to 20 percent. About one-fifth of the workers received wage increases of 10 to 15 percent and another fifth 20 to 25 percent. In sharp contrast, the preceding study of the printing trades (July 1, 1945) revealed that only 33 percent of the book and job workers and 39 percent of the newspaper workers received increases during the 1944–45 period, with out few recording basic rate improvement of as much as 10 ercent.

In the book and job branch, the trades reporting the largest nembership proportions benefiting by increases of 25 percent nd over were those with the lower general wage averages: bindery women (49.4 percent of the members), mailers (30.7 percent), ress assistants and feeders (28.3 percent). At least three out f every four bindery women, bookbinders, hand compositors, ma- hine operators, mailers, press assistants and feeders, and platen ressmen registered rate advances of 15 percent or better. Con- ersely, trades with averages consistently in the higher levels, uch as photoengravers, electrotypers, machine tenders, and cylin- er pressmen revealed sizable concentrations of membership bene- ting by gains of less than 15 percent.

About three-fourths of the newspaper tradesmen reporting ains obtained raises of 10 to 25 percent, with almost equal por- ons falling into each 5 percent interval of the range. Day and ght shift pressmen-in-charge and mailers, and day shift press- en and machine tenders indicated the largest proportion of mem- ership with increases amounting to 25 percent or more. More an one of every three day shift hand compositors and machine erators and day and night shift machine tenders recorded rate tterments of 10 to 15 percent. Similar proportions of night shift nd compositors, machine operators, pressmen, pressmen-in- arge and day and night shift photoengravers and stereotypers

TABLE 3.—*Extent of changes in union wage rates and percent of members affected by increases, July 1, 1945, to July 1, 1946*

Trade	Percent of members affected by union wage rate changes		Percent of union members receiving increases of —							
	No change	Increase	Under 5 percent	5 and under 10 percent	10 and under 15 percent	15 and under 20 percent	20 and under 25 percent	25 and under 30 percent	30 and under 35 percent	35 percent and over
All printing trades	2.0	98.0	0.7	7.2	19.4	36.5	18.8	9.5	4.8	1.1
Book and job	1.0	99.0	.8	6.2	17.7	42.3	15.2	10.5	4.8	1.5
Bindery women	.6	99.4	------	10.0	5.4	19.3	15.3	33.1	13.1	3.2
Bookbinders	.5	99.5	------	2.5	20.8	41.1	14.4	7.2	11.7	1.8
Compositors, hand	.4	99.6	------	4.3	15.9	68.5	7.7	1.9	1.3	------
Electrotypers	2.8	97.2	4.3	8.4	44.2	36.4	3.2	------	.2	.5
Machine operators	.4	99.6	.4	4.1	12.6	75.0	4.9	1.8	.8	------
Machine tenders (machinists)	4.8	95.2	------	12.0	24.6	48.7	6.1	3.1	.7	------
Mailers	.9	99.1	------	7.3	12.2	3.4	56.4	6.7	3.8	9.3
Photoengravers	4.8	95.2	4.6	20.7	28.4	9.2	23.2	4.8	------	4.3
Press assistants and feeders	.3	99.7	.1	1.9	12.7	37.3	19.4	20.3	6.6	1.4
Pressmen, cylinder	.5	99.5	.7	3.7	23.7	45.9	19.8	4.9	.5	.3
Pressmen, platen	1.1	98.9	.8	3.6	19.4	36.5	30.8	6.1	1.2	.5
Newspapers	4.1	95.9	.6	9.3	22.8	24.6	26.2	7.3	4.8	.3
Day work	4.1	95.9	1.0	9.8	28.4	19.9	23.7	8.3	4.6	.2
Night work	4.1	95.9	.3	8.8	17.4	28.9	28.6	6.5	5.0	.4
Compositors, hand:										
Day work	6.5	93.5	1.4	10.5	43.7	17.8	14.9	4.9	.2	.1
Night work	6.1	93.9	.3	12.2	17.7	30.7	22.7	9.4	.9	------
Machine operators:										
Day work	6.3	93.7	1.8	10.9	35.2	15.5	20.0	9.8	.4	.1
Night work	6.4	93.6	.4	9.9	17.5	33.2	21.4	10.3	.9	------
Machine tenders (machinists):										
Day work	4.6	95.4	1.2	8.2	33.0	19.0	15.8	18.0	.2	------
Night work	7.1	92.9	.2	10.1	33.3	14.7	24.5	9.4	.7	------
Mailers:										
Day work	.8	99.2	.3	9.3	6.6	15.4	35.2	6.5	24.6	1.3
Night work	1.1	98.9	------	1.7	11.5	5.5	60.6	.8	17.9	.9
Photoengravers:										
Day work	11.1	88.9	1.5	7.4	13.9	36.8	28.7	------	.6	------
Night work	10.3	89.7	.4	9.6	23.0	47.9	6.3	2.5	------	------
Pressmen (journeymen):										
Day work	.6	99.4	.2	5.1	21.7	20.2	35.2	12.3	4.7	------
Night work	.4	99.6	.2	5.5	17.5	31.4	33.8	2.3	8.9	------
Pressmen-in-charge:										
Day work	1.3	98.7	.2	17.2	24.6	17.2	19.9	14.9	4.7	------
Night work	.8	99.2	.2	23.2	9.6	30.2	17.5	8.5	.2	9.8
Stereotypers:										
Day work	1.0	99.0	.2	15.0	25.5	31.9	16.4	5.1	4.8	.1
Night work	.9	99.1	.4	9.0	23.2	46.3	11.9	5.4	2.9	----

registered gains of 15 to 20 percent. The most substantial membership group recording increases of 20 to 25 percent were mailers, pressmen, and day shift photoengravers. Newspaper photoengravers reported the highest proportion of members with no change in wage rates from that of last July 1 (day shift 11.1 percent, night 10.3).

POST SURVEY RATE CHANGES

Limited data available indicate that many rate increases hav become effective in the printing industry since July 1, 1946. O particular significance in the book and job branch were gains o about 40 cents an hour for typographical workers in New York and Chicago, both important centers of the industry. Other increases ranging from 10 to 67 cents an hour were reported for typographical workers in 29 cities. Reports of increases up to 26 cents an hour for photoengravers were received in 4 cities. Electrotypers in Springfield were reported to have advanced by about 33 cents and from 5 to 18 cents in three other cities. In Chicago, pressmen and press assistants were reported to have received a 26-cent raise. Increases up to 39 cents an hour were indicated in several cities for bookbinders and mailers.

In the newspaper branch typographers were reported to have advanced by over 40 cents an hour in Rochester, and by at least 30 cents in Baltimore, Boston, Buffalo, Columbus, Dallas, Minneapolis, South Bend, Washington, and Wichita. Rates for pressmen in Toledo and Indianapolis went up 44 and 32 cents an hour, respectively. Dallas stereotypers were recipients of a 31 cent increase, and higher scales were also reported for this trade in 4 other cities. Increases of varying amounts were also indicated in several cities for photoengravers and mailers.

AVERAGE HOURLY WAGE RATES, JULY 1, 1946

Union printing trades workers averaged $1.58 an hour in the
75 cities surveyed on July 1, 1946. The average for day shift
iewspaper workers ($1.69) was about 13 percent higher than the
verage for book and job workers ($1.49). Average rates for
ight shift newspaper workers ($1.87) were about 10 percent
igher than for the day shift ($1.69). Rates for night shift book
nd job workers were not tabulated, but workers on regular night
hift generally received about $5 more per 40- or 37½-hour week
ian day shift workers.

Over half of all printing trades workers had rates ranging from
1.50 to $2. In the book and job branch, more than a third of all
embers received from $1.40 to $1.70 and a fifth had rates be-
veen $1.80 and $2. In the newspaper branch, a fourth received
etween $1.50 and $1.70 and at least another fourth earned be-
veen $1.70 and $1.90. Only 7 percent of the book and job work-
s had rates of $2 or more, as compared with 26 percent in the
wspaper branch.

Averages for individual trades in the commercial branch varied
om $0.81 for bindery women to $1.97 for photoengravers. About
lf of all bindery women received less than 80 cents and only a
gligible proportion received over $1.10. On the other hand, none
the photoengravers received less than $1.30 and a substantial

TABLE 4.—*Percentage distribution of union members in the printing trades, by hourly rates, July 1, 1946*

Trade	Average rate per hour	Percent of union members whose rates (in cents) per hour were—																	
		Under 70 cents	70 and under 80	80 and under 90	90 and under 100	100 and under 110	110 and under 120	120 and under 130	130 and under 140	140 and under 150	150 and under 160	160 and under 170	170 and under 180	180 and under 190	190 and under 200	200 and under 210	210 and under 220	220 and under 230	230 and over[1]
All printing trades	$1.584	0.9	4.7	3.7	2.1	1.0	2.9	2.9	7.0	9.1	11.4	12.6	7.5	16.5	4.4	4.6	5.1	2.5	1.1
Book and job	1.487	1.3	6.9	5.5	3.1	1.3	3.8	3.6	8.3	9.9	11.2	12.5	4.3	17.9	3.4	2.2	2.6	1.8	.4
Bindery women	.805	7.5	43.0	31.5	16.2	1.4	----	.3	----	.1	----	----	----	----	----	----	----	----	----
Bookbinders	1.495	----	----	----	.1	.6	2.2	3.5	26.7	11.2	30.7	12.3	10.2	2.3	.2	----	----	----	----
Compositors, hand	1.650	----	----	----	----	.2	.5	1.3	5.3	14.9	14.3	17.0	1.1	45.4	----	----	----	----	----
Electrotypers	1.870	----	----	----	----	----	.4	.8	1.1	10.4	8.1	11.3	4.8	2.7	7.9	.3	52.2	----	----
Machine operators	1.688	----	----	----	----	.1	.5	.5	4.9	9.4	14.3	14.9	.6	54.2	----	.4	----	.2	----
Machine tenders (machinists)	1.678	----	----	----	----	.3	2.5	1.9	4.5	10.3	11.5	8.2	12.3	48.5	----	----	----	----	----
Mailers	1.429	----	----	----	4.3	1.3	9.0	19.0	9.0	6.7	38.7	6.4	4.2	1.4	----	----	----	----	----
Photoengravers	1.974	----	----	----	----	----	----	----	.4	.2	5.3	9.3	7.3	8.5	20.4	21.4	2.1	21.1	4.2
Press assistants and feeders	1.318	.8	1.3	4.1	3.2	5.6	21.7	12.1	6.3	18.2	5.0	21.3	.4	----	----	----	----	----	----
Pressmen, cylinder	1.646	----	----	----	.2	.3	1.8	4.2	13.8	11.4	8.7	12.4	10.3	24.7	8.8	2.7	.7	(2)	(2)
Pressmen, platen	1.417	----	.7	.4	1.4	5.8	6.6	13.5	18.3	14.4	6.0	25.7	7.2	----	----	----	--	--	
Newspapers	1.786	----	(2)	(2)	.1	.5	1.1	1.3	4.4	7.4	11.9	12.9	14.1	13.5	6.4	9.4	10.4	4.0	2.6
Day work	1.694	----	.1	.1	----	.8	1.7	1.8	6.3	12.0	12.6	12.9	18.0	17.0	2.7	10.7	1.4	1.3	.6
Night work	1.872	----	----	----	.1	.2	.5	.9	2.7	3.2	11.3	12.2	10.4	10.4	9.9	8.3	18.8	6.6	4.5
Compositors, hand	1.855	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Day work	1.764	----	.1	----	----	----	.9	.1	4.2	8.2	11.1	14.8	16.1	19.3	2.5	21.3	----	.2	1.2
Night work	1.930	----	----	----	----	----	----	.4	1.1	2.2	4.5	11.1	12.8	12.8	9.3	9.2	23.0	13.2	.4
Machine operators	1.846	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Day work	1.750	----	.1	----	----	----	.7	.2	4.5	9.2	9.8	13.0	18.7	25.1	2.0	15.3	----	.2	1.2
Night work	1.928	----	----	----	----	----	----	.4	1.2	2.7	4.1	9.5	11.4	15.5	8.9	12.4	24.8	8.6	.5
Machine tenders (machinists)	1.878	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Day work	1.806	----	----	----	----	----	----	.4	2.4	5.2	8.0	12.4	13.2	32.0	1.8	24.6	----	----	----
Night work	1.960	----	----	----	----	----	----	----	.9	3.7	2.3	9.4	8.3	15.4	7.8	8.7	29.3	14.2	----
Mailers	1.481	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Day work	1.386	----	.4	.7	----	5.9	10.4	10.8	18.8	27.1	11.7	14.2	(2)	----	----	----	----	----	----
Night work	1.548	----	----	----	.7	1.1	3.3	4.1	10.1	4.4	40.5	27.8	8.0	----	(2)	----	----	----	----
Photoengravers	2.063	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Day work	1.966	----	----	----	----	----	----	----	.7	1.4	5.7	5.0	15.4	13.7	4.7	11.9	20.0	21.5	----
Night work	2.177	----	----	----	----	----	----	----	----	3.3	----	3.9	2.0	7.8	6.8	23.0	5.9	5.5	41.8

[1] Highest rate is $3.111.
[2] Less than of .05 one percent.

in the printing trades, by hourly rates, July 1, 1946—Continued

Trade	Average rate per hour	Percent of union members whose rates (in cents) per hour were—																
		Under 70 cents	70 and under 80	80 and under 90	90 and under 100	100 and under 110	110 and under 120	120 and under 130	130 and under 140	140 and under 150	150 and under 160	160 and under 170	170 and under 180	180 and under 190	190 and under 200	200 and under 210	210 and under 220	220 and under 230	203 and over!
Pressmen (journeymen)	1.756	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Day work	1.650	----	----	----	----	.4	.3	1.1	5.7	13.4	16.7	14.8	31.0	13.9	1.6	.1	1.0	----	----
Night work	1.872	----	----	----	----	----	.2	.1	2.1	2.6	12.5	8.0	12.0	4.7	23.0	5.6	28.1	----	1.1
Pressmen-in-charge	1.911	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Day work	1.812	----	----	----	----	----	.4	----	1.3	4.3	10.1	14.7	14.7	19.6	15.3	15.3	3.8	----	.5
Night work	2.020	----	----	----	----	----	.2	----	----	2.6	2.2	3.5	17.6	12.8	.8	13.6	14.6	15.0	17.1
Stereotypers	1.731	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Day work	1.625	----	----	----	----	.4	.4	2.1	7.5	16.5	20.0	15.2	17.6	13.7	4.9	1.7	----	----	----
Night work	1.880	----	----	----	----	.2	----	.9	2.2	7.4	9.4	11.4	7.8	18.0	10.1	3.1	1.7		27.8

TABLE 5.—*Differences in union wage rates for day and night work in newspaper printing trades, July 1. 1946*

Trade	Average difference per hour in wage rates	Percent of night workers whose wage rate differences (in cents per hour) over day work were—															
		0	Up to 4	4 and under 6	6 and under 8	8 and under 10	10 and under 12	12 and under 14	14 and under 16	16 and under 18	18 and under 20	20 and under 22	22 and under 24	24 and under 26	26 and under 28	28 and under 30	30 and over
All trades	$0.140	0.2	0.4	2.0	11.8	21.5	13.2	8.8	16.4	5.0	6.4	1.8	3.5	2.2	0.5	1.4	4.9
Compositors, hand	.110	----	----	.6	15.3	37.1	13.9	7.7	21.5	3.7	----	----	----	----	----	----	.2
Machine operators	.115	----	.1	.4	12.0	34.1	14.1	8.1	27.9	2.4	.6	----	----	----	----	----	.3
Machine tenders, machinists	.110	----	----	.2	12.5	37.1	17.2	7.0	23.9	2.1	----	----	----	---	----	----	----
Mailers	.148	----	1.2	4.9	15.1	5.0	5.2	9.2	----	18.0	39.2	1.8	----	.4	----	----	----
Photoengravers	.201	----	----	3.3	.4	1.1	3.3	33.8	4.5	1.1	----	5.7	----	13.0	4.2	29.6	----
Pressmen, journeymen	.198	.7	.2	1.4	6.8	2.4	17.6	5.3	9.5	.2	.6	6.7	18.3	6.4	.9	----	23.0
Pressmen-in-charge	.206	1.2	.2	2.0	4.0	3.4	10.3	9.7	14.1	.6	----	.6	9.9	19.1	7.0	.6	17.3
Stereotypers	.138	1.0	3.5	11.3	14.5	4.2	19.8	9.0	4.0	13.1	8.2	2.2	.7	----	----	2.8	5.7

number earned over $2. Electrotypers with the second highest average ($1.87) in the book and job branch reported over 50 percent of their membership with rates of $2.10 and over. The lowest individual rate reported (40 cents an hour) was for platen press assistants in San Antonio and the highest ($2.37) was for the first position on a 10-color perfecting process press in Chicago.

In the newspaper branch, photoengravers also had the highest average ($2.06) while mailers had the lowest ($1.47). One-quarter of the machine tenders (machinists) in the day group had rates in excess of $2 and in the night group more than two-fifths had rates of $2.10 and over. Other trades with substantial proportions of their night shift membership receiving rates of $2.00 or more were hand compositors (45.8 percent), machine operators (46.3), photoengravers (76.2), pressmen (34.8), pressmen-in-charge (60.3), and stereotypers (32.6). The lowest individual rate found in the newspaper branch (70 cents) was for group A bench mailers in Portland, Maine. The highest ($3.11) was received by hand compositors and machine operators on the night shift of Hebrew text newspapers in New York City.

NIGHT RATE DIFFERENTIALS IN NEWSPAPER TRADES

Union agreements for the newspaper printing trades in the 75 cities surveyed provided an average differential of 14 cents an hour in favor of night workers.[2] Pressmen-in-charge indicated the highest average differential (20.6 cents an hour) while the lowest (about 11 cents) was reported for members of the typographical union.

Among the individual trades, all except typographical machine tenders (machinists), mailers, and photoengravers had some proportion of their members with differentials of 30 cents or more an hour. Journeymen pressmen had 23 percent and pressmen-in-charge 17.3 percent in this category. The greatest difference between day and night scales (77.8 cents) was found in the Hebrew publishing field in New York City where hand compositors and machine operators had the same daily rate for a night shift of 4½ hours and a day shift of 6 hours. Night rates for stereotypers in Newark were 52 cents an hour above day rates and in New York City 46 cents, resulting from shorter hours worked for the same daily scale. In Chicago, stereotypers on foreign language dailies had a night differential of 42.6 cents due to a shorter work week plus higher night scales. The lowest differential between day and night work (2 cents) was reported for stereotypers in Mobile

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[2] These higher rates, however, do not necessarily mean that average earnings of the nig shift workers were greater since this differential is often the result of night workers receivi the same daily or weekly scale as day workers, but for fewer hours of work.

DIFFERENCES IN WAGE RATES BY CITY AND REGION

Average wage rates of union printing-trades workers were progressively higher according to size of city; in almost all cases highest averages being recorded for the largest city size groups. In the book and job branch, a differential of almost 28 cents an hour separated cities of over 1,000,000 population from cities of 500,000–1,000,000, whereas in the newspaper branch the largest differential (16.5 cents) existed between cities of 250,000–500,000 and cities with 100,000–250,000 population. Chicago with an average of $1.72 in the book and job branch and New York with an average of $2.06 in the newspaper branch led all cities in group I. In the other four city size groups in the book and job branch, San Francisco ($1.53), Seattle ($1.65), Salt Lake City ($1.50), and

TABLE 6.—*Average union hourly wage rates in the printing trades, by cities, and population groups, July 1, 1946, and percent of increase over previous year*

BOOK AND JOB[1]

City and population group	Average hourly rate	Percent of increase
Group I (1,000,000 and over):		
Chicago, Ill.	$1.716	21.8
New York, N. Y.	1.637	17.4
Average for group I	*1.635*	-------
Los Angeles, Calif.	1.551	24.8
Detroit, Mich.	1.515	15.8
Philadelphia, Pa.	1.451	15.7
roup II (500,000 to 1,000,000):		
San Francisco, Calif.	1.530	16.2
Cleveland, Ohio	1.418	14.7
Pittsburgh, Pa.	1.368	17.6
Average for group II	*1.358*	-------
Buffalo, N. Y.	1.343	16.0
Boston, Mass.	1.324	14.3
Milwaukee, Wis.	1.312	14.0
St. Louis, Mo.	1.300	12.4
Baltimore, Md.	1.270	20.9
Washington, D. C.	1.238	9.0
roup III (250,000 to 500,000):		
Seattle, Wash.	1.648	29.7
Portland, Oreg.	1.471	21.9
Columbus, Ohio	1.430	15.7
Cincinnati, Ohio	1.420	14.6
Newark, N. J.	1.383	14.9
Indianapolis, Ind.	1.363	9.9
Houston, Tex.	1.345	17.7
Toledo, Ohio	1.324	10.7
Denver, Colo.	1.317	13.7
Rochester, N.Y.	1.317	15.9
Atlanta, Ga.	1.315	23.2
Providence, R. I.	1.307	5.5
Average for group III	*1.290*	-------
Dallas, Tex.	1.259	12.8
Kansas City, Mo.	1.237	12.9
New Orleans, La.	1.235	17.6
Birmingham, Ala.	1.217	25.3
Minneapolis, Minn.	1.199	19.7
Louisville, Ky.	1.158	13.1
Memphis, Tenn.	1.095	9.1
San Antonio, Tex.	1.076	5.5
St. Paul, Minn.	1.067	22.3
Group IV (100,000 to 250,000):		
Salt Lake City, Utah	$1.498	33.7
Dayton, Ohio	1.438	24.2
Norfolk, Va.	1.430	20.5
Worcester, Mass.	1.371	16.7
Omaha, Nebr.	1.368	17.8
South Bend, Ind.	1.350	13.8
Spokane, Wash.	1.350	28.4
Erie, Pa.	1.332	10.5
Jacksonville, Fla.	1.317	16.3
Peoria, Ill.	1.315	10.4
Rock Island (Ill.) district [2]	1.308	3.8
New Haven, Conn.	1.291	11.3
Youngstown, Ohio	1.289	7.6
Reading, Pa.	1.284	14.1
Average for group IV	*1.277*	-------
Oklahoma City, Okla.	1.272	16.6
Charlotte, N. C.	1.270	2.8
Tampa, Fla.	1.260	17.2
Grand Rapids, Mich.	1.241	14.9
Des Moines, Iowa	1.240	11.0
Springfield, Mass.	1.163	12.5
Scranton, Pa.	1.158	11.0
Duluth, Minn.	1.132	7.8
Wichita, Kans.	1.127	14.4
Richmond, Va.	1.075	17.0
Nashville, Tenn.	1.023	9.6
Group V (40,000 to 100,000):		
El Paso, Tex.	1.480	17.0
Charleston, S. C.	1.438	17.7
Madison, Wis.	1.429	8.5
Charleston, W.Va.	1.388	12.1
Phoenix, Ariz.	1.365	7.9
Jackson, Miss.	1.250	31.6
Average for group V	*1.212*	-------
Binghamton, N.Y.	1.188	12.7
York, Pa.	1.170	12.5
Butte, Mont.	1.130	10.2
Little Rock, Ark.	1.071	13.5
Mobile, Ala.	1.063	21.7
Manchester, N. H.	1.058	17.8
Portland, Maine	1.007	14.6

TABLE 6.—*Average union hourly wage rates in the printing trades, by cities, and population groups, July 1, 1946, and percent of increase over previous year*—Continued

NEWSPAPER

City and population group	Average hourly rate	Percent of increase
Group I (1,000,000 and over):		
New York, N.Y.	2.060	15.5
Detroit, Mich.	1.932	19.7
Chicago, Ill.	1.954	17.3
Average for group I	*1.927*	-------
Los Angeles, Calif.	1.709	22.5
Philadelphia, Pa.	1.526	8.8
Group II (500,000 to 1,000,000):		
Cleveland, Ohio	1.895	25.4
San Francisco, Calif.	1.879	27.7
St. Louis, Mo.	1.862	23.8
Boston, Mass.	1.836	10.5
Washington, D.C.	1.820	10.5
Average for group II	*1.803*	-------
Milwaukee, Wis.	1.755	17.2
Pittsburgh, Pa.	1.707	20.5
Buffalo, N.Y.	1.660	12.8
Baltimore, Md.	1.647	15.4
Group III (250,000 to 500,000):		
Cincinnati, Ohio	1.853	21.2
Seattle, Wash.	1.845	26.1
Indianapolis, Ind.	1.793	21.0
Minneapolis, Minn.	1.748	19.9
St. Paul, Minn.	1.736	20.9
Providence, R.I.	1.732	10.4
Portland, Oreg.	1.717	22.2
Newark, N.J.	1.716	12.0
Toledo, Ohio	1.708	14.8
Columbus, Ohio	1.703	13.4
Average for group III	*1.672*	-------
Louisville, Ky.	1.616	23.9
Dallas, Tex.	1.601	14.9
Rochester, N.Y.	1.594	17.9
Denver, Colo.	1.567	12.9
Atlanta, Ga.	1.563	16.9
Kansas City, Mo.	1.540	11.2
Memphis, Tenn.	1.531	11.3
Houston, Tex.	1.510	7.4
Birmingham, Ala.	1.492	20.9
San Antonio, Tex.	1.448	13.7
New Orleans, La.	1.361	7.0
Group IV (100,000 to 250,000):		
Jacksonville, Fla.	1.703	19.9
Scranton, Pa.	1.646	17.2
Spokane, Wash.	1.614	20.9
Des Moines, Iowa	1.601	13.2
Dayton, Ohio	1.597	7.9
Omaha, Nebr.	1.577	16.6
Youngstown, Ohio	1.562	9.7
Grand Rapids, Mich.	1.559	19.2
Reading, Pa.	1.538	13.8
Springfield, Mass.	1.514	12.9
Erie, Pa.	1.508	6.2
Average for group IV	*1.507*	-------
Rock Island (Ill.) district [2]	1.500	11.0
Peoria, Ill.	1.499	13.3
Worcester, Mass.	1.499	5.4
Oklahoma City, Okla.	1.492	19.0
Tampa, Fla.	1.487	14.0
Salt Lake City, Utah	1.480	13.0
South Bend, Ind.	1.450	15.9
Richmond, Va.	1.422	11.4
Norfolk, Va.	1.411	13.6
Duluth, Minn.	1.395	5.9
Nashville, Tenn.	1.372	11.0
New Haven, Conn.	1.368	6.1
Charlotte, N.C.	1.345	10.3
Wichita, Kans.	1.244	9.0
Group V (40,000 to 100,000):		
Butte, Mont.	1.539	8.8
Mobile, Ala.	1.516	24.6
El Paso, Tex.	1.513	15.9
Charleston, S.C.	1.492	25.9
Madison, Wis.	1.467	10.3
Phoenix, Ariz.	1.457	7.4
Binghamton, N.Y.	1.427	8.1
Charleston, W.Va.	1.422	6.7
Average for group V	*1.408*	-------
Manchester, N.H.	1.392	8.2
Little Rock, Ark.	1.364	13.8
Jackson, Miss.	1.350	42.1
Portland, Maine	1.347	13.4
York, Pa.	1.185	13.8

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[1] The averages in the book and job table include rates for the semiskilled—bindery women and press assistants and feeders—as well as the highly skilled journeymen composing room and pressroom workers and others. If there are large numbers of the semiskilled workers organized in one city as compared to another, the average rate for the city with the high degree of organization among semiskilled workers will tend to be lower in this table than the average for a city where only the skilled workers are organized.

[2] Includes Rock Island and Moline, Ill. and Davenport, Iowa.

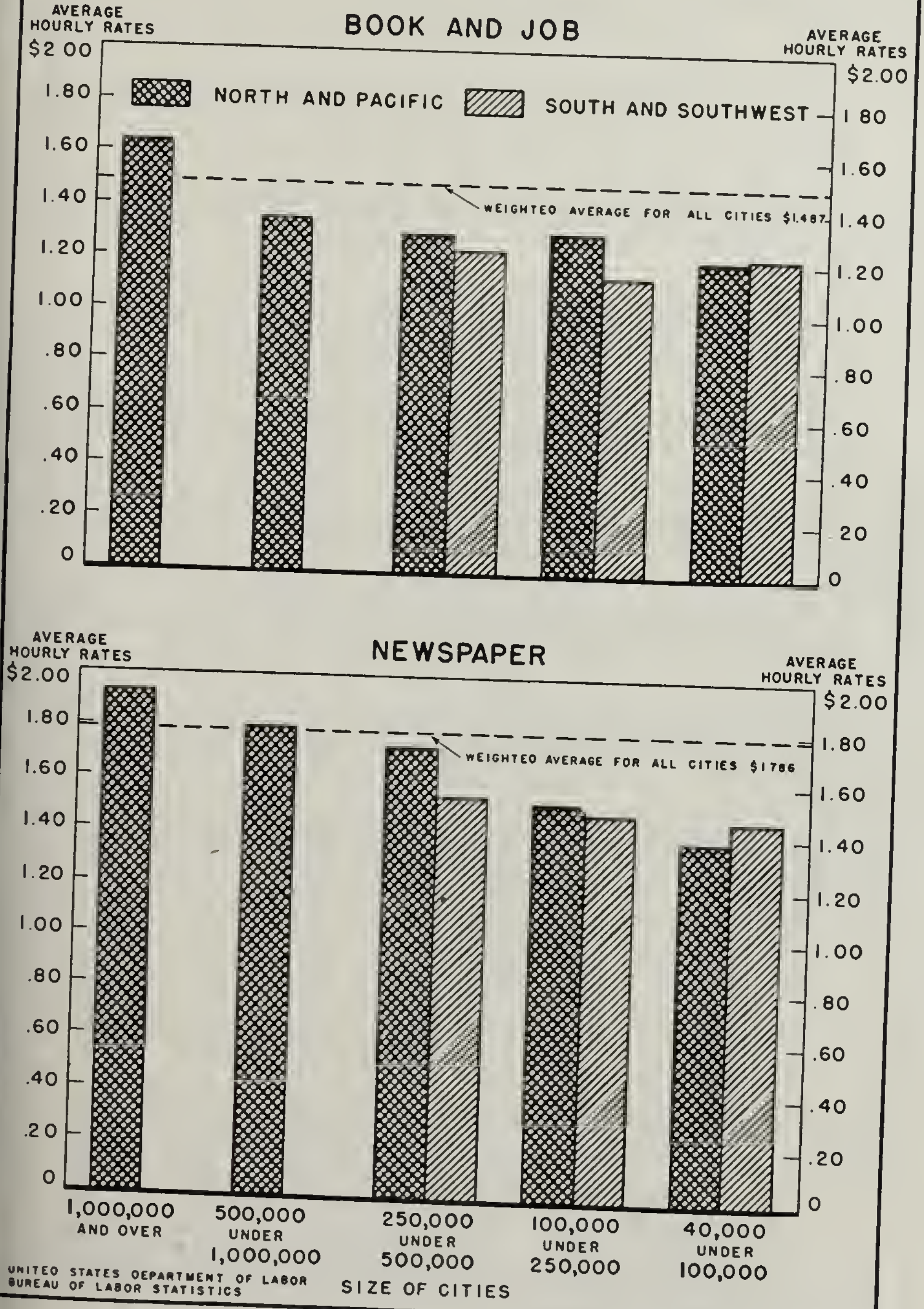
El Paso ($1.48) had the highest averages. In the newspaper branch, Cleveland with an average of $1.90 reported the highest wage rates among group II cities, Cincinnati ($1.85) in group III, Jacksonville ($1.70) in group IV, and Butte ($1.54) in group V cities.

As in previous years, with the exception of group V cities, rates for union printing-trades workers in the North and Pacific regio were generally higher than in the South and Southwest region This was true for the book and job branch in 25 out of 30 possible comparisons and for the newspaper branch in 36 out of 4 cases.

CHART 2

AVERAGE UNION WAGE RATES IN PRINTING TRADES ACCORDING TO SIZE OF CITY AND REGION

JULY 1, 1946



UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS

TABLE 7.—*Average hourly union wage rates in the printing trades, by region and population group, July 1, 1946*

Trade	Average hourly wage rates in the cities of specified population group[1]										
	Group I[2]	Group II[2]	Group III			Group IV			Group V		
	North and Pacific	North and Pacific	All regions	North and Pacific	South and Southwest	All regions	North and Pacific	South and Southwest	All regions	North and Pacific	South and Southwest
All printing trades	$1.716	$1.515	$1.427	$1.447	$1.363	$1.374	$1.389	$1.317	$1.318	$1.298	$1.355
Book and job	1.635	1.358	1.290	1.304	1.235	1.277	1.306	1.137	1.212	1.208	1.221
Bindery women	.860	.770	.758	.771	.695	.760	.787	.674	.752	.806	.600
Bookbinders	1.552	1.434	1.410	1.434	1.305	1.348	1.378	1.236	1.289	1.364	1.090
Compositors, hand	1.786	1.530	1.506	1.523	1.451	1.449	1.463	1.372	1.283	1.237	1.357
Electrotypers	2.069	1.536	1.614	1.627	1.490	1.495	1.517	1.250	1.290	1.290	----
Machine operators	1.804	1.544	1.496	1.516	1.452	1.431	1.447	1.374	1.344	1.343	1.345
Machine tenders (machinists)	1.823	1.621	1.517	1.559	1.293	1.388	1.396	1.355	1.380	1.320	1.440
Mailers	1.550	1.419	1.349	1.406	1.110	1.220	1.242	1.007	-----	-----	------
Photoengravers	2.108	1.859	1.736	1.745	1.700	1.605	1.629	1.542	1.643	1.643	-----
Press assistants and feeders	1.449	1.174	1.068	1.098	.979	1.040	1.073	.833	.887	.941	.762
Pressmen, cylinder	1.835	1.490	1.494	1.544	1.330	1.452	1.474	1.242	1.286	1.273	1.311
Pressmen, platen	1.613	1.340	1.299	1.307	1.267	1.185	1.203	1.116	1.169	1.096	1.286
Newspapers	1.927	1.803	1.672	1.726	1.535	1.507	1.518	1.475	1.408	1.379	1.460
Day work	1.834	1.727	1.624	1.672	1.488	1.473	1.485	1.432	1.366	1.341	1.420
Night work	1.987	1.882	1.737	1.804	1.587	1.552	1.570	1.515	1.467	1.442	1.501
Compositors:											
Day work	1.997	1.786	1.689	1.736	1.571	1.499	1.510	1.459	1.381	1.347	1.455
Night work	2.113	1.898	1.797	1.862	1.662	1.581	1.600	1.526	1.470	1.425	1.537
Machine operators:											
Day work	1.968	1.798	1.727	1.768	1.574	1.501	1.513	1.460	1.403	1.370	1.463
Night work	2.120	1.912	1.818	1.869	1.675	1.587	1.614	1.536	1.489	1.441	1.544
Machine tenders (machinists):											
Day work	2.032	1.804	1.757	1.800	1.587	1.539	1.526	1.567	1.431	1.413	1.484
Night work	2.145	1.911	1.800	1.868	1.666	1.587	1.594	1.578	1.510	1.485	1.549
Mailers:											
Day work	1.406	1.414	1.307	1.384	1.081	1.195	1.231	1.082	.986	.972	1.143
Night work	1.582	1.593	1.385	1.508	1.164	1.252	1.278	1.149	1.313	1.361	1.218
Photoengravers:											
Day work	2.134	1.971	1.758	1.812	1.685	1.610	1.620	1.579	1.449	1.449	-----
Night work	2.417	2.112	1.849	1.978	1.703	1.756	1.796	1.685	1.649	1.649	-----
Pressmen (journeymen):											
Day work	1.714	1.707	1.534	1.570	1.432	1.422	1.422	1.423	1.341	1.350	1.324
Night work	1.946	1.906	1.637	1.668	1.562	1.533	1.532	1.534	1.426	1.439	1.404
Pressmen-in-charge:											
Day work	1.879	1.861	1.662	1.693	1.548	1.625	1.631	1.596	1.477	1.506	1.391
Night work	2.100	2.074	1.740	1.767	1.663	1.723	1.747	1.670	1.520	1.551	1.457
Stereotypers:											
Day work	1.733	1.679	1.580	1.630	1.450	1.457	1.478	1.384	1.325	1.346	1.283
Night work	2.105	1.848	1.714	1.893	1.544	1.546	1.591	1.479	1.403	1.450	1.341

[1] Group I, over 1,000,000; group II, 500,000 to 1,000,000; group III, 250,000 to 500,000; group IV, 100,000 to 250,000; group V, 40,000 to 100,000.

[2] No city of this size in the South or Southwest.

[3] Insufficient quotations to compute an average.

PERCENT OF CHANGE BY CITIES[3]

Jackson, Miss., reported the largest percentage wage increase (37.8) for all printing-trades workers. The advance in rates was from 95 cents to $1.25 for hand compositors and machine operators in the book and job branch and from 95 cents to $1.35 for he same trades in the newspaper branch. The smallest percentage increase was that recorded for Duluth (6.4 percent) repre-
enting an advance in the city average of 8 cents.

Table 8.—*Percent of change in union printing trades wage rates in each city, July 1, 1945, to July 1, 1946*

City	Percent of increase		
	All printing trades	Book and job	Newspaper
l cities	17.1	17.6	16.1
lanta, Ga	20.7	23.2	16.9
ltimore, Md	18.2	20.9	15.4
nghamton, N.Y	9.9	12.7	8.1
rmingham, Ala	23.2	25.3	20.9
ston, Mass	12.5	14.3	10.5
ffalo, N.Y	14.7	16.0	12.8
tte, Mont	9.3	10.2	8.8
arleston, S C	23.3	17.7	25.9
arleston, W Va	9.5	12.1	6.7
arlotte, N.C	8.4	2.8	10.3
icago, Ill	20.6	21.8	17.3
cinnati, Ohio	17.8	14.6	21.2
veland, Ohio	18.7	14.7	25.4
umbus, Ohio	14.8	15.7	13.4
llas, Tex	14.0	12.8	14.9
yton, Ohio	20.9	24.2	7.9
nver, Colo	13.3	13.7	12.9
Moines, Iowa	12.0	11.0	13.2
roit, Mich	17.4	15.8	19.7
luth, Minn	6.4	7.8	5.9
Paso, Tex	16.0	17.0	15.9
, Pa	7.2	10.5	6.2
nd Rapids, Mich	17.6	14.9	19.2
ston, Tex	12.0	17.7	7.4
anapolis, Ind	14.1	9.9	21.0
son, Miss	37.8	31.6	42.1
sonville, Fla	19.1	16.3	19.9
sas City, Mo	12.3	12.9	11.2
le Rock, Ark	13.7	13.5	13.8
Angeles, Calif	23.8	24.8	22.5
sville, Ky	18.2	13.1	23.9
ison, Wis	9.7	8.5	10.3
chester, N.H	10.9	17.8	8.2
phis, Tenn	10.4	9.1	11.3
aukee, Wis	15.1	14.0	17.2
eapolis, Minn	19.8	19.7	19.9
Mobile, Ala	24.0	21.7	24.6
Nashville, Tenn	10.2	9.6	11.0
Newark, N.J	13.8	14.9	12.0
New Haven, Conn	9.6	11.3	6.1
New Orleans, La	13.6	17.6	7.0
New York, N.Y	16.8	17.4	15.5
Norfolk, Va	14.7	20.5	13.6
Oklahoma City, Okla	18.1	16.6	19.0
Omaha, Nebr	17.1	17.8	16.6
Peoria, Ill	12.1	10.4	13.3
Philadelphia, Pa	13.3	15.7	8.8
Phoenix, Ariz	7.7	7.9	7.4
Pittsburgh, Pa	19.2	17.6	20.5
Portland, Maine	13.6	14.6	13.4
Portland, Oreg	22.1	21.9	22.2
Providence, R I	9.0	5.5	10.4
Reading, Pa	13.9	14.1	13.8
Richmond, Va	14.9	17.0	11.4
Rochester, N.Y	16.5	15.9	17.9
Rock Island (Ill.) district[1]	7.6	3.8	11.0
St. Louis, Mo	16.5	12.4	23.8
St. Paul, Minn	22.0	22.3	20.9
Salt Lake City, Utah	16.2	33.7	13.0
San Antonio, Tex	10.9	5.5	13.7
San Francisco, Calif	19.4	16.2	27.7
Scranton, Pa	13.1	11.0	17.2
Seattle, Wash	27.8	29.7	26.1
South Bend, Ind	14.4	13.8	15.9
Spokane, Wash	23.6	28.4	20.9
Springfield, Mass	12.6	12.5	12.9
Tampa, Fla	14.8	17.2	14.0
Toledo, Ohio	12.8	10.7	14.8
Washington, D.C	9.7	9.0	10.5
Wichita, Kans	11.4	14.4	9.0
Worcester, Mass	8.7	16.7	5.4
York, Pa	12.9	12.5	13.8
Youngstown, Ohio	8.6	7.6	9.7

ncludes Rock Island and Moline, Ill. and Davenport, Iowa.

Sixty-one of the 75 cities surveyed in the book and job branch l 60 cities in the newspaper branch had increases of at least percent between July 1, 1945, and July 1, 1946.

These net changes were based on the specific rates for 1945 and 1946 weighted by the
ership reported in 1946. Only comparable data for both years were included. Specific in-
es for 1946 reflected a larger percentage change in those cities with relatively low actual
. Thus, if rates of pressmen in city A increased from $1.00 to $1.10, a gain of 10 percent
egistered. If in city B rates rose from $1.40 to $1.50 the change was only about 7 percent.

Charlotte, N. C., in the book and job branch, and Worcester, Mass., in the newspaper branch, reported the smallest increases, 2.8 percent (3.5 cents) and 5.4 percent (7.7 cents) respectively.

Weekly Hours [4]

TREND OF WEEKLY HOURS

Reflecting the reductions in straight-time hours between July 1, 1945, and July 1, 1946, was the drop of 2.5 percent in the index of union hours, which affected almost 40 percent of the book and job workers and 7 percent of the newspaper tradesmen. Among the 18 cities reporting hour reductions in the book and job branch were such important printing-trades areas as New York and Chicago where as many as 70 percent of the tradesmen benefited by shorter workweeks, several trades by as much as 5 hours. In New York all of the trades, except electrotypers and photoengravers, and in Chicago all except cylinder pressmen, press assistants and photoengravers reported shorter hours.

In the newspaper branch, although 20 cities recorded reduced straight-time workweeks, these reductions involved only a few trades and relatively few workers in each city.

TABLE 9.—*Indexes of union weekly hours in all printing trades, 1907 to 1946*

Year	Indexes of weekly hours (1939=100)			Year	Indexes of weekly hours (1939=100)		
	All printing	Book and job	Newspaper		All printing	Book and job	Newspaper
1907	(1)	136.6	120.5	1927	114.0	111.7	118.
1908	(1)	130.3	119.9	1928	114.0	111.7	118.
1909	(1)	129.2	119.6	1929	113.9	111.6	117.
1910	(1)	128.8	119.3	1930	113.8	111.5	117.
1911	127.1	128.8	119.3	1931	113.7	111.5	117.
1912	127.0	128.7	119.1	1932	109.9	107.2	114.
1913	126.9	128.7	119.0	1933	109.0	106.1	114.
1914	126.8	128.7	118.7	1934	103.4	102.4	105.
1915	126.8	128.7	118.6	1935	101.7	100.9	103.
1916	126.8	128.7	118.5	1936	101.3	101.0	101.
1917	126.8	128.7	118.5	1937	100.8	100.8	101.
1918	126.8	128.7	118.5	1938	100.3	100.3	100.
1919	126.8	128.6	118.7	1939	100.0	100.0	100.
1920	123.1	123.8	118.6	1940	99.8	99.8	99
1921	115.6	113.9	118.3	1941	99.8	99.8	99
1922	115.2	112.5	120.6	1942	99.5	99.8	99
1923	114.7	111.8	120.4	1943	99.8	100.1	99
1924	114.2	111.8	118.7	1944	99.8	100.1	99
1925	114.2	111.9	118.4	1945	99.8	100.1	99
1926	114.1	111.7	118.6	1946	97.3	96.6	98

[1] Combined data for the years 1907-10 not available.

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[4] Weekly hours considered here refer to the maximum number of hours per week permitt by union agreements before overtime rates become effective. The number of hours actual worked in any week may be greater or less than the weekly hours discussed.

A decline in the index, comparable to that of the past year, occurred in the post World War I year of 1920 (2.9 percent). The most marked index change (a 6.1 percent decline) was registered the succeeding year. This was a reflection of the mounting acceptance of the 44-hour week in the organized printing-trades establishments.

TABLE 10.—*Indexes of union weekly hours in each printing trade, 1907 to 1946*

[1939=100]

BOOK AND JOB

Year	Bindery women	Book binders	Compositors, hand	Electrotypers	Machine operators	Machine tenders (machinists)	Mailers	Photoengravers	Press assistants and feeders	Pressmen, cylinder	Pressmen, platen
07	-------	132.7	119.0	129.3	119.7	-------	-------	-------	131.9	128.5	126.1
08	-------	120.8	119.0	128.8	119.7	-------	-------	-------	119.8	122.3	121.7
09	-------	120.1	119.0	128.6	119.7	-------	-------	-------	118.6	120.5	119.2
10	-------	119.7	119.0	125.2	119.7	-------	-------	-------	118.4	120.3	119.0
11	-------	119.3	119.0	124.4	119.7	-------	-------	-------	118.4	120.3	119.0
12	-------	119.3	118.9	124.4	119.3	120.7	-------	-------	118.4	120.3	119.0
13	-------	119.3	118.9	124.2	119.3	120.7	-------	-------	118.1	120.3	119.1
4	-------	119.3	118.9	123.9	119.3	120.7	-------	-------	118.1	120.3	119.1
5	118.4	119.3	118.9	123.9	119.3	120.7	-------	-------	118.1	120.3	119.1
6	118.4	119.3	118.9	123.8	119.5	120.9	-------	130.0	118.1	120.3	119.1
7	118.4	119.3	118.9	123.7	119.5	120.9	-------	130.0	118.1	120.3	119.1
8	118.4	119.3	118.9	123.7	119.5	120.9	-------	129.6	118.1	120.3	119.1
9	118.4	119.3	118.9	123.7	119.5	120.9	-------	129.6	118.1	120.3	119.1
0	118.4	119.3	118.9	123.6	119.5	120.9	-------	119.6	118.0	120.3	119.0
1	112.9	113.2	112.5	119.7	113.3	112.0	-------	119.3	111.7	113.7	112.8
	111.5	112.1	110.2	118.1	111.7	111.6	-------	119.3	110.5	112.3	112.1
3	111.0	111.6	109.1	119.1	111.2	111.2	-------	119.3	109.7	111.8	110.7
	111.0	111.2	109.4	118.8	110.8	111.1	-------	119.3	109.9	112.0	111.0
	111.0	111.6	109.4	119.9	111.2	111.3	-------	119.6	109.6	111.4	110.9
	111.2	111.4	109.4	119.9	111.0	111.1	-------	119.3	109.5	111.2	110.0
	110.5	111.1	109.4	120.0	111.2	111.1	-------	119.3	109.4	111.2	110.0
	110.4	111.9	109.4	119.9	111.0	111.1	-------	119.3	109.3	111.0	110.3
	110.6	111.1	109.4	119.6	111.0	111.1	-------	119.3	109.3	111.0	110.4
	110.5	111.0	109.4	118.2	111.0	111.1	-------	119.1	109.3	111.0	110.4
	110.4	110.9	109.4	117.4	111.0	111.1	-------	119.1	109.3	111.0	110.9
	110.5	110.8	109.1	117.5	110.9	111.1	-------	113.2	96.1	101.4	108.4
	110.5	110.7	105.6	111.4	106.1	105.6	-------	109.4	101.5	102.6	105.9
	103.4	103.4	103.0	107.8	103.1	101.7	-------	108.0	98.1	99.0	101.5
	102.7	101.7	101.1	105.5	101.2	100.8	-------	103.7	97.9	98.7	100.8
	102.2	101.7	100.3	103.5	100.3	100.2	-------	102.3	100.4	100.7	100.8
	101.7	101.7	100.2	103.2	100.2	100.2	100.0	101.7	100.2	100.3	100.3
	101.2	101.3	100.0	101.1	100.0	100.1	100.0	100.7	100.0	100.0	100.0
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	100.0	100.0	100.0	97.7	100.0	100.0	99.5	99.9	100.0	100.0	100.0
	100.0	99.9	100.0	97.7	100.0	100.0	99.5	99.8	100.0	100.0	99.8
	100.2	100.0	100.0	97.7	100.0	100.0	99.5	99.4	100.0	100.0	99.8
	100.2	100.0	100.0	105.6	100.0	100.0	99.5	99.3	100.0	100.0	99.8
	100.2	100.0	100.0	105.6	100.0	100.0	99.5	99.3	100.0	100.0	99.8
	100.2	100.0	100.0	105.6	100.0	100.0	99.5	99.3	100.0	100.0	99.8
	97.0	95.7	95.6	103.2	94.9	95.5	94.8	98.8	97.5	96.0	96.7

TABLE 10.—*Indexes of union weekly hours in each printing trade, 1907 to 1946*—Continued

[1939=100]

NEWSPAPER

Year	Compositors, hand	Machine operators	Machine tenders (machinists)	Mailers	Photoengravers	Pressmen web presses [1]	Stereotypers
1907	121.8	123.7	----------	----------	----------	113.8	122.5
1908	121.7	123.7	----------	----------	----------	111.8	120.7
1909	121.7	123.7	----------	----------	----------	111.0	119.4
1910	121.7	123.7	----------	----------	----------	110.7	118.0
1911	121.7	123.7	----------	----------	----------	110.7	117.8
1912	121.3	123.4	126.4	----------	----------	110.4	117.5
1913	121.3	123.3	126.4	----------	----------	110.4	117.6
1914	121.0	122.9	126.3	----------	----------	110.4	117.4
1915	120.9	122.5	126.0	----------	----------	110.4	117.3
1916	120.7	122.4	125.9	----------	120.9	110.4	117.3
1917	120.7	122.4	125.9	----------	120.9	110.3	117.2
1918	120.9	122.7	126.0	----------	119.6	110.3	117.2
1919	120.9	122.7	126.0	----------	119.2	111.1	117.3
1920	121.2	122.8	126.1	----------	118.0	110.7	116.7
1921	121.0	122.5	126.1	----------	114.4	110.4	115.1
1922	122.4	124.4	126.9	----------	115.2	116.2	117.3
1923	122.4	124.2	126.9	----------	114.1	115.6	117.2
1924	121.2	122.5	126.1	----------	114.1	112.0	117.1
1925	121.1	122.5	126.8	----------	113.3	111.3	116.6
1926	121.3	122.2	126.5	----------	112.9	112.6	116.6
1927	120.6	122.0	125.8	----------	113.3	112.3	116.4
1928	120.4	121.7	126.0	----------	113.1	111.9	117.0
1929	119.9	121.8	125.6	----------	113.1	112.2	116.1
1930	119.5	121.6	125.4	----------	113.0	112.0	116.1
1931	119.5	121.6	125.4	----------	112.6	112.0	116.
1932	117.0	116.8	116.7	----------	112.4	109.8	115.
1933	115.7	116.0	115.7	----------	112.7	110.8	113.
1934	104.0	103.8	103.8	----------	108.0	105.4	110.
1935	102.6	102.7	102.3	----------	104.5	103.0	107.
1936	100.7	100.7	100.4	----------	104.2	102.6	107.
1937	100.1	100.1	100.1	99.3	103.1	101.3	105.
1938	100.1	100.0	100.0	99.3	100.2	100.7	103.
1939	100.0	100.0	100.0	100.0	100.0	100.0	100.
1940	99.6	99.8	99.9	99.3	99.8	99.8	99
1941	99.5	99.6	99.8	99.3	99.7	99.4	97
1942	99.4	99.4	99.4	99.8	99.4	99.3	97
1943	99.4	99.4	99.4	99.8	99.4	99.3	97
1944	99.5	99.5	99.5	99.8	99.4	99.3	97
1945	99.5	99.5	99.5	99.8	99.4	99.3	97
1946	99.1	99.0	99.1	99.7	99.1	98.9	97

[1] Includes pressmen-in-charge.

UNION HOURS IN 1946

The straight-time workweek stipulated in union agreemen averaged 38.3 hours for the book and job branch and 37.5 hou for the newspaper branch. Significant hour changes have take place in the book and job branch since the previous surve Whereas more than 9 of every 10 members had workweeks 40 hours on July 1, 1945, the ratio in this category dropped July 1, 1946 to 5 of every 10 members, with most of the mainder shifting toward workweeks ranging from 35 to 3 hours. While 40-hour workweek provisions encompassed most the members of 6 of the 11 book and job trades, all except el trotypers and photoengravers had at least one-quarter of th members with workweeks of 35 to 37.5 hours. The photoengraving union, with over two-thirds of its members under contracts specifying workweeks of 37.5 hours, was the only group having as much as one-fifth of its membership with straight-time weekly hours limited to 35.

TABLE 11.—*Percentage distribution of union members in the printing trades, by straight-time hours, July 1, 1946*

Trade	Average hours per week	Percent of members whose straight-time hours per week were—									
		Under 30	30	Over 30 and under 35	35	Over 35 and under 36¼	36¼	Over 36¼ and under 37½	37½	Over 37½ and under 40	40
All printing trades	38.1	(1)	0.1	0.5	5.3	1.3	24.5	1.1	24.8	1.4	41.0
Book and job	38.3	------	(1)	------	2.6	------	32.6	(1)	12.4	.9	51.5
Bindery women	38.8	------	------	------	1.4	------	27.5	------	6.5	------	64.6
Bookbinders	38.3	------	------	------	1.0	------	37.3	------	11.1	------	50.6
Compositors, hand	38.2	------	------	------	(1)	------	41.4	------	11.5	2.2	44.9
Electrotypers	39.1	------	------	------	.3	------	23.8	------	1.5	.6	73.8
Machine operators	37.9	------	.2	------	(1)	------	50.8	------	8.7	.9	39.4
Machine tenders (machinists)	38.1	------	------	------	------	------	46.4	------	8.5	.7	44.4
Mailers	38.1	------	------	------	3.8	------	32.0	.6	22.9	------	40.7
Photoengravers	37.3	------	------	------	21.3	------	------	------	66.8	.3	11.6
Pressassistants and feeders	39.0	------	------	------	.3	------	25.3	------	3.2	------	71.2
Pressmen, cylinder	38.3	------	------	------	2.3	------	39.1	------	4.3	2.2	52.1
Pressmen, platen	38.8	------	------	------	.5	------	30.5	------	.8	2.6	65.6
Newspaper	37.5	.1	.2	1.5	10.7	4.1	7.6	3.5	50.4	2.3	19.6
Day work	38.0	------	.1	.4	6.1	.9	5.4	1.8	53.4	2.3	29.6
Night work	36.9	.1	.2	2.6	15.0	7.1	9.6	5.1	47.7	2.3	10.3
Compositors, hand	37.3	------	------	------	------	------	------	------	------	------	------
Day work	37.5	------	.2	.7	7.5	1.5	12.1	3.3	57.6	2.9	14.2
Night work	37.2	.2	.2	.4	8.0	.4	18.4	3.3	60.2	1.4	7.5
Machine operators	37.3	------	------	------	------	------	------	------	------	------	------
Day work	37.4	------	.2	.5	11.0	2.0	9.8	3.2	55.0	3.7	14.6
Night work	37.2	.3	.2	.2	8.6	.1	16.9	4.2	59.7	1.3	8.5
Machine tenders (machinists)	37.2	------	------	------	------	------	------	------	------	------	------
Day work	37.1	------	------	.4	18.6	.6	9.0	2.6	57.8	2.0	9.0
Night work	37.2	------	------	.5	7.3	.2	21.3	3.0	59.5	1.1	7.1
Mailers	38.1	------	------	------	------	------	------	------	------	------	------
Day work	39.2	------	------	------	.5	.5	------	.2	28.8	2.3	67.7
Night work	37.4	------	------	.2	13.3	------	.3	20.2	50.6	.6	14.8
Photoengravers	38.0	------	------	------	------	------	------	------	------	------	------
Day work	38.1	------	------	------	------	.1	------	.6	71.9	1.7	25.7
Night work	37.8	------	------	------	6.8	.4	------	.9	71.3	.3	20.3
Pressmen (journeymen)	37.4	------	------	------	------	------	------	------	------	------	------
Day work	38.5	------	------	.2	1.1	------	------	.4	55.7	.2	42.4
Night work	36.3	------	------	------	36.6	33.8	------	------	13.4	7.5	8.7
Pressmen-in-charge	37.5	------	------	------	------	------	------	------	------	------	------
Day work	38.6	------	------	.2	1.3	------	------	.7	52.2	.2	45.4
Night work	36.3	------	------	------	35.7	34.8	------	------	12.8	3.9	12.8
Stereotypers	37.0	------	------	------	------	------	------	------	------	------	------
Day work	38.2	------	------	.7	8.6	------	------	.2	50.5	3.2	36.8
Night work	35.3	------	2.1	35.6	12.7	------	------	.4	32.8	.3	16.1

Less than a tenth of 1 percent.

Agreements providing for a 37.5-hour workweek covered a ajority of the newspaper tradesmen. Of the remainder, over e-quarter had workweeks of less than 37.5 hours and one-fifth erated under provisions for 40 straight-time hours per week. Night-shift newspaper crews generally had shorter straight-ne workweeks than the day-shift crews. Thirty percent of the day members, contrasted with 10 percent of the night workers, had workweeks stipulating 40 hours. Two-fifths of those employed on night operations had workweeks calling for less than 37.5 hours whereas fewer than 15 percent of the day men were in this category. Night-shift pressmen and pressmen-in-charge, with over one-third of their membership working 35 hours per week, had the greatest concentrations in the 35-hour category. Night-shift stereotypers, with almost two-fifths of their members under contract for less than 32.5 hours and one-third working 37.5 straight-time hours, registered the lowest weekly hour average (35.3).

Overtime and Sunday Rates

With little exception the union printing-trades members worked under agreements providing for the payment of time and a half for work beyond specified daily or weekly hours. Several agreements, covering but few members, however, stipulated either double time or other than standard rates for overtime.

Eight out of 10 of all printing-trades workers covered (93 percent of those in the book and job branch and 51 percent in the newspaper branch) were employed under contracts requiring double-time pay for unscheduled work performed on Sunday or the seventh consecutive workday. Virtually all of the others received time and a half for Sunday or seventh-day work. Business operations in newspapers frequently require seven consecutive days of operation, but generally any time worked over five shifts by the individual union member requires payment of overtime rates.

TABLE 12.—*Percentage distribution of union members according to overtime an Sunday rates, July 1, 1946*

Trade	Percent of members receiving overtime rates of—				Percent of members receiving Sunday rates of—				
	No overtime rate specified	Time and one-half	Double time	Other overtime rates	No Sunday rate specified	Time and one-half	Double time	Other Sunday rates	Sunday work pr hibite
All printing trades	(1)	99.3	0.1	0.6	2.5	15.8	79.3	2.4	(1)
Book and job	(1)	99.2	(1)	.8	.1	4.1	92.9	2.9	(1)
Newspapers	.1	99.6	.1	.2	7.4	40.3	50.7	1.6	--------

[1] Less than .05 of 1 percent.

Paid Vacations

In July 1946 most of the printing-trades workers in 75 cities operated under union agreements that provided for vacations with pay. The most common provision, affecting over 50 percent of the union members, called for 2 weeks' vacation after 1 year of service. This plan covered a larger proportion of newspaper than book and job people (64 percent compared to 48 percent). A paid vacation of 1 week after 1 year was next in importance in the book and job branch covering over 20 percent of the workers, while a vacation of 1 week after 6 months and 2 weeks after 1 year was the second most common plan in newspaper shops. The plan that generally met the approval of the War Labor Board in manufacturing industries in late war years, 1 week after 1 year and 2 weeks after 5 years, included only about 6 percent of all printing-trades workers. A substantial proportion of union members were covered by other miscellaneous provisions such as 1 veek after 1 year and 2 weeks after 2 or 3 years. A good number f the vacation plans mentioned above provided for breaking the acation period down on a day basis so that substitutes would ot be without paid vacations. Under this system, plans that called or 2 weeks after 1 year required that 1 day's vacation should be redited for each 25 or 26 days worked; those that called for one eek provided for one day of vacation credit for each 50 or 52 ays worked.

The vacation pattern was about the same for each of the indi- dual trades in the newspaper branch. In the book and job ranch, however, bindery women, electrotypers, and pressmen had latively fewer members receiving 2 weeks' vacation after 1 year service than the other trades. Pressmen had more members in e 1 week after 1 year classification and bindery women had a bstantial proportion in the same category, with many additional rkers also getting an extra week after 5 years of service. In e case of the electrotypers, fewer than a quarter worked under e 2 weeks after one year plan; about 30 percent received either veek after 1 year or 1 week after 1 year plus an extra week er 5 years of service. Over two-fifths of the electrotypers op- ted under other vacation arrangements, some of them being re favorable than the 2 weeks after 1 year provisions men- ned above.

Apprenticeship in the Printing Trades

The international union constitutions and the by-laws or working rules of the local unions generally limit the number of apprentices that may enter a printing craft to a specified ratio of the total number of journeymen union members. The ratios generally permit 1 apprentice for each 5 to 10 or more journeymen. In view of recent public discussions indicating that there were insufficient young men in training in the industry, Bureau representatives endeavored to obtain from local union officials details regarding the apprentice situation.

Analysis of the composition of the apprentice labor force indicated an average of 1 apprentice for each 11 journeymen on July 1, 1946. About a third of the 375 printing-trades locals included in the study revealed that union regulations permitted the employment of more apprentices than were indentured at the time of the survey. About 85 percent of the responding locals reported that they were against changing the long established apprentice journeymen ratios to increase the number of apprentices permitted. A majority of the locals reported that the percentage of journeyman rate customarily paid to apprentices had been increased since 1939, indicating that where the starting rate might have been 50 percent of the journeyman rate in 1939, by 1946 it was 60 or 65 percent with increasing percentages after specified periods of training.

TABLE 13.—*Union scales of wages and hours in the* BOOK AND JOB *printing trades in selected cities, July 1, 1946, and July 1, 1945*

BINDERY WOMEN

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
tlanta, Ga.	$0.750	40	$0.650	40
altimore, Md.:				
Bindery operators, hand or machine	.650	40	.575	40
Banders and examiners	.575	40	.500	40
Wrappers, packers, strippers of all cut work, sealers, outsetters, boxers	.525	40	.450	40
inghamton, N.Y.:				
Folders, casting-machine operators, hand casters	.750	40	.650	40
Head band and liner machine, round and back feeder	.700	40	.600	40
Joggers	.700	40	.550	40
Packers, male	.750	40	.600	40
Pasting-machine helpers	.750	40	.660	40
Wrapping and jacketing	.750	40	.700	40
rmingham, Ala.	.650	40	.510	40
ston, Mass.	.750	40	.650	40
ffalo, N.Y.	.700	40	.575	40
tte, Mont.	.800	40	.693	40
arleston, W.Va.	.875	40	----	--
arlotte, N.C.	.450	40	.450	40
icago, Ill.:				
Gathering, collating, flat wire stitching, covering, mailing thread sewing, blank book sewing	.910	36⅓	.725	40
Paging and numbering	.910	36⅓	.712	40
Feeding automatic stitchers; feeding, folding or ruling machines; rotary perforating-machine operators, punching-machine operators, table workers	.868	36⅓	.688	40
cinnati, Ohio	.750	40	.631	40
veland, Ohio:				
Machine work	.776	40	.675	40
Hand work	.707	40	.615	40
umbus, Ohio	.865	40	.660	40
las, Tex.	.700	40	.650	40
ton, Ohio:				
Magazine	.900	40	.660	40
Feeders	.840	40	.635	40
Miscellaneous bindery	.780	40	.610	40
Blankbook	.900	40	.650	40
Collating and perforating	.780	40	.680	40
ver, Colo.	.800	40	.627	40
Foreladies	.875	40	.702	40
Moines, Iowa	.730	40	.650	40
oit, Mich.:				
greement A:				
Journeywomen	.830	40	.750	40
No. 1 key girls	.930	40	.850	40
No. 2 key girls	.880	40	.800	40
Floor supervisors	1.200	40	1.100	40
greement B:				
No. 1 key girls	.950	40	.850	40
No. 2 key girls	.900	40	.800	40
Journeywomen	.850	40	.750	40
d Rapids, Mich.	.600	40	.600	40
ton, Tex.	.700	40	.600	40
oreladies	.800	40	.625	40
napolis, Ind.	.800	40	.680	40
onville, Fla.	.700	40	.550	40
s City, Mo.	.775	40	.650	40
Rock, Ark.	.600	40	.600	40
ngeles, Calif.	.900	40	.650	40
ville, Ky.:				
greement A	.700	40	.550	40
greement B	.660	40	----	----
his, Tenn.	.600	40	.600	40
ukee, Wis.	.700	40	.600	40
apolis, Minn.:				
reement A	.740	40	.575	40
reement B	.680	40	.600	40
reement C	.675	40	.575	40
velope	.600	40	.550	40
lle, Tenn.:				
reement A	.625	40	.550	40
reement B	.600	40	.550	40

TABLE 13.—*Union scales of wages and hours in the* BOOK AND JOB *printing trades in selected cities, July 1, 1946, and July 1, 1945*—Continued

BINDERY WOMEN—Continued

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Newark, N.J.	$0.800	40	$0.663	40
Auxiliary workers	.625	40	.550	40
New Haven, Conn.	.650	40	.575	40
Foreladies	.775	40	.700	40
New Orleans, La.	.750	40	.600	40
New York, N.Y.:				
Agreement A:				
Hand collators, hand stitchers or sewers, general edition workers, sewing-machine operators, paring-machine operators, hand folders, drop roll or point folding-machine feeders, hand pasters, hand gatherers or coverers	.923	37½	.775	40
Pasting-machine operators, stubbers, strippers, wire-stitcher operators, inserters, guarders	.827	37½	.680	40
Gathering-machine fillers-in	.747	37½	.630	40
Box girls on folding machines	.800	37½	.635	40
Book examiners and wrappers	.747	37½	.585	40
Agreement B:				
Indexing, paging or numbering-machine (foot or power) operators; ruling-machine feeders; gathering-machine operators; flat and saddle stitchers; hand folders; punching or drilling-machine operators; perforating, pasting, or sewing-machine operators; flat and mail wrappers; hand book sewer; hand coverers; full-bound wire stitchers	.869	36⅓	.688	40
Pamphlet and magazine binders	.869	36⅓	.688	40
Edition (hand cover) binders, perforating-machine operators	.869	36⅓	.688	40
Stripping and pasting-machine feeders	.869	36⅓	.688	40
Oklahoma City, Okla.	.750	40	.600	40
Foreladies	.850	40	.700	40
Philadelphia, Pa.:				
Rate A	.750	40	.700	40
Rate B	.700	40	.650	40
Pittsburgh, Pa.	.715	37½	.595	40
Foreladies	.815	37½	.695	40
Portland, Oreg.	.938	40	.713	40
Richmond, Va.:				
Operators	.725	40	.525	4
Feeders and helpers	.700	40	.550	4
Supervisor, wrapping and inserting	.800	40	.600	4
Inspector or assistant supervisor—rate A	.750	40	.575	4
Inspector—rate B	.725	40	.575	4
Female helpers	.575	40	.450	4
Rochester, N.Y.:				
Agreement A	.800	40	.600	4
Agreement B	.700	40	.600	4
Foreladies	.850	40	.660	4
St. Louis, Mo.	.790	40	.640	4
St. Paul, Minn.	.740	40	.575	4
Specialty shop	.750	40	.575	
Envelope work	.600	40	.550	
San Antonio, Tex.	.650	40	.580	
San Francisco, Calif.	.950	40	.788	
Scranton, Pa.	.750	40	.600	
Seattle, Wash.	1.050	35	.805	
South Bend, Ind.	.750	40	.550	
Spokane, Wash.	.800	40	.660	
Foreladies	.850	40	.710	
Springfield, Mass.:				
Stitcher-wire operators and stripping-machine feeders	.825	40	.750	
Bindery women and tying-machine operators	.800	40	.700	
Bench workers	.725	40	.650	
Gathering-machine assistants	.720	40	.650	
Folders, small	.720	40	.600	
Helpers	.720	40	.450	
Toledo, Ohio	.750	40	.650	
Washington, D.C.	.700	40	.650	
Wichita, Kans.	.715	40	.600	
York, Pa.	.750	40	.550	
Foreladies	.825	40	.625	
Youngstown, Ohio	.650	40	.568	

TABLE 13.—*Union scales of wages and hours in the* book and job *printing trades in selected cities, July 1, 1946, and July 1, 1945*—Continued

BOOKBINDERS

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Atlanta, Ga.	$1.435	40	$1.140	40
Baltimore, Md.	1.320	40	1.050	40
Binghamton, N.Y.:				
Book repairing, hand operator, smasher	1.290	40	1.100	40
Building in, board and cloth cutter	1.240	40	1.050	40
Layout for sewers, casing-in feeders, male	.965	40	.800	40
Stamping, sheet stock cutter, casing-in operator, folding-machine operator, round and back operator, head band and lining-machine operator, trimming	1.400	40	1.150	40
Birmingham, Ala.	1.250	40	1.035	40
Boston, Mass.	1.390	40	1.220	40
uffalo, N.Y.	1.300	40	1.100	40
utte, Mont.	1.383	40	1.240	40
Foremen	1.508	40	1.340	40
harleston, W.Va.	1.500	40	------	------
harlotte, N.C.	.900	40	.900	40
hicago, Ill.:				
Agreement A:				
Commercial:				
Forwarders, finishers, paper-cutter operators, automatic stretching-machine operators, gathering-machine operators, combination gathering and stitching-machine operators, Kast inserting-machine operators, Rowe trimmers	1.724	36⅓	1.313	40
Combination cutter and folding-machine operators	1.834	36⅓	1.421	40
Men-in-charge of stock and cutting machines; operators of combination gathering, stitching, and covering machines	1.824	36⅓	1.358	40
Automatic folding-machine operators:				
1 machine	1.724	36⅓	1.276	40
2 machines	1.793	36⅓	1.339	40
3 machines	1.876	36⅓	1.414	40
Edition binding:				
Automatic folding-machine operators:				
1 machine	1.724	36⅓	1.276	40
2 machines	1.793	36⅓	1.339	40
3 machines	1.876	36⅓	1.414	40
Automatic gluing-machine operators, book pressers, gluing form machines	1.559	36⅓	1.163	40
Book trimmers, automatic stitching-machine operators, gathering-machine operators, paper cutter operators	1.724	36⅓	1.313	40
Case helpers, pasters, smashers, sawyers, tipping for gilders, book repairers, general work	1.646	36⅓	1.242	40
Casing-in (setting squares), casing-in machine operators, gluing- and pasting-machine operators, covering machine	1.696	36⅓	1.253	40
Combination cutters and folding-machine operators	1.834	36⅓	1.421	40
Men-in-charge of stocks and cutting machines	1.696	36⅓	1.358	40
Forwarders, finishers, casemakers, edge gilders, marblers, steam rounders and backers, headstock cutters, stampers	1.724	36⅓	1.288	40
Stampers-in-charge of one or more machines	1.806	36⅓	1.356	40
Tip printers, operators on binding machines	1.671	36⅓	1.265	40
Agreement B: Paper rulers	1.694	36⅓	1.375	40
innati, Ohio	1.300	40	1.113	40
eland, Ohio	1.472	40	1.280	40
mbus, Ohio	1.600	40	1.410	40
as, Tex.	1.350	40	1.250	40
ton, Ohio:				
Blank book	1.500	40	1.190	40
Magazine:				
Agreement A	1.450	40	1.125	40
Agreement B	1.450	40	1.135	40
In charge of golding and stitching machine	1.550	40	1.185	40
er, Colo.	1.325	40	1.127	40
oremen	1.450	40	1.252	40
Moines, Iowa	1.320	40	1.180	40
oit, Mich.:				
greement A	1.500	40	1.350	40
Combination journeymen	1.650	40	1.500	40

TABLE 13.—*Union scales of wages and hours in the* BOOK AND JOB *printing trades in selected cities, July 1, 1946, and July 1, 1945*—Continued

BOOKBINDERS—Continued

City and classification	July 1, 1946 Rate per hour	July 1, 1946 Hours per week	July 1, 1945 Rate per hour	July 1, 1945 Hours per week
Detroit, Mich.—Continued:				
Agreement B:				
Key men:				
No. 1 bookbinders, folding-machine operators, No. 1 finishers, stampers, No. 1 embossers, No. 1 paper flat cutters, die makers	$1.400	40	$1.250	40
Bookbinders (job, and loose leafers), gold stamper, No. 2 embossers, cutting-machine operators, No. 2 folding-machine operators, No. 2 bookbinders	1.300	40	1.150	40
No. 1 leather worker	1.250	40	1.100	40
No. 2 leather worker	1.100	40	.950	40
Grand Rapids, Mich.	1.000	40	1.000	40
Houston, Tex.	1.350	40	1.100	40
Foremen and head rulers	1.500	40	1.200	40
Indianapolis, Ind.	1.443	40	1.270	40
Jacksonville, Fla.	1.250	40	.900	40
Kansas City, Mo.	1.375	40	1.220	40
Little Rock, Ark.	1.090	40	1.025	40
Los Angeles, Calif.	1.520	40	1.200	40
Louisville, Ky.:				
Agreement A	1.150	40	.950	40
Agreement B	1.155	40	------	------
Memphis, Tenn.	1.100	40	1.100	40
Milwaukee, Wis.	1.350	40	1.185	40
Minneapolis, Minn.:				
Commercial	1.380	40	1.145	40
Envelope	1.110	40	1.025	40
Novelty:				
Agreement A	1.260	40	1.110	40
Agreement B	1.270	40	1.145	40
Nashville, Tenn.:				
Agreement A	1.150	40	1.000	40
Agreement B	1.175	40	.990	40
Newark, N.J.:				
Agreement A:				
Assistant stampers and finishers	1.500	40	1.225	40
Hand sheet straighteners and counters	1.275	40	1.100	40
Bookbinders, Hi-Die cutters, nonprecision operators on cutting machines under 65-inch knife, Cleveland folding-machine operators (with one feeder)	1.425	40	1.211	40
Bookbinders:				
Nonprecision operators on cutting machines 65—74 inch knife	1.440	40	1.225	40
75-inch and over	1.465	40	1.250	40
Precision 65—74 inch	1.465	40	1.250	40
Stampers and finishers	1.525	40	1.250	40
3-knife trimmers, folding-machine operators (combination, 2 automatic)	1.470	40	1.256	40
Precision cutters 75-inch knife and over	1.490	40	1.315	40
Rulers, on 3-beam automatic machines	1.600	40	1.340	40
Agreement B:				
Stampers and embossers, case makers, paper cutters, casing-in, and stock cutters	1.350	40	1.240	40
New Haven, Conn.	1.250	40	1.100	40
New Orleans, La.	1.350	40	1.100	40
New York, N.Y.:				
Agreement A:				
Head stampers	1.910	37½	1.580	40
Extra finishers	1.810	37½	1.505	40
Gilders	1.780	37½	1.480	40
Stampers, general reference book-binders	1.720	37½	1.430	40
Head sheetmen, folding-machine operators, book trimmers; power rounders and backers; head-banding and lining-machine operators, stock cutters, case-making-machine operators, casing-in-machine operators; extra forwarders, extra finishers' assistants; circuit workers; gathering; stitching, and covering-machine operators; sheet and plate cutters	1.650	37½	1.380	40
Gathering-machine operators; book trimmers (flat or turntable); hand rounders and backers; head banders and liners; hand case and stretcher makers; hand casers-in; book repairers; edge colorers; sprinkling and general all-around workers; assistant operators on gathering, stitching, and covering machines; sheet cutters	1.590	37½	1.330	40

TABLE 13.—*Union scales of wages and hours in the* BOOK AND JOB *printing trades in selected cities, July 1, 1946, and July 1, 1945*—Continued

BOOKBINDERS—Continued

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
New York, N. Y.—Continued:				
Agreement A—Continued				
Paper rulers:				
First class	$1.520	37½	$1.250	40
Second class	1.493	37½	1.200	40
Smashing-machine operators	1.650	37½	1.268	40
Assistant sheetmen or heads of stock; builders-in	1.500	37½	1.268	40
Nipping-machine operators	1.440	37½	1.218	40
Hand gluers-up, board cutters, pasters-off	1.370	37½	1.155	40
Loaders-up for folding machine, Cleveland-machine operators (single machine over one fold)	1.130	37½	.968	40
Head gold layers	1.100	37½	.940	40
Casing-in machine feeders	1.070	37½	.903	40
Gold layers	1.030	37½	.885	40
Agreement B:				
Operators of continuous and bracket trimmers	1.613	36¼	1.362	40
Continuous trimmers (tumbler type)	1.640	36¼	1.387	40
Operators of combination Kast inserting and stitching machines; Dayton 3-knife machines; gathering, stitching and covering machines; folding machines	1.585	36¼	1.336	40
Electric automatic spacer	1.563	36¼	1.316	40
Operators of duplex trimmers or combination gathering and stitching machines	1.561	36¼	1.292	40
Blankbook binders, operators of flat machines, die machines, band-cutting machines, gathering machines, stitching and covering machines	1.535	36¼	1.292	40
Manifold table workers	1.510	36¼	1.269	40
Assistant operators of combination folding and jogging machines	1.335	36¼	1.110	40
Agreement C:				
Pressmen on automatic feed pressing machines	1.876	36¼	1.600	40
Finishing-machine operators	1.793	36¼	1.550	40
Feeders	1.269	36¼	1.050	40
General helpers	.745	36¼	.600	40
General helpers—women	.690	36¼	.550	40
klahoma City, Okla	1.300	40	1.100	40
Foremen	1.400	40	1.225	40
iladelphia, Pa.:				
Rate A	1.350	40	1.140	40
Rate B	1.300	40	1.100	40
ttsburgh, Pa	1.305	37½	1.120	40
Foremen	1.430	37½	1.245	40
rtland, Oreg	1.563	40	1.288	40
chmond, Va.:				
Stamping	1.350	40	1.150	40
Operators, gathering, casing, etc	1.225	40	1.000	40
Lining-up, machine adjustment, and repair	1.300	40	1.050	40
Stockkeeper	1.325	40	1.125	40
Cutting-machine operators	1.395	40	1.263	40
chester, N.Y.:				
Agreement A	1.325	40	1.200	40
Agreement B	1.380	40	1.200	40
Foremen	1.520	40	1.320	40
Louis, Mo	1.410	40	1.260	40
Rulers and finishers	1.430	40	1.280	40
Paul, Minn.:				
Agreement A	1.300	40	1.145	40
Agreement B	1.380	40	1.145	40
Agreement C (envelopes)	1.110	40	1.025	40
Agreement D	1.375	40	1.145	40
Antonio, Tex	1.250	40	1.100	40
Foremen	1.500	40	1.250	40
Francisco, Calif	1.663	40	1.456	40
anton, Pa.:				
Machine workers	1.363	40	1.213	40
Bench workers	1.313	40	1.163	40
tle, Wash	1.857	35	1.438	40
th Bend, Ind	1.450	40	1.150	40
kane, Wash	1.500	40	1.200	40
Foremen	1.650	40	1.320	40
ngfield, Mass	1.300	40	1.125	40
Foremen	1.350	40	1.050	40
do, Ohio	1.350	40	1.250	40
hington, D.C	1.250	40	1.150	40
ita, Kans	1.238	40	1.050	40
, Pa	1.150	40	.950	40
Foremen	1.350	40	1.150	40
ngstown, Ohio	1.275	40	1.143	40

TABLE 13.—*Union scales of wages and hours in the* BOOK AND JOB *printing trades in selected cities, July 1, 1946, and July 1, 1945*—Continued

COMPOSITORS, HAND

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Atlanta, Ga.	$1.525	40	$1.235	40
Baltimore, Md.	1.500	40	1.200	40
Binghamton, N.Y.:				
Agreement A	1.370	40	1.250	40
Agreement B	1.375	40	1.275	40
Birmingham, Ala.	1.550	40	1.215	40
Boston, Mass.	1.425	40	1.220	40
Buffalo, N.Y.	1.475	38⅘	1.265	40
Butte, Mont.	1.438	40	1.350	40
Charleston, S.C.:				
Agreement A	1.438	40	1.125	40
Agreement B	1.438	40	1.250	40
Charleston, W.Va.	1.500	40	1.395	40
Charlotte, N.C.	1.300	40	1.200	40
Chicago, Ill.	1.815	36¼	1.545	40
Cincinnati, Ohio	1.594	40	1.388	40
Cleveland, Ohio	1.615	37½	1.415	37½
Columbus, Ohio	1.600	40	1.410	40
Dallas, Tex.	1.400	40	1.205	40
Dayton, Ohio:				
Agreement A	1.800	40	1.380	40
Agreement B	1.800	37½	1.415	40
Denver, Colo.	1.438	40	1.304	40
Des Moines, Iowa	1.410	40	1.280	40
Detroit, Mich.:				
Agreement A	1.825	40	1.535	40
Agreement B	1.850	40	1.610	40
Duluth, Minn.	1.200	40	1.000	40
El Paso, Tex.	1.520	37½	1.320	37½
Erie, Pa.	1.340	40	1.245	40
Grand Rapids, Mich.	1.350	40	1.150	40
Houston, Tex.	1.500	40	1.295	40
Indianapolis, Ind.	1.463	40	1.343	40
Jackson, Miss.	1.250	40	.950	40
Jacksonville, Fla.	1.500	40	1.290	40
Kansas City, Mo.	1.500	40	1.335	40
Little Rock, Ark.	1.250	40	1.090	40
Los Angeles, Calif.	1.600	40	1.365	40
Louisville, Ky.	1.375	40	1.200	40
Madison, Wis.	1.300	40	1.200	40
Manchester, N.H.	1.050	40	.875	40
Memphis, Tenn.	1.350	40	1.100	40
Milwaukee, Wis.	1.500	40	1.285	40
Minneapolis, Minn.	1.500	40	1.220	40
Mobile, Ala.	1.310	40	1.130	40
Nashville, Tenn.:				
Agreement A	1.375	40	1.105	40
Agreement B	1.250	40	1.105	40
Newark, N.J.	1.771	37½	1.510	40
New Haven, Conn	1.175	40	1.175	40
Magazine	1.520	37½	1.275	40
New Orleans, La.	1.350	40	1.150	40
New York, N.Y.	1.832	36¼	1.560	40
English—Hungarian text	1.600	35	1.200	40
German text	1.832	36¼	1.560	40
Hebrew text	1.832	36¼	1.560	40
Italian text	1.680	37½	1.381	40
Norfolk, Va.	1.400	40	1.050	40
Oklahoma City, Okla.	1.500	40	1.220	40
Omaha, Nebr.	1.470	40	1.190	40
Peoria, Ill.	1.350	40	1.250	40
Philadelphia, Pa.	1.600	37½	1.350	40
Phoenix, Ariz.	1.390	40	1.290	40
Pittsburgh, Pa.	1.600	37½	1.380	40
Portland, Maine	1.013	40	.875	40
Portland, Oreg.	1.563	40	1.288	40
Providence, R.I.	1.250	40	1.150	40
Reading, Pa.	1.300	40	1.150	40
Richmond, Va.	1.300	40	1.150	40
Rochester, N.Y.:				
Agreement A	1.375	40	1.250	40
Agreement B	1.450	40	1.250	40

TABLE 13.—*Union scales of wages and hours in the* BOOK AND JOB *printing trades in selected cities, July 1, 1946, and July 1, 1945*—Continued

COMPOSITORS, HAND—Continued

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Rock Island (Ill.) district[1]	$1.323	40	$1.323	40
St. Louis, Mo.	1.490	40	1.340	40
St. Paul, Minn.	1.500	40	1.220	40
Salt Lake City, Utah	1.500	37½	1.150	40
San Antonio, Tex.	1.150	40	1.150	40
San Francisco, Calif.	1.663	40	1.463	40
Scranton, Pa.	1.425	40	1.350	40
Seattle, Wash.	1.857	35	1.438	40
South Bend, Ind.	1.360	40	1.210	40
Spokane, Wash.	1.500	40	1.150	40
Springfield, Mass.	1.300	40	1.100	40
Shopping News	1.350	40	1.150	40
Tampa, Fla.	1.320	40	1.150	40
Toledo, Ohio:				
Agreement A	1.505	38¾	1.380	40
Agreement B	1.500	40	1.380	40
Washington, D.C.	1.529	37½	1.457	37½
Wichita, Kans.	1.334	40	1.150	40
Worcester, Mass.	1.100	40	.900	40
York, Pa.	1.200	40	1.035	40
Youngstown, Ohio	1.450	40	1.293	40

ELECTROTYPERS

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Atlanta, Ga.	$1.535	40	$1.245	40
Baltimore, Md.	1.300	40	1.175	40
Birmingham, Ala.	1.563	40	1.344	40
Boston, Mass.	1.400	40	1.300	40
Buffalo, N.Y.	1.500	40	1.330	40
Chicago, Ill.	2.100	36⅓	1.775	40
Cincinnati, Ohio	1.625	40	1.466	40
Cleveland, Ohio	1.750	40	1.525	40
Columbus, Ohio	1.600	40	1.410	40
Dallas, Tex.	1.375	40	1.295	40
Davenport, Iowa (see Rock Island (Ill.) district)				
Dayton, Ohio	1.700	40	1.450	40
Denver, Colo.	1.445	40	1.320	40
Des Moines, Iowa	1.570	40	1.375	40
Detroit, Mich.	1.800	40	1.610	40
Grand Rapids, Mich.:				
Finishers and molders	1.600	40	1.200	40
Branchmen	1.600	40	1.100	40
ouston, Tex.	1.500	40	1.350	40
ndianapolis, Ind.	1.600	40	1.420	40
ansas City, Mo.	1.500	40	1.375	40
os Angeles, Calif.	1.933	40	1.600	40
emphis, Tenn.	1.175	40	1.175	40
ilwaukee, Wis.	1.610	40	1.430	40
inneapolis, Minn.	1.650	40	1.450	40
oline, Ill. (see Rock Island (Ill.) district)				
ashville, Tenn.	1.150	40	1.150	40
ewark, N.J.	2.100	40	1.850	40
ew Haven, Conn.	1.460	40	1.420	40
ew Orleans, La.	1.717	37½	1.400	40
ew York, N.Y.	2.100	40	1.850	40
klahoma City, Okla.	1.409	40	1.221	40
maha, Nebr.	1.510	40	1.310	40
eoria, Ill.	1.580	40	1.370	40
hiladelphia, Pa.	1.950	40	1.700	40
ittsburgh, Pa.	1.500	40	1.250	40
ortland, Oreg.	1.723	40	1.410	40
rovidence, R.I.	1.400	40	1.300	40
ichmond, Va.:				
Molders	1.406	40	1.321	40
Finishers	1.406	40	1.273	40
ock Island (Ill.) district	1.435	40	1.300	40
Moline shop	1.435	40	1.280	40
. Louis, Mo.	1.500	40	1.437	40
. Paul, Minn.	1.650	40	1.400	40
lt Lake City, Utah	1.375	40	1.150	40
n Francisco, Calif.	1.581	40	1.525	40

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[1] Includes Rock Island and Moline, Ill., and Davenport, Iowa.

TABLE 13.—*Union scales of wages and hours in the* BOOK AND JOB *printing trades in selected cities, July 1, 1946, and July 1, 1945*—Continued

ELECTROTYPERS—Continued

City and classification	July 1, 1946 Rate per hour	July 1, 1946 Hours per week	July 1, 1945 Rate per hour	July 1, 1945 Hours per week
Scranton, Pa.	$1.425	40	$1.236	40
Seattle, Wash.	2.000	35	1.479	35
South Bend, Ind.	1.500	40	1.360	40
Springfield, Mass.	1.415	40	1.415	40
Toledo, Ohio	1.425	40	1.250	40
Washington, D.C.	1.900	38	1.580	38
Worcester, Mass.	1.400	40	1.300	40
York, Pa.	1.290	40	1.290	40

MACHINE OPERATORS

City and classification	July 1, 1946 Rate per hour	July 1, 1946 Hours per week	July 1, 1945 Rate per hour	July 1, 1945 Hours per week
Atlanta, Ga.	$1.525	40	$1.235	40
Baltimore, Md.	1.500	40	1.200	40
Binghamton, N.Y.	1.375	40	1.275	40
Machinist-operators	1.375	40	1.275	40
Birmingham, Ala.	1.550	40	1.215	40
Boston, Mass.:				
Linotype operators	1.465	40	1.260	40
Monotype operators	1.425	40	1.220	40
Buffalo, N.Y.	1.550	38⅘	1.370	40
Machinist-operators	1.600	38⅘	1.420	40
Butte, Mont.:				
Machinist-operators	1.500	40	1.413	40
Machine operators	1.438	40	1.350	40
Charleston, S.C.:				
Agreement A	1.438	40	1.125	40
Agreement B	1.438	40	1.250	40
Charleston, W.Va.	1.500	40	1.395	40
Charlotte, N.C.:				
Agreement A	1.300	40	----	----
Agreement B	1.300	40	1.200	40
Chicago, Ill.	1.815	36¼	1.580	40
Czechoslovak text	2.240	30	1.868	32
Swedish text	1.854	36¼	1.580	40
Cincinnati, Ohio	1.594	40	1.388	40
Cleveland, Ohio	1.664	37½	1.464	37½
Columbus, Ohio	1.600	40	1.410	40
Dallas, Tex.	1.500	40	1.330	40
Dayton, Ohio:				
Agreement A	1.800	40	1.380	40
Agreement B	1.800	40	1.415	40
Agreement C	1.800	37½	1.380	40
Denver, Colo.	1.438	40	1.304	40
Des Moines, Iowa	1.410	40	1.280	40
Detroit, Mich.:				
Agreement A	1.825	40	1.535	40
Agreement B	1.850	40	1.610	40
El Paso, Tex.	1.520	37½	1.320	37½
Erie, Pa.	1.340	40	1.245	40
Grand Rapids, Mich.	1.350	40	1.150	40
Houston, Tex.	1.500	40	1.295	40
Indianapolis, Ind.	1.463	40	1.343	40
Jackson, Miss.	1.250	40	.950	40
Jacksonville, Fla.	1.500	40	1.290	40
Kansas City, Mo.:				
Machinist-operators	1.500	40	1.335	40
Little Rock, Ark.	1.250	40	1.090	40
Machinist-operators	1.325	40	1.165	40
Los Angeles, Calif.	1.600	40	1.365	40
Louisville, Ky.	1.375	40	1.200	40
Madison, Wis.	1.300	40	1.200	40
Manchester, N.H.	1.050	40	.875	40
Memphis, Tenn.	1.350	40	1.100	40
Milwaukee, Wis.	1.500	40	1.285	40
Minneapolis, Minn.	1.500	40	1.220	40
Machinist-operators	1.600	40	1.295	40
Mobile, Ala.	1.310	40	1.130	40

TABLE 13.—*Union scales of wages and hours in the* BOOK AND JOB *printing trades in selected cities, July 1, 1946, and July 1, 1945*—Continued

MACHINE OPERATORS—Continued

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Nashville, Tenn.:				
Machinist-operators:				
Agreement A	$1.375	40	$1.193	40
Agreement B	1.250	40	1.193	40
Newark, N.J.	1.771	37½	1.510	40
New Haven, Conn.	1.175	40	1.175	40
Magazine	1.520	37½	1.275	40
New Orleans, La.	1.350	40	1.150	40
New York, N.Y.	1.832	36¼	1.560	40
English—Hungarian text	1.600	35	1.200	40
German text	1.832	36¼	1.560	40
Hebrew text	2.069	36¼	2.000	40
Italian text	1.680	37½	1.381	40
Norfolk, Va.	1.400	40	1.050	40
klahoma City, Okla.	1.500	40	1.220	40
Machinist-operators	1.563	40	1.283	40
maha, Nebr.	1.470	40	1.190	40
Peoria, Ill.	1.350	40	1.250	40
Machinist-operators	1.400	40	1.300	40
Philadelphia, Pa.	1.600	37½	1.350	40
Phoenix, Ariz.	1.390	40	1.290	40
Machinist-operators	1.460	40	1.360	40
Pittsburgh, Pa.	1.600	37½	1.380	40
Portland, Maine	1.013	40	.875	40
Portland, Oreg.	1.563	40	1.350	40
Providence, R.I.	1.250	40	1.150	40
eading, Pa.	1.350	40	1.180	40
Machinist-operators	1.350	40	1.180	40
ichmond, Va.	1.300	40	1.150	40
ochester, N.Y.:				
Agreement A	1.450	40	1.250	40
Agreement B	1.375	40	1.250	40
ock Island (Ill.) district[1]				
Machinist-operators	1.373	40	1.373	40
t. Louis, Mo.	1.520	40	1.370	40
t. Paul, Minn.	1.500	40	1.220	40
alt Lake City, Utah	1.500	40	1.150	40
an Antonio, Tex.	1.150	40	1.150	40
an Francisco, Calif.	1.663	40	1.463	40
Machinist-operators	1.788	40	1.525	40
cranton, Pa.	1.425	40	1.350	40
Machinist-operators	1.500	40	1.425	40
attle, Wash.:				
Machinist-operators	1.857	35	1.479	35
uth Bend, Ind.	1.360	40	1.210	40
okane, Wash.:				
Machinist-operators	1.600	40	1.220	40
ringfield, Mass.	1.300	40	1.100	40
Shopping News	1.350	40	1.150	40
mpa, Fla.	1.320	40	1.150	40
ledo, Ohio:				
Agreement A	1.500	40	1.380	40
Agreement B	1.505	37¾	1.380	40
shington, D.C.	1.529	37½	1.457	37½
chita, Kans.	1.334	40	1.150	40
rcester, Mass.	1.100	40	.900	40
rk, Pa.	1.200	40	1.035	40
ungstown, Ohio	1.450	40	1.318	40
Machinist-operators	1.550	40	1.393	40

MACHINE TENDERS (MACHINISTS)

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
anta, Ga.	$1.525	40	$1.235	40
timore, Md.	1.500	40	1.200	40
ghamton, N.Y.	1.375	40	1.275	40
mingham, Ala.	1.550	40	1.215	40
ton, Mass.:				
Linotype	1.465	40	1.260	40
Monotype	1.425	40	1.220	40
falo, N.Y.	1.640	38⅜	1.460	40
rleston, W.Va.	1.750	40	1.633	40

[1] ncludes Rock Island and Moline, Ill., and Davenport, Iowa.

TABLE 13.—*Union scales of wages and hours in the* BOOK AND JOB *printing trades in selected cities, July 1, 1946, and July 1, 1945*—Continued

MACHINE TENDERS (MACHINISTS)—Continued

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Chicago, Ill.	$1.815	36¼	$1.580	40
Cincinnati, Ohio	1.594	40	1.388	40
Cleveland, Ohio	1.664	37½	1.464	37½
Columbus, Ohio	1.600	40	1.410	40
Dayton, Ohio	1.800	40	1.380	40
Magazine	1.800	37½	1.415	40
Denver, Colo.	1.513	40	1.379	40
Des Moines, Iowa	1.410	40	1.280	40
Detroit, Mich.:				
Agreement A	1.825	40	1.535	40
Agreement B	1.850	40	1.610	40
Duluth, Minn.	1.200	40	1.000	40
Erie, Pa.	1.390	40	1.295	40
Indianapolis, Ind.	1.463	40	1.343	40
Jacksonville, Fla.	1.500	40	----------	----------
Los Angeles, Calif.	1.600	40	1.365	40
Louisville, Ky.	1.375	40	1.200	40
Manchester, N.H.	1.050	40	.875	40
Milwaukee, Wis.	1.500	40	1.285	40
Minneapolis, Minn.	1.500	40	1.220	40
Machine tenders:				
Combination operators	1.600	40	1.295	40
Mobile, Ala.	1.360	40	1.180	40
Newark, N.J.	1.771	37½	1.510	40
New Haven, Conn.	1.175	40	1.175	40
Magazine	1.653	37½	1.400	40
New York, N.Y.:				
1 to 4 machines	1.832	36¼	1.560	40
5 to 8 machines	1.832	36¼	1.600	40
9 to 12 machines	1.832	36¼	1.650	40
13 machines or over	1.832	36¼	1.700	40
Oklahoma City, Okla.	1.500	40	1.220	40
Philadelphia, Pa.	1.707	37½	1.450	40
Pittsburgh, Pa.	1.600	37½	1.380	40
Portland, Oreg.	1.563	40	1.350	40
Providence, R.I.	1.250	40	1.150	40
Richmond, Va.	1.300	40	1.150	40
Rochester, N.Y.	1.375	40	1.250	40
St. Louis, Mo.	1.520	40	1.370	40
St. Paul, Minn.	1.500	40	1.220	40
San Antonio, Tex.	1.150	40	1.150	40
Springfield, Mass.	1.375	40	1.175	40
Washington, D.C.	1.529	37½	1.457	37½
MAILERS				
Atlanta, Ga.	$1.150	40	----------	----------
Birmingham, Ala.:				
Magazine	1.190	40	$1.070	40
Mailers	1.050	40	.863	40
Buffalo, N.Y.	1.160	40	1.000	40
Chicago, Ill.	1.584	36⅓	1.310	40
Cincinnati, Ohio	1.453	40	1.203	40
Cleveland, Ohio:				
Agreement A	1.677	36⅔	1.405	36⅔
Agreement B	1.805	36⅔	1.405	36⅔
Agreement C	1.644	40	1.644	40
Columbus, Ohio	1.275	40	1.000	40
Dallas, Tex.	.900	40	.900	40
Dayton, Ohio:				
General workers	1.250	40	1.010	40
Machine operators	1.450	40	1.060	40
Leaders	1.550	40	1.110	40
Take-off ticket writers, label sorters, female	.900	40	.660	40
Denver, Colo.	1.416	36⅔	1.280	40
Des Moines, Iowa	1.310	40	1.135	40
Detroit, Mich.	1.771	40	1.363	40
Indianapolis, Ind.	1.360	40	1.193	40
Kansas City, Mo.	1.218	40	1.093	40
Los Angeles, Calif.	1.563	40	1.294	40
Louisville, Ky.	1.200	40	1.050	40

TABLE 13.—*Union scales of wages and hours in the* BOOK AND JOB *printing trades in selected cities, July 1, 1946, and July 1, 1945*—Continued

MAILERS—Continued

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
ilwaukee, Wis.	$1.473	40	$1.201	40
inneapolis, Minn.	1.178	40	1.078	40
ashville, Tenn.:				
Agreement A	.950	40	.900	40
Agreement B	1.000	40	.900	40
Female	.750	40	.700	40
ew York, N.Y.	1.696	35	1.216	40
Stampers	1.769	35	1.278	40
Machine operators	1.839	35	1.341	40
klahoma City, Okla.	1.188	40	1.094	40
eoria, Ill.	1.121	40	.975	40
Foremen	1.250	40	1.125	40
hiladelphia, Pa.:				
Agreement A	1.120	37½	1.067	40
Agreement B	1.175	40	1.063	40
Agreement C	1.225	40	1.025	40
rtland, Oreg.	1.620	37½	1.250	40
ochester, N.Y.	1.387	37½	.950	40
. Louis, Mo.	1.300	40	1.150	40
. Paul, Minn.	1.200	40	1.078	40
n Francisco, Calif.	1.663	37½	1.303	37½
ranton, Pa.	.975	40	.775	40
attle, Wash.	1.800	35	1.393	35
ledo, Ohio	1.400	37½	1.224	37½
shington, D.C.	1.250	40	1.150	40

PHOTOENGRAVERS

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
anta, Ga.:				
Agreement A	$1.795	40	$1.581	40
Agreement B	1.786	37½	------	------
Agreement C	1.787	37½	1.581	40
timore, Md.:				
Agreement A	1.973	37½	1.760	37½
Agreement B	1.767	37½	1.767	37½
mingham, Ala.	1.750	40	1.438	40
ton, Mass.	1.866	37½	1.680	37½
falo, N.Y.	1.667	37½	1.467	37½
rlotte, N.C.	1.500	40	1.500	40
cago, Ill.	2.067	37½	1.693	37½
Rotogravure	2.240	37½	1.867	37½
cinnati, Ohio	1.800	37½	1.587	37½
veland, Ohio:				
Agreement A	1.996	37½	1.736	37½
Agreement B	2.177	37½	1.893	37½
Agreement C (rotogravure)	1.840	40	1.725	40
mbus, Ohio:				
Agreement A	1.760	37½	1.707	37½
Agreement B	1.500	40	------	------
Agreement C	1.535	40	------	------
Rotogravure	1.500	40	1.500	40
as, Tex.	1.750	40	1.500	40
ton, Ohio	1.800	37½	1.600	37½
ver, Colo.	1.575	40	1.438	40
Moines, Iowa	1.638	40	1.638	40
oit, Mich.	1.933	37½	1.667	37½
otogravure	1.875	40	1.725	40
th, Minn.	1.500	40	1.438	40
ton, Tex.	1.750	40	1.550	40
napolis, Ind.	1.687	37½	1.687	37½
onville, Fla.	1.375	40	1.375	40
as City, Mo.	1.688	40	1.625	40
ngeles, Calif.	2.067	37½	1.438	40
ville, Ky.	1.570	40	1.430	40
ravure	1.720	40	1.560	40
on, Wis.	1.740	37½	1.600	37½
hester, N.H.	1.350	37½	1.200	37½
his, Tenn.	1.438	40	1.375	40
ukee, Wis.	1.740	37½	1.600	37½
apolis, Minn.	1.500	40	1.445	40

TABLE 13.—*Union scales of wages and hours in the* BOOK AND JOB *printing trades in selected cities, July 1, 1946, and July 1, 1945*—Continued

PHOTOENGRAVERS—Continued

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Nashville, Tenn.	$1.500	40	$1.500	40
Newark, N.J.	2.143	35	2.000	35
New Haven, Conn.	1.375	40	1.375	40
New Orleans, La.	1.500	40	1.438	40
New York, N.Y.	2.229	35	2.029	35
Gravure	2.314	35	2.171	35
Norfolk, Va.	1.500	40	1.500	40
Oklahoma City, Okla.	1.625	40	1.580	40
Omaha, Nebr.	1.500	40	1.500	40
Peoria, Ill.	1.500	40	1.375	40
Philadelphia, Pa.	1.920	37½	1.760	37½
Pittsburgh, Pa.	1.940	37½	1.687	37½
Portland, Oreg.	1.700	40	1.575	40
Providence, R.I.	1.600	37½	1.600	37½
Richmond, Va.	1.625	40	1.438	40
Rochester, N.Y.	1.920	37½	1.600	37½
Rock Island (Ill.) district	1.625	40	1.500	40
St. Louis, Mo.	1.680	37½	1.600	37½
St. Paul, Minn.	1.500	40	1.445	40
Gravure	1.725	40	1.500	40
San Antonio, Tex.	1.750	40	1.625	40
San Francisco, Calif.	1.933	37½	1.547	37½
Scranton, Pa.	1.711	38	1.375	40
Seattle, Wash.	2.133	37½	1.650	40
South Bend, Ind.	1.625	40	1.450	40
Springfield, Mass.:				
Agreement A	1.615	39	1.450	39
Agreement B	1.575	40	1.450	40
Toledo, Ohio	1.680	37½	1.533	37½
Washington, D.C.	1.890	37½	1.733	37½
Wichita, Kans.	1.581	40	1.438	40
Worcester, Mass.	1.625	40	1.375	40
Youngstown, Ohio	1.680	37½	1.600	37½

PRESS ASSISTANTS AND FEEDERS

City and classification	Rate per hour, July 1, 1946	Hours per week, July 1, 1946	Rate per hour, July 1, 1945	Hours per week, July 1, 1945
Atlanta, Ga.:				
Cylinder assistants	$1.035	40	$0.740	40
Feeders and assistant feeders, wax paper	.800	40	.800	40
Baltimore, Md.:				
Platen or small automatic presses	.890	40	.700	40
Cylinder presses, over 31 inches	1.180	40	.950	40
Two color cylinder presses	1.210	40	.975	40
Through 24 inches	.950	40	.750	40
Over 24 inches	1.180	40	.950	40
Binghamton, N.Y.:				
Platen presses	.600	40	.600	40
Cylinder presses, job automatic pressmen	.885	40	.830	40
Birmingham, Ala.	.850	40	.650	40
Platen feeders	.650	40	.450	40
Boston, Mass.:				
Assistants on 1 two-color press, 1 perfecting press (2-sheet or 2-pile feeding machines) or 1 two-color offset press	1.300	40	1.120	40
Assistants on single presses, cross feeding presses, under 65 inches and pile feeding presses; cylinder press assistants, hand	1.230	40	1.060	40
Job press feeders	.790	40	.670	40
Buffalo, N.Y.:				
Cylinder and job cylinder press assistants	1.201	38⅘	1.015	40
Two-color press assistants	1.253	38⅘	1.065	40
Rotary web press assistants	1.278	38⅘	1.090	40
Platen press assistants	.995	38⅘	.815	40
Butte, Mont.:				
Cylinder press feeders:				
After 18 months	.826	40	.754	40
Platen press feeders after 1 year	.566	40	.517	40
Chicago, Ill.:				
Assistants on 1- or 2-color rotary presses, assistants on single deck tubular rotary presses, assistants on 10-color web perfecting presses	1.689	40	1.356	4

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[1] Includes Rock Island and Moline, Ill., and Davenport, Iowa.

TABLE 13.—*Union scales of wages and hours in the* BOOK AND JOB *printing trades in selected cities, July 1, 1946, and July 1, 1945*—Continued

PRESS ASSISTANTS AND FEEDERS—Continued

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Chicago, Ill.—Continued				
Assistants on 2-deck or rotary machines using 1 or 2 rolls with insert attachments	$1.634	40	$1.306	40
Assistants on Miehle 4-color presses or sheeting machines, on Claybourne 4- or 5-color presses, second and third assistants on web, 10-color presses, and U.P.M. presses, with double attachments	1.648	40	1.319	40
Assistants on single cylinder presses, 25 by 38 inches and larger; on coupon presses; feeders on hand-fed folding machines; assistants on 2 automatic Miehle Unit presses 29 by 41 inches; assistants in charge of varnishing machines	1.607	40	1.256	40
Assistants on 2-color presses; feeders and operators of hand-fed folding machines; assistants on rotary presses, automatic or sheet-fed rotary presses, Cox-Duplex and Goss-Comet presses, U.P.M. presses with single attachments	1.607	40	1.281	40
Assistants on stock cutters (flat machines)	1.621	40	1.294	40
Assistant operators of sheet-fed folding machines:				
1 machine	1.607	40	1.281	40
2 machines	1.676	40	1.344	40
3 machines	1.759	40	1.419	40
Assistants on 2-color Harris or Miehle presses, 22 by 30 inches; feeders on hand-fed cylinder presses; assistants on 2 pony Miehle presses	1.163	40	.889	40
Feeders on hand-fed Colt's Armory or Universal press	1.135	40	.864	40
Platen press feeders	1.121	40	.851	40
incinnati, Ohio:				
Rotary presses:				
First assistants	1.313	40	1.140	40
Second assistants	1.256	40	1.090	40
Helpers and automatic machine tenders	1.213	40	1.053	40
Assistants on large 2-color cylinder presses	1.213	40	1.053	40
Cylinder press assistants	1.175	40	1.015	40
Job press feeders	.838	40	.728	40
Provers on engravers' proofs	1.313	40	1.140	40
eveland, Ohio:				
Feeders on specialty work after 30 days	1.295	40	1.125	40
Cylinder press feeders	1.280	37½	1.113	37½
Platen press feeders	1.032	37½	.898	37½
Assistants on 2-color perfecting and 1 single-color rotogravure press	1.314	37½	1.143	37½
Assistants on Harris-Claybourne multicolor presses	1.351	37½	1.175	37½
umbus, Ohio	1.320	40	1.140	40
llas, Tex.:				
Agreement A	1.000	40	.800	40
Rotary helpers—wax paper	.900	40	.800	40
Plate register	.950	40	.850	40
Agreement B	.960	40	.800	40
yton, Ohio:				
Cylinder press feeders	1.190	40	1.050	40
Two-color cylinder press feeders	1.240	40	1.100	40
Job press feeders	.900	40	.800	40
Parchment (after 1 year)	1.100	40	.925	40
Wax paper (after 2 years)	1.280	40	.980	40
ver, Colo.:				
Ready-print comet cylinder press assistants	1.175	40	1.015	40
Cylinder press assistants	1.125	40	.973	40
Platen press feeders	.675	40	.625	40
Moines, Iowa:				
Rotary, color and offset press assistants	1.160	40	1.030	40
Folder assistants	1.080	40	1.020	40
Platen press assistants	.940	40	.810	40
Platen press feeders	.920	40	.790	40
Cylinder press assistants	1.150	40	1.020	40
oit, Mich.:				
Cylinder press assistants (2-color) single color and job cylinder, all sizes	1.400	40	1.180	40
ob cylinder, assistants	1.220	40	1.000	40
Platen press assistants	1.100	40	.880	40
Rotary press assistants	1.420	40	1.200	40
th, Minn.	.450	40	.450	40
d Rapids, Mich.:				
Cylinder press feeders	.900	40	.900	40

TABLE 13.—*Union scales of wages and hours in the* BOOK AND JOB *printing trades in selected cities, July 1, 1946, and July 1, 1945*—Continued

PRESS ASSISTANTS AND FEEDERS—Continued

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Houston, Tex.:				
Cylinder and platen assistants	$1.050	40	$0.830	40
2-color press assistants	1.113	40	.893	40
Indianapolis, Ind.:				
Rotary press assistants	1.316	40	1.191	40
Cylinder press assistants	1.262	40	1.137	40
Job press assistants	.743	40	.618	40
Rotary cylinder assistants (bread wrapper printing)	1.050	40	.850	40
Jacksonville, Fla.:				
Cylinder press assistants	.900	40	.625	40
Platen press assistants	.650	40	.518	40
Kansas City, Mo.:				
Rotary press assistants	1.185	40	1.055	40
Rotary press assistants waxide paper	1.295	40	1.165	40
Cylinder press assistants	1.160	40	1.030	40
Platen press assistants	.925	40	.825	40
Little Rock, Ark.:				
Cylinder press feeders	.825	40	.675	40
Platen press feeders	.600	40	.475	40
Los Angeles, Calif.:				
Cylinder press feeders	1.280	40	1.050	40
2-color presses	1.330	40	-------	-------
Platen press feeders	1.100	40	.900	40
Louisville, Ky.:				
Press assistants and feeders:				
Agreement A:				
Cottrell rotary assistants, cylinder press assistants	.935	40	.850	40
Goss rotary press assistants	1.290	40	1.175	40
Job press feeders	.720	40	-------	-------
Agreement B:				
1 cylinder single color	.900	40	.745	40
1 or 2 job automatic cylinder press assistants	.950	40	.795	40
1 platen hand-fed press assistants	.770	40	.619	40
2 platen automatic fed press assistants	.810	40	.650	40
Memphis, Tenn.:				
Cylinder press feeders:				
Men	.825	40	.800	40
Women	.610	40	.610	40
Platen feeders (women)	.600	40	.570	40
Milwaukee, Wis.:				
Cylinder and rotary press feeders	1.235	40	1.084	40
Job cylinder press assistants	.880	40	.754	40
Platen press feeders	.830	40	.704	40
Paper joggers or straighteners	.900	40	.774	40
Minneapolis, Minn.:				
Cylinder press feeders	1.175	40	.980	40
Kelly A or Miehle vertical press assistants	1.025	40	.830	40
Platen press feeders	.875	40	.690	40
Envelope:				
Feeders for cutting and scoring presses	.890	40	.765	40
Stokes or Harris job press feeders	.670	40	.575	40
Platen press feeders	.700	40	.600	40
Mobile, Ala.:				
Platen feeders	.650	40	.500	40
Cylinder feeders	.650	40	.650	40
Nashville, Tenn.:				
Cylinder press feeders:				
Agreement A:				
Male	.850	40	.750	4
Female	.725	40	.650	4
Agreement B	1.000	40	.925	4
Agreement C—platen feeders	.630	40	.550	4
Newark, N.J.:				
Assistants on 1 three-color Sterling press	1.475	40	1.300	4
Assistants on 1 two-color press over 70 inches, 1 two-color with three-color attachment, 1 special Kidder press	1.450	40	1.275	4
Assistants on two-color press, 1 Duplex Web press	1.425	40	1.250	4
Assistants on cylinder, offset and automatic rotary presses	1.375	40	1.200	4
Platen press assistants	1.075	40	.900	4
Seal press assistants	.975	40	.800	4
New Haven, Conn.:				
Press feeders	.900	40	.850	4
Magazine	1.050	40	.900	[illegible]

TABLE 13.—*Union scales of wages and hours in the* BOOK AND JOB *printing trades in selected cities, July 1, 1946, and July 1, 1945*—Continued

PRESS ASSISTANTS AND FEEDERS—Continued

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
New Haven, Conn.—Continued				
2-color press assistants: Magazine	$1.100	40	$0.950	40
Offset press assistants	.900	40	.850	40
2-color press assistants	1.150	40	.875	40
New Orleans, La.:				
Platen press feeders	.625	40	.563	40
Offset assistants	1.025	40	.825	40
New York, N.Y.:				
Assistants on automatic or hand-fed platen presses; Miehle vertical presses; Miller Hi-speed presses; Kelly A, B, Clipper, automatic jobber, Kelly C or Kelly No. 1 presses; Harris 1- or 2-color presses, 15 by 18 inches; Harris offset presses, and including 22 by 34 inches; Webendorfers; Multi-color presses, and C and P cylinder presses	1.131	36¼	.925	40
Assistant or Utility man on Web presses, cylinder, over 42 inches, second assistants on McKee prosses and offset presses, 35 x 45 or larger	1.476	36¼	1.238	40
Assistant on Miehle automatic pony presses, Kelly 2 presses, Babcock automatic press, Miller major, Simplex presses, Premier A.F. presses, Miehle No. 41 presses, sheet-feed rotary and double sheet-feed rotary presses	1.503	36¼	1.263	40
Assistant on Miller 2-color major Simplex; Miehle 2-color No. 41 or 46 press; First assistant on small McKee process presses; large 2-color floor bed press; 2-color Cottrell rotary presses not over 42 inches; 5-color Cottrell presses not over 61 inches; second assistants and perfecting presses	1.531	36¼	1.263	40
Assistants on 2-color 48 inch Cottrell presses, 5-color 42 inch Cottrell presses	1.559	36¼	1.313	40
Assistants on 2-color 59 inch Cottrell presses, 2-color Rotary presses over 59 inches	1.586	36¼	1.338	40
First assistants on 5-color 61 inch Cottrell presses, 5-color 72-inch Cottrell presses	1.600	36¼	1.350	40
lahoma City, Okla.:				
Cylinder press feeders	.850	40	.738	40
Operating automatic platen feeders	.800	40	.675	40
Platen press feeders	.750	40	.625	40
aha, Nebr.:				
Cylinder and rotary press assistants	1.100	40	.900	40
ria, Ill.:				
Platen press feeders	.900	40	.800	40
Cylinder feeders	1.130	40	1.030	40
ladelphia, Pa.:				
Sheet-feed rotary press assistants or roll-feed rotary helpers (rollmen)	1.370	40	1.160	40
1-color cylinder press feeders	1.330	40	1.120	40
Junior feeders	1.100	40	.930	40
Rotary press feeders (wax paper printing)	1.100	40	.920	40
McKee press	1.370	40	1.160	40
enix, Ariz.:				
Cylinder press assistants	1.130	40	1.030	40
Platen press assistants	.978	40	.878	40
sburgh, Pa.:				
2-color offset press helpers	1.420	37½	1.180	40
2-color cylinder press helpers	1.380	37½	1.140	40
Cylinder press helpers, male	1.230	37½	1.025	40
Platen press feeders, male	1.030	37½	.855	40
Cylinder press helpers, female	1.070	37½	.885	40
Platen press feeders, female	.940	37½	.785	40
land, Maine:				
Cylinder press feeders	.800	40	.600	40
land, Oreg.:				
Cylinder press assistants	1.250	40	.958	40
Platen press feeder	1.063	40	.858	40
idence, R I.:				
Agreement A:				
Automatic or hand-fed press assistants:				
Cylinder, 2-color rotary, offset, or automatic job cylinder presses	.900	40	.875	40
greement B	1.000	40	.900	40
ing, Pa.:				
Cylinder press assistants	1.245	40	1.035	40
laten press assistants	1.035	40	.885	40
nond, Va.:				
greement A:				
2-color and perfector press assistants	.900	40	.800	40

TABLE 13.—*Union scales of wages and hours in the* BOOK AND JOB *printing trades in selected cities, July 1, 1946, and July 1, 1945*—Continued

PRESS ASSISTANTS AND FEEDERS—Continued

City and classification	July 1, 1946 Rate per hour	July 1, 1946 Hours per week	July 1, 1945 Rate per hour	July 1, 1945 Hours per week
Richmond, Va.—Continued:				
Agreement A—Continued:				
Single cylinder press assistants	$0.900	40	$0.775	40
Job press assistants and feeders	.750	40	.600	40
Agreement B: Gravure rotary press assistants	1.375	40	1.200	40
Agreement C: Bag printing	.640	40	.550	40
Rochester, N.Y.:				
Agreement A:				
Cylinder press assistants	1.095	40	.970	40
Automatic platen press assistants	1.083	40	.958	40
Duplex press assistants	1.013	40	.888	40
Platen press hand feeders	.918	40	.793	40
Agreement B:				
Vertical press assistants	1.150	40	.970	40
Platen hand press feeders	.940	40	.760	40
Rock Island (Ill.) district:[1]				
Cylinder press assistants	1.090	40	1.045	40
Rotary press, 1st and 2nd assistants	1.265	40	1.210	40
Rotary press 3rd assistants	1.090	40	1.045	40
St. Louis, Mo.:				
Rotary web press assistants	1.390	40	1.240	40
Assistants on cylinder presses larger than 27 x 41 inches	1.220	40	1.070	40
Assistants on special presses 27 x 41 inches	1.180	40	1.030	40
Assistants on small cylinder or automatic presses	1.040	40	.890	40
Platen feeders	.790	40	.640	40
St. Paul, Minn.:				
Commercial:				
Cylinder press feeders	1.200	40	1.000	40
Platen press feeders	.840	40	.700	40
Novelty:				
Cylinder press assistants or feeders	1.200	40	.985	40
Platen press or Carver press feeders	.875	40	.735	40
Gravure:				
Waite press feeders	.875	40	.735	40
Perfection, web, or 4-color press feeders	1.200	40	.985	40
Envelope:				
Stokes and Harris job press feeders	.670	40	.575	40
Platen press feeders	.700	40	.600	40
Salt Lake City, Utah:				
Cylinder press feeders	1.250	40	.825	40
San Antonio, Texas:				
Cylinder press feeders	.600	40	.600	40
Platen press feeders	.400	40	.400	40
San Francisco, Calif.:				
Cylinder press assistants	1.300	40	1.118	40
Platen press assistants	1.038	40	.888	40
Scranton, Pa.:				
Cylinder press assistants	1.099	40	1.024	40
2-color or perfecting presses	1.140	40	1.065	40
Platen press assistants	.865	40	.790	40
Seattle, Wash.:				
Cylinder press feeders	1.471	35	1.095	40
Platen press feeders	1.229	35	.934	40
South Bend, Ind.:				
Cylinder and offset press assistants	1.070	40	.920	40
Spokane, Wash.:				
Platen feeders	1.120	40	.862	40
Cylinder press feeders	1.150	40	.885	40
Springfield, Mass.:				
Cylinder press assistants	.870	40	.750	4
Toledo, Ohio	1.170	40	1.015	4
Washington, D.C.:				
5-color McKee press assistants	1.383	40	1.266	4
4-color McKee press assistants; U.P.M. press assistants, 1 assistant to 2 presses	1.258	40	1.141	4
Assistants on web-color presses with color attachments	1.220	40	1.103	4
Assistants on Perfector press, 2-color press, 1 U P.M. press	1.170	40	1.053	4
Senior offset and web press assistants	1.145	40	1.028	4
Junior press assistants	.875	40	.753	4
Wichita, Kans.:				
Cylinder press assistants	1.001	40	.910	
Platen press assistants	.819	40	.744	
York, Pa.	.995	40	.870	
Perfector press assistants	1.045	40	.920	
Youngstown, Ohio:				
Feeders	.678	40	.600	

[1] Includes Rock Island and Moline, Ill., and Davenport, Iowa.

TABLE 13.—*Union scales of wages and hours in the* BOOK AND JOB *printing trades in selected cities, July 1, 1946, and July 1, 1945*—Continued

CYLINDER PRESSMEN

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
tlanta, Ga.:				
Cylinder pressmen	$1.445	40	$1.150	40
Wax paper pressmen	1.200	40	1.200	40
altimore, Md.:				
Small automatic 31 inches and under	1.350	40	1.100	40
Single color cylinder over 31 inches	1.500	40	1.200	40
2-color cylinder presses	1.580	40	1.275	40
Offset presses through 17 inches	1.580	40	1.100	40
Over 17 inches through 24 inches	1.500	40	1.200	40
Over 24 inches through 42 inches	1.580	40	1.275	40
Over 42 inches	1.730	40	1.400	40
nghamton, N.Y.:				
Agreement A:				
Cylinder presses	1.250	40	1.075	40
Job automatic cylinder presses	1.250	40	1.025	40
Agreement B:				
Cylinder or automatic job presses	1.000	40	1.000	40
Agreement C	1.230	40	1.175	40
mingham, Ala.:				
Agreement A:				
Cylinder presses	1.250	40	.975	40
Coupon presses, Harris rotary presses	1.250	40	1.075	40
Automatic job cylinder presses	1.250	40	.910	40
Agreement B:				
Rotary presses:				
In charge	1.625	40	1.450	40
First position	1.463	40	1.250	40
Tension men	1.313	40	1.175	40
Agreement C:				
Wax paper printing	1.200	40	1.200	40
ton, Mass.:				
1 perfecting press; 1 two-color press; 2 Hi-speed cylinder presses, 25 x 38 inches or larger; 1 two-sheet-feed rotary press	1.505	40	1.320	40
1 cylinder press, over 65 inches, 1 single color offset or job cylinder press under 65 inches with 2-inch pile feeders	1.450	40	1.270	40
Cylinder press under 65 inches	1.390	40	1.220	40
alo, N.Y.:				
Job cylinder or photo-offset presses	1.459	38⅘	1.265	40
-color presses	1.588	38⅘	1.390	40
otary web presses	1.613	38⅘	1.415	40
olor comics	1.464	40	1.294	40
len-in-charge	1.589	40	1.419	40
e, Mont	1.383	40	1.263	40
oremen	1.508	40	1.388	40
leston, W.Va	1.500	40	1.238	40
n charge	1.688	40	1.437	40
utomatic job presses, cylinder presses	1.500	40	1.175	40
lotte, N.C.	1.250	40	1.095	40
go, Ill.:				
econd position when running tandem or 4-press bed; 2-color automatic Harris presses; 2-color multicolor ticket presses; any 2 of following presses in combination: Automatic press, Harris single press, Miehle horizontal press, Miehle vertical press, Miller Simplex press, Osterlind press, Stokes and Smith press; 2 presses up to 46 by 65 inches; 3 patent inside blanket presses, 1 press with Upham attachments; 1 double cylinder perfecting press; 1 press over 25 by 38 inches and not over 3 job presses; 2 automatic presses; 1 double cylinder flat bed 2-color press	1.793	36⅓	1.475	40
remen, 3 to 6 presses or 2 cylinder and job presses	1.931	36⅓	1.600	40
Cox Duplex, Hoe Duplex, Goss flat-bed, Cox-o-type, or press of similar type; process or label work, 3 or more colors; 1 cylinder press with Upham attachment running process or label work 3 or 4 colors	1.889	36⅓	1.563	40
tary presses:				
Sheet-or-web-feed rotary press, 70 inches or more:				
1 four-color press	2.151	36⅓	1.800	40
1 five-color press	2.234	36⅓	1.875	40
1 Meisel press	2.041	36⅓	1.700	40
1 tubular press, 1 or 2 units	1.981	36⅓	1.650	40
Second pressmen, 3 or 4 units	1.871	36⅓	1.550	40
1 thirty-two page 2-unit press	1.931	36⅓	1.600	40

TABLE 13.—*Union scales of wages and hours in the* BOOK AND JOB *printing trades in selected cities, July 1, 1946, and July 1, 1945*—Continued

CYLINDER PRESSMEN—Continued

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Chicago, Ill.—Continued:				
Rotary presses—Continued:				
Sheet-or-web-feed rotary press, 70 inches or more—Continued:				
1 sixty-four page, 2- or 4-unit press; 1 eighty page, 2 unit press; 1-color 4-unit press, 1 ninety-six page 2- or 4-unit press, 1 one hundred and twenty-eight page 4-unit press:				
First pressmen	$2.096	36⅓	$1.750	40
Second pressmen	1.931	36⅓	1.600	40
1 one-hundred and ninety-two page novel news, 4-unit press:				
First pressmen	2.151	36⅓	1.800	40
Second pressmen	1.981	36⅓	1.650	40
1 two-color, sheet-feed press	1.958	36⅓	1.625	40
1 three color-sheet-feed press	2.013	36⅓	1.675	40
1 four-color-sheet-feed press	2.096	36⅓	1.750	40
1 five-color-sheet-feed press	2.179	36⅓	1.825	40
Rotogravure	1.707	37½	1.419	37½
Pressmen-in-charge, registermen	1.873	37½	1.585	37½
Bread-wrapper printing:				
Kidder or similar:				
1 two-color press	1.862	36⅓	1.538	40
1 three-color press	1.889	36⅓	1.563	40
1 four-color press	1.945	36⅓	1.600	40
Cincinnati, Ohio:				
Cylinder presses:				
1 or 2 single-color presses over 19 x 25 inches; 1 single color press 65 inches or over, one 2-color over 19 by 25 inches	1.450	40	1.259	40
One 2-color flat-bed press over 25 x 38 inches	1.500	40	1.303	40
Automatic job presses, cylinder presses:				
1 Kelley, Miehle Hi-Speed or Goudy up to 19 x 25 inches	1.188	40	1.028	40
2 presses up to 19 x 25 inches	1.300	40	1.128	40
1 press up to 19 x 25 inches, 1 single-color press under 25 x 38 inches with 2 or 3 platen presses	1.481	40	1.259	40
Rotary and web presses:				
1 web press, single or double sheet-feed	1.538	40	1.334	40
With stitcher or paster attached	1.613	40	1.409	40
One 3-or-4-color rotary press	1.575	40	1.365	40
Over 4-color rotary roll or hand fed	1.731	40	1.503	40
Cleveland, Ohio:				
Job pressmen, 1 or 2 job	1.326	37½	1.153	37½
Job pressmen, 3 or 4 job	1.435	37½	1.248	37½
Job pressmen, 5 or more	1.535	37½	1.335	37½
Offset presses over 22 x 29 inches	1.700	37½	1.478	37½
Semirotary presses	1.646	37½	1.431	37½
Harris, Claybourne multicolor presses	1.713	37½	1.490	37½
Offset presses up to 22 x 29 inches	1.573	37½	1.368	37½
Cylinder pressmen on specialty work	1.580	40	1.375	40
Columbus, Ohio	1.600	40	1.380	40
Rotary presses (wax paper printing)	1.340	40	1.205	40
Dallas, Tex.:				
Rotary presses:				
Journeymen oil presses	1.300	40	1.200	40
Rotary pressmen	1.375	40	1.250	40
Automatic or 2-color presses	1.300	40	1.100	40
Wax paper, Aniline press	1.200	40	1.075	40
Second pressmen	1.170	40	.975	40
Cylinder pressmen:				
Journeymen	1.163	40	.950	40
Dayton, Ohio:				
Cylinder or automatic job presses	1.530	40	1.350	40
2-color presses	1.605	40	1.425	40
Presses over 22 x 28 inches	1.555	40	1.375	40
Rotary pressmen	1.763	40	1.313	40
Flat-bed pressmen	1.633	40	1.213	40
RotaryKidder presses (parchment printing)	1.460	40	1.225	40
Rotary wed presses (wax printing)	1.600	40	1.300	40
Rotary web presses, magazine:				
2 Kelly presses	1.625	40	1.300	40
Scott offset presses, reel delivery Webendorfer presses	1.600	40	1.275	40
2-color Miehle or Miller presses	1.700	40	1.375	
Cottrell presses:				
96 pages	1.850	40	1.525	40
80 or 32 pages	1.800	40	1.475	40

TABLE 13.—*Union scales of wages and hours in the* BOOK AND JOB *printing trades in selected cities, July 1, 1946, and July 1, 1945*—Continued

CYLINDER PRESSMEN—Continued

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
ayton, Ohio—Continued:				
Goss presses:				
192 pages-men-in-charge; 64 page double 2-color	$1.925	40	$1.600	40
192 page, 2nd pressmen	1.750	40	1.425	40
32 page 2-color and black-and-white	1.875	40	1.550	40
McKee presses	1.925	40	1.500	40
5-color Claybourne small McKee presses	1.925	40	1.525	40
Multicolor presses	1.825	40	1.500	40
Men-in-charge	2.025	40	1.650	40
enver, Colo.	1.438	40	1.250	40
Foremen	1.563	40	1.375	40
es Moines, Iowa:				
Claybourne, Cottrell, Rotary, and Scott Rotary presses	1.470	40	1.290	40
Small cylinder presses	1.330	40	1.190	40
Cylinder pressmen	1.370	40	1.230	40
Hi-speed	1.370	40	1.290	40
etroit, Mich.:				
Cylinder pressmen:				
Rotary presses	1.775	40	1.555	40
Cylinder presses (two-color, single color, and job cylinder all sizes)	1.700	40	1.480	40
uluth, Minn.	1.050	40	1.050	40
Paso, Tex.	1.360	40	1.101	40
ie, Pa.	1.300	40	1.100	40
rand Rapids, Mich.	1.100	40	1.100	40
ouston, Tex.	1.350	40	1.130	40
Foremen	1.495	40	1.275	40
2-color pressmen	1.475	40	1.255	40
dianapolis, Ind.	1.443	40	1.318	40
Rotary pressmen	1.539	40	1.414	40
Offset pressmen	1.443	40	1.318	40
Rotary presses (bread-wrapper printing)	1.400	40	1.225	40
cksonville, Fla.	1.300	40	1.150	40
nsas City, Mo.	1.500	40	1.265	40
1 cylinder and 1 automatic platen press, 1 double-ender cylinder press or 1 offset press	1.500	40	1.335	40
1 two-color cylinder press over 42 inches	1.525	40	1.355	40
1 double roll rotary press	1.550	40	1.380	40
tle Rock, Ark.	1.188	40	1.000	40
Foremen	1.288	40	1.100	40
s Angeles, Calif.	1.520	40	1.275	40
Foremen	1.600	40	1.350	40
Flat-bed web presses	1.350	40	1.313	40
uisville, Ky.:				
Agreement A:				
1 two-color flat-bed press	1.325	40	1.178	40
Job automatic cylinder presses:				
1 Kelly B or 1 Kelly 17 by 22 No. 1, 1 Miehle vertical, 1 Miller Hi-Speed, 1 Miller Simplex	1.250	40	1.089	40
1 Kelly No. 2, 1 Miehle horizontal, 1 Miller Major Simplex	1.300	40	1.149	40
Rotary presses: 1 Kidder or Harris press	1.250	40	1.089	40
Agreement B:				
Rotogravure: Journeymen	1.320	40	1.200	40
Pressmen-in-charge	1.490	40	1.350	40
Cylinder press:				
Large 5-color Claybourne	1.500	40	----------	----------
Men-in-charge, 2 single color flat-bed presses, 1 two color flat-bed press or 5 color Claybourne rotary	1.375	40	1.250	40
1 single color flat-bed or Miller Major	1.180	40	1.075	40
Rotary presses:				
Men-in-charge Goss 2 or 4-color or Goss comic 4 color	1.790	40	1.625	40
Cottrell and Hoe presses	1.510	40	1.375	40
chester, N.H.	1.100	40	.900	40
Automatic presses	.975	40	.850	40
nphis, Tenn.	1.100	40	1.050	40
Foremen	1.250	40	1.175	40
Cylinder 2-color press over 25 x 28 inches	1.150	40	1.080	40
Offset presses:				
17 x 22 inches	1.100	40	1.050	40
20 x 26 inches to 22 x 34 inches	1.150	40	1.075	40
Over 22 x 34 inches	1.200	40	1.100	40
2-color	1.250	40	1.160	40

TABLE 13.—*Union scales of wages and hours in the* BOOK AND JOB *printing trades in selected cities, July 1, 1946, and July 1, 1945*—Continued

CYLINDER PRESSMEN—Continued

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Milwaukee, Wis.:				
Cylinder and rotary presses	$1.450	40	$1.284	40
Double-roll rotary presses, any press that prints 3 or more colors	1.520	40	1.354	40
Cox Duplex or Goss flat-bed	1.550	40	1.384	40
Minneapolis, Minn.:				
Men-in-charge of 4 cylinder presses	1.605	40	1.350	40
Men-in-charge of 3 cylinder presses; 2-color double enders or single-roll rotary presses	1.575	40	1.320	40
1 or 2 single cylinder presses, 1 Kelly A or Miehle vertical press, 1 single cylinder and 1 platen press	1.475	40	1.220	40
Envelope printing:				
Stokes or Harris presses	1.205	40	1.050	40
Combination job presses and compositors	1.290	40	1.125	40
Job cylinder presses	1.260	40	1.110	40
Rotary presses	1.380	40	1.230	40
Special presses	1.430	40	1.260	40
With small web-fed presses	1.320	40	1.170	40
2-cylinder tissue presses	1.050	40	.920	40
Cylinder pressmen:				
4 or 5 color pressmen	1.650	40		
Offset 17 x 22	1.225	40		
Gravure pressmen	1.475	40		
Gravure assistants	1.125	40		
Mobile, Ala.	1.300	40	1.050	40
Nashville, Tenn.:				
Agreement A	1.250	40	1.150	40
Men-in-charge	1.288	40	1.263	40
Kelly presses	1.105	40	1.063	40
2 tension presses	1.125	40	1.063	40
Agreement B	1.200	40	1.075	40
Newark, N.J.:				
Cylinder presses:				
1 three-color Sterling	1.750	40	1.575	40
1 two-color, over 70 inches	1.738	40	1.563	40
1 single color with bronzing attachments over 68 inches	1.688	40	1.513	40
1 special Kidder, Prudential	1.688	40	1.513	40
4-color Kidder (wax paper printing)	1.575	40	1.400	40
Cylinder and job presses:				
1 or 2 job cylinder presses with automatic-feeder; 1 job cylinder press with automatic-feeder and 1 automatic-feed platen press; 1 job cylinder-press with automatic-feeder and 2 hand-fed platen presses; 1 or 2 single cylinder-presses not over 68 inches; 1 Duplex web press	1.638	40	1.463	40
1 two-color Harris press, 15 x 18 inches	1.550	40	1.375	40
Seal pressmen	1.300	40	1.125	40
Bag pressmen	1.425	40	1.250	40
New Haven, Conn.:				
Cylinder presses, Miehle vertical and horizontal automatic job cylinder presses	1.325	40	1.175	40
Magazine	1.375	40	1.225	40
Miehle vertical and horizontal presses	1.225	40	1.175	40
2-color presses	1.450	40	1.300	40
Offset presses under 17 x 22 inches	1.225	40	1.125	40
New Orleans, La.	1.350	40	1.150	40
Foremen	1.475	40	1.275	40
Offset presses over 22 inches	1.475	40	1.275	40
Combination cylinder and platen presses	1.350	40	1.150	40
New York, N.Y.:				
Cylinder and sheet-fed rotary presses:				
1 cylinder press over 68 inches; 1 or 2 cylinder presses not over 68 inches; 1 poster press 28 x 41 inches or over; 1 label press (close register work); 1 perfecting press	1.834	36¼	1.563	40
2 cylinder presses, both on color register work; 1 two-color flat-bed press; permanent provers on cylinder or color work; 1 press with bronzing machine	1.909	36¼	1.630	40
1 two-color Harris 28 x 34 inches and up	1.885	36¼	1.608	40
1 two-color flat-bed press over 70 inches	1.934	36¼	1.653	40
1 sheet-fed rotary press with color attachments	1.909	36¼	1.630	40
McKee process presses	1.984	36¼	1.698	40
1 five-color Cottrell press 50 x 72 inches	2.136	36¼	1.836	40

ABLE 13.—*Union scales of wages and hours in the* BOOK AND JOB *printing trades in selected cities, July 1, 1946, and July 1, 1945*—Continued

CYLINDER PRESSMEN—Continued

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
ew York, N.Y.—Continued:				
Automatic unit cylinder presses:				
Single color presses:				
Miehle vertical; Miller HiSpeed; Kelley A,B,C, or Kelly automatic jobber	$1.834	36¼	$1.563	40
Miehle horizontal, Miller Simplex, Kelly No. 1 presses, Harris I.C.	1.909	36¼	1.630	40
Miehle automatic pony; Miehle No. 4—2, 3, or 4 roller; Miehle No. 41; Miller Major Simplex; Kelly No. 2; Babcock 3/5, 4/3 or No. 5 automatic; Premier No. GF	1.909	36¼	1.630	40
Two-color presses:				
Miehle horizontal tandem or Harris H.K.	1.909	36¼	1.630	40
Miehle No. 41, 2-color; Miller 2-color Simplex	1.960	36¼	1.676	40
Web presses:				
Second men	1.834	36¼	1.563	40
Brakemen or tension men on presses	1.834	36¼	1.563	40
Single-roll presses:				
46 inches or under	1.984	36¼	1.698	40
Over 46 inches	2.035	36¼	1.744	40
Double roll press men-in-charge:				
46 inches or under	1.984	36¼	1.698	40
Over 46 inches	2.035	36¼	1.744	40
3 or 4-color process presses 46 inches (men-in-charge)	2.035	36¼	1.744	40
3 or 4-color or process presses over 46 inches (men-in-charge)	2.084	36¼	1.796	40
Cox Duplex presses	1.885	36¼	1.608	40
Multi-ticket presses	1.834	36¼	1.563	40
Combination presses:				
1 cylinder and 1 or 2 hand-fed platens, 1 cylinder and 1 automatic platen, 1 cylinder and 1 automatic job cylinder up to and including 31 inches	1.834	36¼	1.563	40
lahoma City, Okla:				
Foremen (1 or more journeymen)	1.313	40	1.248	40
Foremen (no journeymen)	1.206	40	1.088	40
Pressmen (under foremen)	1.113	40	1.000	40
Foremen, #1 Kelly press	1.313	40	1.238	40
aha, Nebr.	1.300	40	1.150	40
ria, Ill.	1.300	40	1.200	40
Foremen	1.390	40	1.290	40
Color printing	1.500	40	1.253	40
Men-in-charge	1.720	40	1.451	40
ladelphia, Pa.:				
Presses, 68 inches or under	1.600	40	1.350	40
Pressmen on 2-color work	1.660	40	1.400	40
Rotary presses (wax paper printing)	1.500	40	1.320	40
Rotary presses:				
Sheet feed:				
4-color 70 inches or under and McKee presses	1.840	40	1.550	40
U.P.M. presses with automatic attachments	1.685	40	1.425	40
Roll-fed	1.790	40	1.510	40
Jitney presses	1.660	40	1.400	40
Second pressmen, color presses	1.700	40	1.410	40
enix, Ariz.	1.390	40	1.290	40
sburgh, Pa.:				
Cylinder	1.600	37½	1.330	40
Combination web and cylinder presses	1.770	37½	1.330	40
2-color presses cylinder	1.740	37½	1.445	40
Offset presses, 2-color	2.030	37½	1.680	40
land, Maine	.985	40	.875	40
Offset press, 2 cylinder presses	1.110	40	.985	40
land, Oreg.	1.563	40	1.288	40
Offset presses	1.563	40	1.338	40
Foremen: 2 presses or less	1.688	40	1.351	40
idence, R.I.:				
-color presses, 46 x 64 inches rotary, roll-feed presses	1.450	40	1.350	40
-color presses, 25 x 38 inches	1.350	40	1.250	40
handler and Price; Little Giant 12 x 18 inches; Miller Hi-Speed, 13 x 20 inches; Miehle Vertical or Kelly A, 13 x 20 inches; Kelly Clipper 14 x 20 inches; ATF or Kelly B, 17 x 22 inches; Miller Simplex 20 x 26 inches; Miehle horizontal 22 x 28 inches; Miehle pony 22 x 34 inches; Kelly No. 2, 24 x 35 inches	1.200	40	1.100	40

TABLE 13.—*Union scales of wages and hours in the* BOOK AND JOB *printing trades in selected cities, July 1, 1946, and July 1, 1945*—Continued

CYLINDER PRESSMEN—Continued

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Providence, R. I.—Continued				
Automatic job cylinder presses	$1.100	40	$1.075	40
Rotary roll-feed	1.450	40	1.350	40
Reading, Pa.	1.185	40	1.095	40
Foremen	1.485	40	1.335	40
Assistant foremen	1.345	40	1.195	40
Richmond, Va:				
Agreement A:				
Perfector or 2-color presses	1.300	40	1.175	40
Platemen	1.300	40	1.150	40
Platemen and cylinder presses, 1- color	1.150	40	1.050	40
Agreement B:				
Gravure rotary pressmen	1.687	40	1.463	40
Agreement C (bag printing)	1.040	40	.950	40
Rochester, N.Y.:				
Agreement A:				
Duplex presses	1.525	40	1.400	40
Cylinder presses; Kelly No. 1 or 2 presses; 2 Kelly A or B presses; 2 vertical presses	1.375	40	1.250	40
1 Kelly C press	1.325	40	1.200	40
1 Kelly A or B or 1 vertical press	1.275	40	1.150	40
Agreement B	1.450	40	1.250	40
Vertical presses	1.330	40	1.150	40
Rock Island (Ill.) district[1]	1.325	40	1.265	40
Cylinder foremen or rotary pressmen-in-charge	1.495	40	1.430	40
St. Louis, Mo.:				
1 four- or five-color press	1.630	40	1.480	40
Single or 2-roll rotary presses	1.600	40	1.460	40
One 2-color Claybourne press, rotogravure press, sheet-fed, double cylinder perfecting press	1.490	40	1.340	40
Second pressmen on 5-color presses or 2-roll rotary presses; 1 two-color press; 2 automatic presses over 19 x 25 inches; 2 cylinder 25 x 38 inches but under 68 inches; 1 press 68 inches or larger	1.480	40	1.330	40
1 automatic press 17 x 22 inches to 19 x 25 inches and two platen presses	1.420	40	1.270	40
One automatic press less than 17 x 22 inches and 3 platen presses Rate A	1.400	40	1.250	40
Rate B	1.380	40	1.230	40
Two cylinder 24 x 36 inches or less; 1 cylinder press 25 x 38 inches, but under 68 inches	1.360	40	1.210	40
One press 24 x 36 inches or less	1.310	40	1.160	40
Coupon presses:				
42-inch presses	1.330	40	1.180	40
28-inch presses	1.280	40	1.130	40
Combination cylinder and 2 platen	1.440	40	1.290	40
St. Paul, Minn.:				
Commercial:				
2-color presses, double ender presses	1.600	40	1.310	40
1 or 2 single cylinder presses; 3 cylinder presses on imprinting; 1 single cylinder and 1 platen press; any of the following presses: Kelly, Miehle, vertical or horizontal Miller Hi-Speed or any 2 of the following presses; Harris Imprint, Kelly A or B, Miehle vertical	1.500	40	1.220	40
Gravure:				
4-color presses	1.675	40	1.410	40
Perfection double-ender; web double ender presses	1.575	40	1.285	40
Waite presses, Harris presses	1.500	40	1.220	40
Novelty:				
2-color, double ender press	1.610	40	1.365	40
1 or 2 single cylinder presses; 1 cylinder and platen press; any 1 of following: Kelly, Miehle vertical, Simplex horizontal, Miller Hi-Speed	1.500	40	1.265	40
Envelope:				
Stokes or Harris presses	1.205	40	1.050	40
Salt Lake City, Utah	1.500	40	1.100	40
Foremen	1.563	40	1.150	40
San Antonio, Tex.	1.000	40	1.000	40
San Francisco, Calif.:				
Cylinder or manifold presses	1.663	40	1.456	40
Foremen of cylinder or manifold presses	1.788	40	1.531	40
Flat-bed web presses	1.738	40	1.531	40
Rotary magazine presses:				
First position	1.813	40	1.606	40
Second position	1.663	40	1.456	40

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[1] Includes Rock Island and Moline, Ill., and Davenport, Iowa.

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CYLINDER PRESSMEN—Continued

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
cranton, Pa.:				
2-color presses	$1.465	40	$1.390	40
1 or 2 presses	1.365	40	1.290	40
attle, Wash.	1.857	40	1.438	40
outh Bend, Ind.:				
2-color presses	1.470	40	1.320	40
2 cylinder presses over 40 inches	1.360	40	1.260	40
Offset presses 17 x 22 inches through 22 x 34 inches	1.500	40	1.350	40
Automatic job cylinder presses, 1 cylinder press under 40 inches	1.360	40	1.210	40
okane, Wash.	1.500	40	1.150	40
Foremen	1.650	40	1.265	40
ringfield, Mass.	1.210	40	1.125	40
ledo, Ohio	1.445	40	1.290	40
ashington, D. C.:				
1 five-color rotary Cottrell-McKee press	1.965	40	1.814	40
1 U.P.M. rotary press, 1 offset press over 42 inches	1.599	40	1.448	40
1 perfector press, 1 two-color press	1.524	40	1.383	40
Job automatic cylinder presses:				
1 or 2 Miehle vertical presses, any cylinder press 20 inches or under, 1 or 2 Kelly job presses, 1 offset press 24 inches or under, 1 or 2 Miller Hi-Speed presses	1.434	40	1.283	40
chita, Kans.	1.273	40	1.157	40
rk, Pa.:				
Cylinder and automatic job cylinder presses	1.265	40	1.140	40
Perfector presses	1.315	40	1.190	40
ungstown, Ohio	1.275	40	1.238	40
Rotary web presses	1.300	40	1.263	40
Offset and 2-color	1.338	40	1.300	40

PLATEN PRESSMEN

anta, Ga.	$1.445	40	$1.150	40
timore, Md.	1.240	40	1.000	40
ghamton, N. Y.:				
Agreement A:				
Automatic presses	1.250	40	.875	40
Hand-fed presses	1.250	40	.825	40
Agreement B:				
Automatic job presses	1.000	40	1.000	40
ningham, Ala.	1.060	40	.810	40
ton, Mass.:				
2 automatic presses	1.320	40	1.166	40
Hand-fed presses	1.250	40	1.100	40
alo, N. Y.	1.330	38⅘	1.140	40
te, Mont.	1.247	40	1.127	40
rlotte, N. C.	1.050	40	.925	40
ago, Ill.:				
Proofers on 1-job and power proof presses	1.793	36⅓	1.475	40
innati, Ohio:				
or 2 presses	1.156	40	1.000	40
presses	1.200	40	1.040	40
presses	1.225	40	1.065	40
presses	1.265	40	1.090	40
mbus, Ohio	1.600	40	1.380	40
as, Tex.	1.188	40	1.100	40
ton, Ohio:				
or 2 job presses	1.300	40	1.150	40
job presses	1.410	40	1.250	40
or 5 job presses	1.530	40	1.350	40
er, Colo.	1.328	40	------	------
oremen	1.403	40	1.158	40
Moines, Iowa	1.250	40	1.120	40
oit, Mich.	1.470	40	1.250	40
th, Minn.	.775	40	.775	40
so, Tex.	1.360	40	1.101	40
Pa.	1.200	40	1.000	40
d Rapids, Mich.	.900	40	.900	40
ton, Tex.:				
or 2 presses	1.100	40	.880	40
presses	1.175	40	.955	40

TABLE 13.—*Union scales of wages and hours in the* BOOK AND JOB *printing trades in selected cities, July 1, 1946, and July 1, 1945*—Continued

PLATEN PRESSMEN—Continued

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Indianapolis, Ind.:				
1 or 2 presses	$1.307	40	$1.182	40
3 presses	1.361	40	1.235	40
5 presses	1.443	40	1.318	40
Jacksonville, Fla	1.300	40	1.150	40
Kansas City, Mo.:				
1 or 2 presses	1.375	40	1.185	40
5 presses	1.450	40	1.275	40
Little Rock, Ark	1.188	40	1.000	40
Los Angeles, Calif	1.420	40	1.200	40
Foremen	1.500	40	1.275	40
Louisville, Ky.:				
Agreement A.:				
1 press, hand-fed or automatic	1.025	40	.878	40
2 presses, hand-fed or automatic	1.063	40	.906	40
3 presses, hand-fed or automatic	1.100	40	.938	40
Agreement B	1.180	40	--------	--------
Manchester, N.H	.900	40	.750	40
Memphis, Tenn	1.100	40	1.050	40
Automatic platen	1.040	40	.990	40
Foremen	1.200	40	1.110	40
Milwaukee, Wis	1.330	40	1.174	40
Minneapolis, Minn.:				
1 press	1.150	40	.900	40
2 presses	1.225	40	.980	40
3 presses	1.300	40	1.070	40
4 presses	1.375	40	1.140	40
Men-in-charge of more than 4 presses	1.475	40	1.220	40
Mobile, Ala	1.300	40	.950	40
Nashville, Tenn.:				
1 press	.875	40	.750	40
2 presses	.938	40	.813	40
Newark, N.J.:				
1 to 3 hand-fed presses	1.456	40	1.281	40
4 hand-fed presses	1.506	40	1.375	40
5 hand-fed presses	1.550	40	1.463	40
1 New Era press	1.638	40	1.463	40
New Orleans, La	1.050	40	.950	40
2 presses	1.250	40	1.050	40
New York, N.Y.:				
Provers	1.759	36¼	1.494	40
2 two-color Harris presses 15 x 18 inches	1.750	36¼	1.486	40
2 automatic presses over 20 inches, 1 two-color Harris press 18 x 25 inches or 15 x 18 inches, 1 two-color Harris press 18 x 22 inches, 1 two-color Harris press 15 x 18 inches	1.699	36¼	1.440	40
2 automatic platen presses up to 20 inches, 1 automatic press and 1 or 2 hand-fed presses; 2 Webendorfers or 4 platen presses	1.650	36¼	1.395	40
1 automatic platen press over 20 inches	1.624	36¼	1.372	40
1 to 3 platen presses; 1 automatic platen press 20 inches or under	1.600	36¼	1.350	40
Oklahoma City, Okla.:				
1 press	1.000	40	.875	40
2 or 3 presses	1.075	40	.925	40
Omaha, Nebr	1.300	40	1.150	40
Peoria, Ill	1.180	40	1.080	40
Foremen	1.210	40	1.110	40
Philadelphia, Pa	1.460	40	1.230	40
Phoenix, Ariz	1.240	40	1.140	40
Pittsburgh, Pa	1.510	37½	1.255	40
Portland, Maine	.890	40	.800	40
Portland, Oreg	1.500	40	1.168	40
Foremen	1.625	40	1.231	40
Providence, R.I.:				
Automatic-feed presses:				
Agreement A	1.200	40	1.100	40
Agreement B	1.100	40	1.075	40
Hand-fed presses	1.125	40	1.025	40
Presses up to 12 x 18 inches	1.150	40	1.050	40
Reading, Pa.:				
1 or 2 automatic presses	1.245	40	1.035	40
Hand-fed presses	1.135	40	.985	40
Richmond, Va	1.100	40	.825	40

TABLE 13.—*Union scales of wages and hours in the* BOOK AND JOB *printing trades in selected cities, July 1, 1946, and July 1, 1945*—Continued

PLATEN PRESSMEN—Continued

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Rochester, N.Y.:				
Agreement A:				
Automatic presses	$1.375	40	$1.250	40
1 to 3 hand-feed presses	1.275	40	1.150	40
Agreement B:				
4 hand presses or 2 automatic presses	1.330	40	1.150	40
1, 2, or 3 hand presses	1.200	40	1.020	40
Rock Island (Ill) district [1]	1.200	40	1.155	40
St. Louis, Mo:				
1 or 2 presses	1.230	40	1.080	40
3 or 4 presses	1.330	40	1.180	40
St. Paul, Minn.:				
Commercial:				
2 presses	1.200	40	1.000	40
Novelty:				
2 platen or 2 Carver presses	1.225	40	.985	40
3 platen or 3 Carver presses	1.300	40	1.060	40
4 platen or 4 Carver presses	1.375	40	1.135	40
Men-in-charge of more than 4 platen or 4 Carver presses	1.500	40	1.220	40
Envelope; 2 presses	1.040	40	.900	40
Salt Lake City, Utah	1.500	40	1.100	40
San Antonio, Tex	.750	40	.750	40
San Francisco, Calif	1.588	40	1.381	40
Foremen	1.713	40	1.456	40
Scranton, Pa	1.099	40	1.024	40
Seattle, Wash	1.714	35	1.334	40
South Bend, Ind:				
Hand-fed presses	1.200	40	1.050	40
Automatic presses	1.260	40	1.160	40
Spokane, Wash	1.500	40	1.150	40
Tampa, Fla	1.200	40	1.000	40
Toledo, Ohio:				
1 or 2 presses	1.320	40	1.165	40
3 presses	1.370	40	1.215	40
Washington, D.C.:				
2 automatic presses	1.346	40	1.195	40
1 or 2 hand-fed and automatic presses	1.284	40	1.133	40
1, 2 or 3 hand-fed presses	1.209	40	1.058	40
Wichita, Kans	1.061	40	.965	40
York, Pa	1.145	40	1.020	40
Youngstown, Ohio	1.238	40	1.200	40

[1] Includes Moline and Rock Island, Ill., and Davenport, Iowa.

TABLE 14.—*Union scales of wages and hours in the* NEWSPAPER *printing trades in selected cities, July 1, 1946, and July 1, 1945*

COMPOSITORS, HAND: DAY WORK

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Atlanta, Ga	$1.627	37½	$1.409	40
Baltimore, Md	1.670	36⅔	1.450	36⅔
Binghamton, N.Y	1.400	37½	1.293	37½
Birmingham, Ala	1.550	40	1.271	40
Boston, Mass	1.730	37½	1.730	37½
Buffalo, N.Y	1.653	37½	1.472	37½
Butte, Mont	1.520	35	1.400	35
Charleston, S.C	1.450	40	1.150	40
Charleston, W. Va	1.375	40	1.325	40
Charlotte, N.C	1.316	40	1.196	40
Chicago, Ill	2.083	36⅓	1.840	36⅓
Polish text	1.846	32½	1.600	35
Cincinnati, Ohio	1.867	37½	1.547	37½
Cleveland, Ohio	1.899	37½	1.508	37½
Columbus, Ohio	1.700	37½	1.533	37½
Dallas, Tex	1.657	35	1.447	37½
Dayton, Ohio	1.573	37½	1.466	37½
Denver, Colo	1.649	36⅔	1.427	36⅔
Des Moines, Iowa	1.592	40	1.409	40
Detroit, Mich	1.985	37½	1.747	37½
German text	1.400	40	1.250	40
Duluth, Minn	1.436	35½	1.335	35½
El Paso, Tex	1.520	37½	1.320	37½
Erie, Pa	1.500	37½	1.415	37½
Grand Rapids, Mich	1.575	38¾	1.325	40
Shopping News	1.515	40	1.325	40
Houston, Tex	1.616	37½	1.536	37½
Indianapolis, Ind	1.867	37½	1.472	37½
Jackson, Miss	1.350	40	.950	40
Jacksonville, Fla	1.650	40	1.380	40
Kansas City, Mo	1.600	37½	1.460	37½
Little Rock, Ark	1.370	36⅓	1.180	36⅓
Los Angeles, Calif	1.733	37½	1.446	37½
Louisville, Ky	1.653	37½	1.283	40
Madison, Wis	1.450	40	1.323	40
Manchester, N.H	1.340	37½	1.200	37½
Memphis, Tenn	1.520	37½	1.380	37½
Milwaukee, Wis	1.813	37½	1.541	37½
Minneapolis, Minn	1.820	35	1.536	35
Shopping News	1.600	33⅓	1.482	33⅓
Mobile, Ala	1.550	37½	1.190	37½
Nashville, Tenn	1.365	40	1.225	40
Newark, N.J	1.751	40	1.571	40
New Haven, Conn	1.338	40	1.286	40
New Orleans, La	1.350	40	1.250	40
New York, N.Y	2.067	37½	1.807	37½
Hebrew text	2.333	36	2.150	36
Russian text	2.000	36	1.833	36
Italian text	2.261	30	2.261	30
Bohemian and Slavonic text	1.250	40	1.250	40
Hungarian text	1.600	35	1.446	35
Greek text	1.771	35	1.413	37½
Norfolk, Va	1.413	40	1.256	40
Oklahoma City, Okla	1.533	37½	1.250	40
Omaha, Nebr	1.510	40	1.310	40
Peoria, Ill	1.450	38⅓	1.345	38⅓
Philadelphia, Pa	1.537	37½	1.405	37½
German text	1.125	40	1.125	40
Phoenix, Ariz	1.420	37½	1.320	37½
Pittsburgh, Pa	1.867	37½	1.559	37½
Portland, Maine:				
Agreement A	1.300	40	1.200	40
Agreement B	1.375	40	1.200	40
Portland, Oreg	1.724	36⅓	1.400	36⅓
Providence, R.I	1.670	40	1.495	40
Reading, Pa	1.460	37½	1.280	37½
Richmond, Va	1.400	40	1.250	40
Rochester, N.Y.:				
English text	1.547	37½	1.350	40
German text	.770	40	.768	40
Rock Island (Ill.) district[1]	1.473	38¾	1.335	38¾
St. Louis, Mo	1.841	36⅓	1.500	36⅓
St. Paul, Minn	1.760	35	1.480	35

[1] Includes Rock Island and Moline, Ill., and Davenport, Iowa.

able 14.—*Union scales of wages and hours in the* NEWSPAPER *printing trades in selected cities, July 1, 1946, and July 1, 1945*—Continued

COMPOSITORS, HAND: DAY WORK—Continued

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
alt Lake City, Utah	$1.476	36⅓	$1.366	36⅓
an Antonio, Tex	1.467	37½	1.290	37½
an Francisco, Calif	1.867	37½	1.507	37½
eranton, Pa	1.667	39	1.442	39
eattle, Wash	1.857	35	1.479	35
outh Bend, Ind	1.455	40	1.265	40
pokane, Wash	1.633	37½	1.334	37½
ampa, Fla	1.433	37½	1.240	37½
oledo, Ohio	1.773	37½	1.507	37½
ashington, D.C	1.828	35	1.654	35
ichita, Kans	1.320	40	1.200	40
orcester, Mass	1.470	40	1.395	40
ork, Pa	1.150	37½	.985	40
oungstown, Ohio	1.587	37½	1.480	37½

COMPOSITORS, HAND: NIGHT WORK

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
lanta, Ga	$1.707	37½	$1.471	37½
ltimore, Md	1.740	36⅔	1.520	36⅔
nghamton, N Y	1.480	37½	1.372	37½
rmingham, Ala	1.620	40	1.331	40
ston, Mass	1.840	37½	1.840	37½
ffalo, N.Y	1.733	37½	1.539	37½
tte, Mont	1.591	35	1.491	35
arleston, S.C	1.525	40	1.210	40
arleston, W. Va	1.450	40	1.375	40
arlotte, N.C	1.384	40	1.259	40
icago, Ill	2.234	36⅓	1.950	36⅓
Polish text	1.908	32½	1.657	35
cinnati, Ohio	2.000	37½	1.640	37½
veland, Ohio	2.063	37½	1.646	37½
umbus, Ohio	1.807	37½	1.622	37½
llas, Tex	1.729	35	1.513	37½
yton, Ohio	1.666	37½	1.533	37½
nver, Colo	1.730	36⅔	1.500	36⅔
Moines, Iowa	1.710	40	1.513	40
roit, Mich	2.144	36⅓	1.898	37½
luth, Minn	1.521	35½	1.405	35½
Paso, Tex	1.600	37½	1.390	37½
e, Pa	1.580	37½	1.495	37½
nd Rapids, Mich	1.655	38¾	1.375	40
Shopping News	1.650	40	1.375	40
uston, Tex	1.682	37½	1.602	37½
anapolis, Ind	1.967	37½	1.572	37½
ksonville, Fla	1.750	40	1.455	40
sas City, Mo	1.733	37½	1.552	37½
le Rock, Ark	1.440	36⅓	1.250	36⅓
Angeles, Calif	1.827	37½	1.513	37½
isville, Ky	1.760	37½	1.355	40
ison, Wis	1.512	40	1.385	40
chester, N.H	1.440	37½	1.280	37½
mphis, Tenn	1.600	37½	1.456	37½
waukee, Wis	1.946	37½	1.648	37½
neapolis, Minn	1.910	35	1.616	35
Shopping News	1.690	33⅓	1.562	33⅓
ile, Ala	1.640	37½	1.270	37½
hville, Tenn	1.450	40	1.305	40
ark, N.J	1.814	40	1.634	40
Haven, Conn	1.388	40	1.336	40
Orleans, La	1.400	40	1.300	40
York, N.Y	2.160	37½	1.873	37½
talian text	2.401	30	2.401	30
Hebrew text	3.111	27	2.865	27
Hungarian text	1.760	35	1.523	35
olk, Va	1.500	40	1.319	40
homa City, Okla	1.613	37½	1.313	40
ha, Nebr	1.660	40	1.376	40
a, Ill	1.595	38⅓	1.410	38⅓
delphia, Pa	1.613	37½	1.481	37½

TABLE 14.—*Union scales of wages and hours in the* NEWSPAPER *printing trades in selected cities, July 1, 1946, and July 1, 1945*—Continued

COMPOSITORS, HAND: NIGHT WORK—Continued

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Phoenix, Ariz	$1.490	37½	$1.390	37½
Pittsburgh, Pa	1.947	37½	1.636	37½
Portland, Maine	1.475	40	1.300	40
Portland, Oreg	1.828	36⅓	1.469	36⅓
Providence, R.I	1.783	40	1.608	40
Reading, Pa	1.610	35	1.417	35
Richmond, Va	1.463	40	1.313	40
Rochester, N.Y	1.680	37½	1.420	40
Rock Island (Ill.) district [1]	1.523	38¾	1.387	38¾
St. Louis, Mo	2.000	36⅓	1.615	36⅓
St. Paul, Minn	1.890	35	1.566	35
Salt Lake City, Utah	1.575	36⅓	1.455	36⅓
San Antonio, Tex	1.533	37½	1.350	37½
San Francisco, Calif	2.000	37½	1.573	37½
Scranton, Pa	1.744	39	1.519	39
Seattle, Wash	1.964	35	1.550	35
South Bend, Ind	1.543	40	1.328	40
Spokane, Wash	1.733	37½	1.401	37½
Tampa, Fla	1.500	37½	1.333	37½
Toledo, Ohio	1.851	37½	1.580	37½
Washington, D.C	1.970	35	1.797	35
Wichita, Kans	1.383	40	1.263	40
Worcester, Mass	1.545	40	1.470	40
York, Pa	1.250	37½	1.085	40
Youngstown, Ohio	1.680	37½	1.547	37½

MACHINE OPERATORS: DAY WORK

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Atlanta, Ga	$1.627	37½	$1.409	40
Baltimore, Md	1.670	36⅔	1.450	36
Binghamton, N.Y	1.400	37½	1.293	37
Birmingham, Ala	1.550	40	1.271	40
Boston, Mass	1.730	37½	1.730	37
Buffalo, N.Y	1.653	37½	1.472	37
Machinist-operators	1.741	37½	1.560	37
Butte, Mont	1.520	35	1.400	35
Charleston, S.C	1.450	40	1.150	40
Charleston, W. Va	1.375	40	1.325	40
Machinist-operators	1.500	4	1.450	40
Charlotte, N.C	1.316	40	1.196	40
Chicago, Ill	2.083	36⅓	1.840	36
Polish text	1.846	32½	1.723	32
Cincinnati, Ohio	1.867	37½	1.547	37
Cleveland, Ohio	1.899	37½	1.508	37
Columbus, Ohio	1.700	37½	1.533	37
Dallas, Tex	1.657	35	1.447	35
Dayton, Ohio	1.573	37½	1.466	37
Denver, Colo	1.649	36⅔	1.427	36
Des Moines, Iowa	1.592	40	1.409	40
Detroit, Mich	1.985	37½	1.747	37
German text	1.400	40	1.250	40
Duluth, Minn	1.436	35½	1.335	35
El Paso, Tex	1.520	37½	1.320	37
Erie, Pa	1.500	37½	1.415	37
Machinist-operators	1.567	37½	1.482	37
Grand Rapids, Mich	1.575	38¾	1.325	40
Shopping News	1.575	40	1.325	40
Houston, Tex	1.616	37½	1.536	37
Indianapolis, Ind	1.867	37½	1.472	37
Jackson, Miss	1.350	40	.950	40
Jacksonville, Fla	1.650	40	1.380	40
Kansas City, Mo	1.600	37½	1.460	37
Little Rock, Ark	1.370	36⅓	1.180	3
Los Angeles, Calif	1.733	37½	1.446	37
Louisville, Ky	1.653	37½	1.283	4
Madison, Wis	1.450	40	1.323	4
Manchester, N.H	1.340	37½	1.200	3
Memphis, Tenn	1.520	37½	1.380	3
Milwaukee, Wis	1.813	37½	1.541	3

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[1] Includes Rock Island and Moline, Ill., and Davenport, Iowa.

BLE 14.—*Union scales of wages and hours in the* NEWSPAPER *printing trades in selected cities, July 1, 1946, and July 1, 1945*—Continued

MACHINE OPERATORS: DAY WORK—Continued

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
neapolis, Minn.	$1.820	35	$1.536	35
Shopping News	1.600	33⅓	1.482	33⅓
bile, Ala.	1.550	37½	1.195	37½
hville, Tenn.	1.365	40	1.225	40
vark, N.J.	1.751	40	1.571	40
Haven, Conn.	1.338	40	1.286	40
Orleans, La.	1.350	40	1.300	40
York, N.Y.	2.067	37½	1.807	37½
Bohemian and Slavonic texts	1.250	40	1.250	40
Hebrew text	2.333	36	2.150	36
German text	1.938	40	1.690	40
Greek text	1.771	35	1.113	37½
Russian text	2.000	36	1.833	36
Hungarian text	1.600	35	1.446	35
Italian text	2.261	30	2.261	30
folk, Va.	1.413	40	1.256	40
homa City, Okla.	1.533	37½	1.250	40
Machinist-operators	1.667	37½	1.313	40
ha, Nebr.	1.510	40	1.310	40
ia, Ill.	1.450	38⅓	1.345	38⅓
adelphia, Pa.	1.537	37½	1.405	37½
German text	1.125	40	1.125	40
nix, Ariz.	1.420	37½	1.320	37½
burgh, Pa.	1.867	37½	1.559	37½
land, Maine:				
Agreement A	1.375	40	1.200	40
Agreement B	1.300	40	1.200	40
land, Oreg.	1.724	36⅓	1.400	36⅓
idence, R.I.	1.670	40	1.495	40
ing, Pa.	1.460	37½	1.280	37½
mond, Va.	1.400	40	1.250	40
ester, N.Y.	1.547	37½	1.350	40
erman text	.770	40	.768	40
Island (Ill.) district [1]	1.473	38¾	1.335	38¾
ouis, Mo.	1.841	36⅓	1.500	36⅓
aul, Minn.	1.760	35	1.480	35
ake City, Utah	1.476	36⅓	1.366	36⅓
ntonio, Tex.	1.467	37½	1.290	37½
rancisco, Calif.	1.867	37½	1.507	37½
ton, Pa.	1.667	39	1.442	39
achinist-operators	1.692	39	1.468	39
e, Wash.	1.857	35	1.479	35
Bend, Ind.	1.455	40	1.265	40
ne, Wash.	1.633	37½	1.334	37½
a, Fla.	1.433	37½	1.240	37½
, Ohio	1.773	37½	1.507	37½
ngton, D.C.	1.828	35	1.654	35
a, Kans.	1.320	40	1.200	40
achinist-operators	1.395	40	1.275	40
ster, Mass.	1.470	40	1.395	40
Pa.	1.150	37½	.985	40
stown, Ohio	1.587	37½	1.480	37½

MACHINE OPERATORS: NIGHT WORK

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
a, Ga.	$1.707	37½	$1.471	37½
ore, Md.	1.740	36⅔	1.520	36⅔
mton, N.Y.	1.480	37½	1.373	37½
gham, Ala.	1.620	40	1.331	40
, Mass.	1.840	37½	1.840	37½
, N.Y.	1.733	37½	1.539	37½
chinist-operators	1.821	37½	1.627	37½
Mont.	1.591	35	1.471	35
ton, S.C.	1.525	40	1.210	40
ton, W. Va.:				
chinist-operators	1.575	40	1.500	40
te, N.C.	1.384	40	1.259	40
, Ill.	2.234	36⅓	1.950	36⅓
sh text	1.908	32½	1.785	32½

s Rock Island and Moline, Ill., and Davenport, Iowa.

TABLE 14.—*Union scales of wages and hours in the* NEWSPAPER *printing trades in selected cities, July 1, 1946, and July 1, 1945*—Continued

MACHINE OPERATORS: NIGHT WORK—Continued

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Cincinnati, Ohio	$2.000	37½	$1.640	37½
Cleveland, Ohio	2.063	37½	1.646	37½
Columbus, Ohio	1.807	37½	1.622	37½
Dallas, Tex	1.729	35	1.513	35
Dayton, Ohio	1.666	37½	1.533	37½
Denver, Colo	1.730	36⅔	1.500	36⅔
Des Moines, Iowa	1.710	40	1.513	40
Detroit, Mich	2.144	37½	1.898	37½
Duluth, Minn	1.521	35½	1.405	35½
El Paso, Tex	1.600	37½	1.390	37½
Erie, Pa	1.580	37½	1.495	37½
Machinist-operators	1.647	37½	1.562	37½
Grand Rapids, Mich	1.655	38¾	1.375	40
Shopping News	1.650	40	1.375	40
Houston, Tex	1.682	37½	1.602	37½
Indianapolis, Ind	1.967	37½	1.572	37½
Jacksonville, Fla	1.750	40	1.455	40
Kansas City, Mo	1.733	37½	1.552	37½
Little Rock, Ark	1.440	36⅓	1.250	36⅓
Los Angeles, Calif	1.827	37½	1.513	37½
Louisville, Ky	1.760	37½	1.355	40
Madison, Wis	1.512	40	1.385	40
Manchester, N.H	1.440	37½	1.280	37½
Memphis, Tenn	1.600	37½	1.456	37½
Milwaukee, Wis	1.946	37½	1.648	37½
Minneapolis, Minn	1.910	35	1.616	35
Shopping News	1.690	33⅓	1.562	33⅓
Mobile Ala	1.640	37½	1.270	37
Nashville, Tenn	1.450	40	1.305	40
Newark, N.J	1.814	40	1.634	40
New Haven, Conn	1.388	40	1.336	40
New Orleans, La	1.400	40	1.350	40
New York, N.Y	2.160	37½	1.873	37
German text	2.025	40	1.743	40
Hebrew text	3.111	27	2.865	27
Hungarian text	1.760	35	1.523	35
Italian text	2.401	30	2.401	30
Norfolk, Va	1.500	40	1.319	40
Oklahoma City, Okla	1.613	37½	1.313	40
Machinist-operators	1.747	37½	1.375	40
Omaha, Nebr	1.660	40	1.376	40
Peoria, Ill	1.595	38⅓	1.410	38
Philadelphia, Pa	1.613	37½	1.481	37
Phoenix, Ariz	1.490	37½	1.390	37
Pittsburgh, Pa	1.947	37½	1.636	37
Portland, Maine	1.475	40	1.300	40
Portland, Oreg	1.828	36⅓	1.469	36
Providence, R.I	1.783	40	1.608	40
Reading, Pa	1.610	35	1.417	35
Richmond, Va	1.463	40	1.313	40
Rochester, N.Y	1.680	37½	1.420	40
Rock Island (Ill.) district [1]	1.523	38¾	1.387	38
St. Louis, Mo	2.000	36⅓	1.615	36
St. Paul, Minn	1.890	35	1.566	35
Salt Lake City, Utah	1.575	36⅓	1.455	36
San Antonio, Tex	1.533	37½	1.350	37
San Francisco, Calif	2.000	37½	1.573	37
Scranton, Pa	1.744	39	1.519	39
Machinist-operators	1.769	39	1.545	39
Seattle, Wash	1.964	35	1.550	35
South Bend, Ind	1.543	40	1.328	4
Spokane, Wash	1.733	37½	1.401	37
Tampa, Fla	1.500	37½	1.333	3
Toledo, Ohio	1.851	37½	1.580	3
Washington, D.C	1.970	35	1.797	3
Wichita, Kans	1.383	40	1.263	4
Worcester, Mass	1.545	40	1.470	4
York, Pa	1.250	37½	1.085	4
Machinist-operators	1.303	37½	1.135	4
Youngstown, Ohio	1.680	37½	1.547	3

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[1] Includes Rock Island and Moline, Ill., and Davenport, Iowa.

ABLE 14.—*Union scales of wages and hours in the* NEWSPAPER *printing trades in selected cities, July 1, 1946, and July 1, 1945*—Continued

MACHINE TENDERS (MACHINISTS): DAY WORK

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
anta, Ga	$1.627	37½	$1.409	40
timore, Md	1.670	36⅔	1.450	36⅔
ghamton, N.Y	1.400	37½	1.293	37½
mingham, Ala	1.550	40	1.271	40
ton, Mass	1.730	37½	1.730	37½
falo, N.Y	1.741	37½	1.560	37½
te, Mont	1.591	35	1.400	35
rleston, S.C	1.490	40	1.200	40
rleston, W. Va	1.625	40	1.575	40
rlotte, N.C	1.316	40	1.196	40
cago, Ill	2.083	36⅓	1.840	36⅓
Polish text	1.846	32½	1.723	32½
cinnati, Ohio	1.867	37½	1.547	37½
veland, Ohio	1.899	37½	1.508	37½
mbus, Ohio	1.700	37½	1.533	37½
as, Tex	1.657	35	1.447	37½
ton, Ohio	1.573	37½	1.466	37½
ver, Colo	1.649	36⅔	1.427	36⅔
oit, Mich	1.985	37½	1.747	37½
uth, Minn	1.436	35½	1.335	35½
aso, Tex	1.520	37½	1.320	37½
nd Rapids, Mich	1.575	38¾	1.325	40
ston, Tex	1.616	37½	1.536	37½
napolis, Ind	1.867	37½	1.472	37½
sonville, Fla	1.650	40	1.380	40
as City, Mo	1.600	37½	1.460	37½
e Rock, Ark	1.370	36⅓	1.180	36⅓
Angeles, Calif	1.733	37½	1.446	37½
sville, Ky	1.653	37½	1.283	40
son, Wis	1.450	40	1.323	40
chester, N.H	1.340	37½	1.200	37½
phis, Tenn	1.520	37½	1.380	37½
aukee, Wis	1.813	37½	1.541	37½
eapolis, Minn	1.820	35	1.536	35
le, Ala	1.550	37½	1.190	37½
ville, Tenn	1.365	40	1.225	40
rk, N.J	1.751	40	1.571	40
Haven, Conn	1.445	40	1.389	40
York, N.Y.:				
to 12 machines	2.067	37½	1.757	37½
3 or more machines	2.067	37½	1.813	37½
reek text	1.771	35	1.253	37½
lk, Va	1.413	40	1.256	40
oma City, Okla	1.533	37½	1.250	40
a, Nebr	1.660	40	1.376	40
, Ill	1.450	38⅓	1.345	38⅓
delphia, Pa	1.537	37½	1.405	37½
ix, Ariz	1.490	37½	1.390	37½
urgh, Pa	1.867	37½	1.559	37½
nd, Maine	1.375	40	1.200	40
nd, Oreg	1.724	36⅓	1.400	36⅓
dence, R.I	1.670	40	1.495	40
ng, Pa	1.513	37½	1.333	37½
ond, Va	1.400	40	1.250	40
ster, N.Y	1.547	37½	1.350	40
Island (Ill.) district [1]	1.523	38¾	1.387	38¾
uis, Mo	1.841	36⅓	1.500	36⅓
ul, Minn	1.760	35	1.480	35
ake City, Utah	1.545	36⅓	1.435	36⅓
ntonio, Tex	1.467	37½	1.290	37½
ancisco, Calif	1.867	37½	1.507	37½
e, Wash	1.857	35	1.479	35
Bend, Ind	1.455	40	1.265	40
ne, Wash	1.633	37½	1.334	37½
, Ohio	1.773	37½	1.507	37½
gton, D.C	1.828	35	1.654	35
ta, Kans	1.395	40	1.275	40
ter, Mass	1.470	40	1.395	40
Pa	1.203	37½	1.035	40
stown, Ohio	1.587	37½	1.480	37½

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ludes Rock Island and Moline, Ill., and Davenport, Iowa.

TABLE 14.—*Union scales of wages and hours in the* NEWSPAPER *printing trades in selected cities, July 1, 1946, and July 1, 1945*—Continued

MACHINE TENDERS (MACHINISTS): NIGHT WORK

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Atlanta, Ga.	$1.707	37½	$1.471	37½
Baltimore, Md.	1.740	36⅔	1.520	36⅔
Binghamton, N.Y.	1.480	37½	1.373	37½
Birmingham, Ala.	1.620	40	1.331	40
Boston, Mass.	1.840	37½	1.840	37½
Buffalo, N.Y.	1.821	37½	1.627	37½
Butte, Mont.	1.662	35	1.471	35
Charleston, S.C.	1.565	40	1.260	40
Charlotte, N.C.	1.384	40	1.259	40
Chicago, Ill.	2.234	36⅓	1.950	36⅓
Polish text	1.908	32½	1.785	32½
Cincinnati, Ohio	2.000	37½	1.640	37½
Cleveland, Ohio	2.063	37½	1.646	37½
Columbus, Ohio	1.807	37½	1.622	37½
Dallas, Tex.	1.729	35	1.513	37½
Dayton, Ohio	1.666	37½	1.533	37½
Denver, Colo.	1.730	36⅔	1.500	36⅔
Detroit, Mich.	2.144	37½	1.898	37½
Duluth, Minn.	1.521	35½	1.405	35½
El Paso, Tex.	1.600	37½	1.390	37½
Grand Rapids, Mich.	1.655	38¾	1.375	40
Houston, Tex.	1.682	37½	1.602	37½
Indianapolis, Ind.	1.967	37½	1.572	37½
Jacksonville, Fla.	1.750	40	1.455	40
Kansas City, Mo.	1.733	37½	1.552	37½
Little Rock, Ark.	1.440	36⅓	1.250	36⅓
Los Angeles, Calif.	1.827	37½	1.513	37½
Louisville, Ky.	1.760	37½	1.355	40
Manchester, N.H.	1.440	37½	1.280	37½
Memphis, Tenn.	1.600	37½	1.456	37½
Milwaukee, Wis.	1.946	37½	1.648	37½
Minneapolis, Minn.	1.910	35	1.616	35
Shopping News	1.690	33⅓	1.562	33⅓
Mobile, Ala.	1.640	37½	1.270	37½
Nashville, Tenn.	1.450	40	1.305	40
Newark, N.J.	1.814	40	1.634	40
New Haven, Conn.	1.499	40	1.443	40
New York, N.Y.:				
1 to 12 machines	2.160	37½	1.868	37½
13 or more machines	2.160	37½	1.924	37½
Norfolk, Va.	1.500	40	1.319	40
Oklahoma City, Okla.	1.613	37½	1.313	40
Omaha, Nebr.	1.660	40	1.376	40
Peoria, Ill.	1.595	38⅓	1.410	38⅓
Philadelphia, Pa.	1.613	37½	1.481	37½
Phoenix, Ariz.	1.560	37½	1.460	37½
Pittsburgh, Pa.	1.947	37½	1.636	37½
Portland, Maine	1.475	40	1.300	40
Portland, Oreg.	1.828	36⅓	1.469	36
Providence, R.I.	1.783	40	1.608	40
Reading, Pa.	1.667	35	1.477	35
Richmond, Va.	1.463	40	1.313	40
Rochester, N.Y.	1.680	37½	1.420	40
Rock Island (Ill.) district [1]	1.573	38¾	1.439	38
St. Louis, Mo.	2.000	36⅓	1.615	36
St. Paul, Minn.	1.890	35	1.566	35
Salt Lake City, Utah	1.644	36⅓	1.524	36
San Antonio, Tex.	1.533	37½	1.350	37
San Francisco, Calif.	2.000	37½	1.573	37
Seattle, Wash.	1.964	35	1.550	35
Spokane, Wash.	1.733	37½	1.401	37
Toledo, Ohio	1.851	37½	1.580	37
Washington, D.C.	1.970	35	1.797	35
Wichita, Kans.	1.458	40	1.338	40
Worcester, Mass.	1.545	40	1.470	40
York, Pa.	1.303	37½	1.135	40
Youngstown, Ohio	1.680	37½	1.547	37

MAILERS: DAY WORK

Atlanta, Ga.	$1.065	40	$0.920	40
Baltimore, Md.	1.120	40	.920	40
Birmingham, Ala.	1.050	40	.863	40

[1] Includes Rock Island and Moline, Ill., and Davenport, Iowa.

ABLE 14.—*Union scales of wages and hours in the* NEWSPAPER *printing trades in selected cities, July 1, 1946, and July 1, 1945*—Continued

MAILERS: DAY WORK—Continued

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
ston, Mass.	$1.600	40	$1.220	40
ffalo, N.Y.	1.160	40	1.000	40
cte, Mont.	1.282	40	1.164	40
Foremen	1.415	40	1.259	40
cago, Ill.	1.394	40	1.171	40
cinnati, Ohio	1.447	38¾	1.190	38¾
veland, Ohio	1.388	40	1.125	40
Shopping News	1.785	36⅔	1.403	36⅔
umbus, Ohio	1.313	40	1.000	40
las, Tex.	1.050	40	.800	40
ver, Colo.	1.128	40	1.028	40
Moines, Iowa	1.359	40	1.175	40
uth, Minn.	1.050	37½	1.000	40
Paso, Tex.	1.143	37½	.943	40
nd Rapids, Mich.	1.125	40	1.000	40
ston, Tex.	1.035	40	.875	40
anapolis, Ind.	1.340	37½	1.191	37½
sas City, Mo.	1.218	40	1.093	40
Angeles, Calif.	1.449	37½	1.122	37½
sville, Ky.	1.135	40	.935	40
chester, N.H.	1.300	37½	1.160	37½
Men-in-charge	1.320	37½	1.240	37½
phis, Tenn.	1.287	37½	1.180	40
aukee, Wis.	1.473	37½	1.201	37½
neapolis, Minn.	1.500	40	1.138	40
Shopping News	1.138	40	1.078	40
ville, Tenn.	1.000	40	.855	40
rk, N.J.	1.350	40	1.150	40
Orleans, La.	.875	40	.850	40
York, N.Y.	1.484	40	1.216	40
Stampers	1.547	40	1.278	40
Automatic machine operators	1.609	40	1.341	40
homa City, Okla.	1.113	40	1.020	40
a, Ill.	1.250	40	1.000	40
delphia, Pa.:				
Agreement A	1.227	37½	1.125	37½
Agreement B	1.127	35½	1.055	37½
burgh, Pa.	1.417	37½	1.150	37½
and, Maine:				
Bench workers:				
Rate A	.700	40	.588	40
Rate B	1.020	40	.800	40
Stampers and lay-out men	1.163	40	.925	40
and, Oreg.	1.519	40	1.250	40
ester, N.Y.	1.226	37½	.891	40
ouis, Mo.	1.500	40	1.150	40
aul, Minn.	1.470	40	1.069	40
ake City, Utah	1.194	40	.969	40
rancisco, Calif.	1.590	37½	1.230	37½
ton, Pa.	1.172	35	.870	35
e, Wash.	1.547	37½	1.167	37½
ne, Wash.	1.353	40	1.353	40
o, Ohio	1.333	37½	1.200	37½
ngton, D.C.	1.130	40	1.030	40
ta, Kans.	.850	40	.850	40
gstown, Ohio	1.250	40	1.035	37½

MAILERS: NIGHT WORK

a, Ga.	$1.133	37½	$0.981	37½
ore, Md.	1.280	35	1.051	35
gham, Ala.	1.100	40	.913	40
, Mass.	1.660	40	1.260	40
o, N.Y.	1.320	37½	1.120	37½
Mont.	1.282	37½	1.164	37½
remen	1.415	37½	1.259	37½
o, Ill.	1.593	37½	1.319	37½
nati, Ohio	1.524	38⅓	1.263	38⅓
and, Ohio	1.572	35	1.286	35
opping News	1.946	35	1.535	35

TABLE 14.—*Union scales of wages and hours in the* NEWSPAPER *printing trades in selected cities, July 1, 1946, and July 1, 1945*—Continued

MAILERS: NIGHT WORK—Continued

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Denver, Colo.:				
Agreement A	$1.244	36⅓	$1.134	36⅓
Agreement B	1.491	36⅔	1.350	36⅔
Des Moines, Iowa	1.496	40	1.288	40
Duluth, Minn	1.110	37½	1.050	40
El Paso, Tex	1.218	37½	1.018	40
Grand Rapids, Mich	1.200	40	1.050	40
Houston, Tex	1.065	40	.905	40
Indianapolis, Ind	1.420	37½	1.271	37½
Kansas City, Mo	1.273	40	1.135	40
Los Angeles, Calif	1.517	37½	1.159	37½
Louisville, Ky	1.200	40	1.000	40
Manchester, N.H	1.400	37½	1.240	37½
Men-in-charge	1.400	37½	1.320	37½
Memphis, Tenn	1.333	37½	1.200	37½
Milwaukee, Wis	1.580	37½	1.278	37½
Minneapolis, Minn	1.575	40	1.190	40
Nashville, Tenn	1.100	37½	.900	37½
Newark, N.J	1.600	35	1.371	35
New York, N.Y	1.660	37	1.369	37
Stampers	1.728	37	1.437	37
Automatic machine operators	1.796	37	1.505	37
Oklahoma City, Okla	1.163	40	1.069	40
Peoria, Ill	1.350	40	1.050	40
Philadelphia, Pa.:				
Agreement A	1.357	35	1.204	35
Agreement B	1.266	33⅓	1.124	33⅓
Pittsburgh, Pa	1.484	37½	1.217	37½
Portland, Oreg	1.620	37½	1.333	37½
Rochester, N.Y	1.306	37½	.941	40
St. Louis, Mo	1.714	35	1.314	35
St. Paul, Minn	1.580	40	1.119	40
Salt Lake City, Utah	1.256	40	1.000	40
San Francisco, Calif	1.677	37½	1.250	37½
Seattle, Wash	1.657	35	1.250	35
Scranton, Pa	1.222	35	.920	35
Spokane, Wash	1.436	40	1.436	40
Toledo, Ohio	1.400	37½	1.267	37½
Washington, D.C	1.180	40	1.080	40
Wichita, Kans	.900	40	.900	40
Youngstown, Ohio	1.350	40	1.135	37½

PHOTOENGRAVERS: DAY WORK

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Atlanta, Ga	$1.787	37½	$1.581	40
Baltimore, Md	1.863	40	1.575	40
Birmingham, Ala	1.700	40	1.450	40
Boston, Mass	1.867	37½	1.637	37
Tint layers	2.080	37½	1.850	37
Buffalo, N.Y	1.920	37½	1.725	37
Chicago, Ill	2.148	37½	1.840	37
Cincinnati, Ohio	2.000	37½	1.720	37
Cleveland, Ohio	2.133	37½	1.767	37
Columbus, Ohio	2.027	37½	1.760	37
Dayton, Ohio	1.770	40	1.604	40
Denver, Colo	1.640	38⅓	1.509	38
Des Moines, Iowa	1.638	40	1.638	40
Detroit, Mich	2.118	37½	1.840	37
Shopping News	1.800	37½	1.667	37
Duluth, Minn	1.525	40	1.400	40
Grand Rapids, Mich	1.750	37½	1.650	37
Houston, Tex	1.718	40	1.528	40
Indianapolis, Ind	1.687	37½	1.687	37
Jacksonville, Fla	1.650	40	1.380	40
Kansas City, Mo	1.750	40	1.700	40
Los Angeles, Calif	1.821	40	1.553	40
Louisville, Ky	1.700	40	1.430	40
Gravure	1.700	40	1.438	40
Manchester, N.H	1.350	37½	1.350	37

ABLE 14.—*Union scales of wages and hours in the* NEWSPAPER *printing trades in selected cities, July 1, 1946, and July 1, 1945*—Continued

PHOTOENGRAVERS: DAY WORK—Continued

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
emphis, Tenn	$1.739	40	$1.581	40
ilwaukee, Wis	2.000	37½	1.741	37½
inneapolis, Minn	1.825	40	1.550	40
ashville, Tenn	1.500	40	1.500	40
ew Orleans, La	1.400	40	1.300	40
ew York, N.Y	2.253	37½	1.867	37½
orfolk, Va	1.475	40	1.250	40
klahoma City, Okla	1.733	37½	1.580	40
maha, Nebr	1.567	40	1.567	40
eoria, Ill	1.625	40	1.500	40
hiladelphia, Pa	1.787	37½	1.787	37½
ttsburgh, Pa	2.040	37½	1.725	37½
rtland, Maine	1.567	37	1.486	37
rtland, Oreg	1.580	40	1.580	40
ovidence, R.I	1.863	40	1.690	40
chmond, Va	1.538	40	1.538	40
ochester, N.Y	1.920	37½	1.600	40
ock Island (Ill.) district [1]	1.500	38	1.362	38
. Louis, Mo	2.000	37½	1.688	40
. Paul, Minn	1.725	40	1.600	40
lt Lake City, Utah	1.600	40	1.375	40
n Antonio, Tex	1.750	40	1.550	40
n Francisco, Calif	1.938	37½	1.577	37½
ranton, Pa	1.834	40	1.563	40
attle, Wash	1.980	40	1.650	40
ringfield, Mass	1.575	40	1.450	40
mpa, Fla	1.450	40	1.210	40
ledo, Ohio	1.760	37½	1.693	37½
shington, D.C	2.000	37½	1.760	37½
chita, Kans	1.581	40	1.438	40
rcester, Mass	1.500	40	1.500	40

PHOTOENGRAVERS: NIGHT WORK

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
anta, Ga	$1.920	37½	$1.706	40
ltimore, Md	2.013	40	1.725	40
mingham, Ala	1.800	40	1.525	40
ston, Mass	2.000	37½	1.770	37½
icago, Ill	2.388	37½	2.040	37½
cinnati, Ohio	2.133	37½	1.827	37½
veland, Ohio	2.429	35	2.034	35
umbus, Ohio	2.160	37½	1.893	37½
yton, Ohio	1.900	40	1.718	40
nver, Colo	1.770	38⅓	1.640	38⅓
s Moines, Iowa	1.763	40	1.763	40
troit, Mich	2.251	37½	1.973	37½
luth, Minn	1.625	40	1.498	40
nd Rapids, Mich	2.000	37½	1.750	37½
uston, Tex	1.843	40	1.663	40
ianapolis, Ind	1.820	37½	1.820	37½
ksonville, Fla	1.750	40	1.505	40
nsas City, Mo	1.875	40	1.775	40
Angeles, Calif	1.969	37½	1.683	37½
isville, Ky	1.825	40	1.500	40
Gravure men	1.825	40	1.500	40
nphis, Tenn	1.877	40	1.706	40
waukee, Wis	2.130	37½	1.875	37½
neapolis, Minn	1.950	40	1.675	40
hville, Tenn	1.625	40	1.625	40
ark, N.J	2.320	37½	2.160	37½
Orleans, La	1.450	40	1.350	40
York, N.Y	2.547	37½	2.160	37½
folk, Va	1.600	40	1.313	40
ahoma City, Okla	1.944	36	1.870	36
aha, Nebr	1.697	40	1.697	40
ria, Ill	1.789	36½	1.643	36½
adelphia, Pa	2.000	37½	2.000	37½
sburgh, Pa	2.147	37½	1.832	37½

ncludes Rock Island and Moline, Ill., and Davenport, Iowa.

TABLE 14.—*Union scales of wages and hours in the* NEWSPAPER *printing trades in selected cities, July 1, 1946, and July 1, 1945*—Continued

PHOTOENGRAVERS: NIGHT WORK—Continued

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Portland, Maine	$1.649	37	$1.568	37
Portland, Oreg.	1.656	40	1.656	40
Providence, R.I.	1.963	40	1.790	40
Richmond, Va.	1.663	40	1.663	40
Rochester, N.Y.	2.053	37½	1.725	40
St. Louis, Mo.	2.133	37½	1.842	38
St. Paul, Minn.	1.854	40	1.725	40
Salt Lake City, Utah	1.745	40	1.500	40
San Antonio, Tex.	1.875	40	1.675	40
San Francisco, Calif.	2.073	37½	1.647	37½
Scranton, Pa.	2.177	36	1.876	36
Seattle, Wash.	2.063	40	1.713	40
Springfield, Mass.	1.867	37½	1.680	37½
Tampa, Fla.	1.600	40	1.325	40
Toledo, Ohio	1.920	37½	1.827	37½
Washington, D.C.	2.271	35	2.014	35
Wichita, Kans.	1.706	40	1.563	40
Worcester, Mass.	1.625	40	1.625	40

JOURNEYMEN PRESSMEN: DAY WORK

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Atlanta, Ga.	$1.627	37½	$1.281	40
Baltimore, Md.	1.519	40	1.319	40
Binghamton, N.Y.	1.400	37½	1.293	37
Birmingham, Ala.	1.438	40	1.225	40
Boston, Mass.:				
Agreement A	1.890	40	1.445	40
Agreement B	1.965	40	1.462	40
Brakemen	2.040	40	1.537	40
Buffalo, N.Y.:				
Agreement A	1.464	40	1.294	40
Agreement B	1.561	37½	1.380	37
Butte, Mont.	1.465	40	1.345	40
Charleston, W. Va.	1.400	40	1.250	40
Charlotte, N.C.	1.226	40	1.106	40
Chicago, Ill.	1.700	37½	1.412	37
Color press	1.767	37½	1.479	37
Cincinnati, Ohio	1.681	40	1.383	40
Cleveland, Ohio:				
Agreement A	1.825	40	1.475	40
Agreement B	1.675	40	1.325	40
Offside and color press	1.758	40	1.391	40
Gravure	1.800	40	1.450	40
Offside and color press	1.960	40	1.579	40
Shopping News	1.990	37½	1.600	37
Columbus, Ohio	1.588	37½	1.344	37
Dallas, Tex.	1.339	35	1.139	40
Dayton, Ohio	1.480	40	1.380	40
Denver, Colo.	1.433	37½	1.300	37
Des Moines, Iowa	1.560	40	1.350	40
Detroit, Mich.:				
Agreement A	1.837	37½	1.489	38
Offside register men	1.904	37½	1.554	38
Agreement B	1.971	37½	1.554	38
Duluth, Minn.	1.290	35	1.290	35
El Paso, Tex.	1.360	40	1.160	40
Erie, Pa.	1.249	40	1.249	40
Grand Rapids, Mich.	1.450	40	1.175	40
Shopping News	1.425	40	1.125	40
Houston, Tex.	1.353	40	1.236	40
Indianapolis, Ind.	1.480	37½	1.380	37
Jacksonville, Fla.	1.650	40	1.380	40
Kansas City, Mo.	1.361	40	1.215	40
Color press	1.393	40	1.246	40
Little Rock, Ark.	1.290	37½	1.110	37
Los Angeles, Calif.	1.605	37½	1.319	37
Louisville, Ky.	1.500	40	1.283	40
Madison, Wis.	1.450	40	1.300	35
Manchester, N.H.	1.340	37½	1.340	37

BLE 14.—*Union scales of wages and hours in the* NEWSPAPER *printing trades in selected cities, July 1, 1946, and July 1, 1945*—Continued

JOURNEYMEN PRESSMEN: DAY WORK—Continued

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
nphis, Tenn.	$1.500	37½	$1.307	37½
vaukee, Wis.	1.673	37½	1.395	37½
Colormen	1.760	37½	1.448	37½
neapolis, Minn.	1.605	40	1.330	40
ile, Ala.	1.270	37½	1.170	37½
nville, Tenn.	1.355	40	1.209	40
ark, N.J.	1.648	40	1.473	40
Haven, Conn.	1.350	40	1.225	40
Orleans, La.	1.300	33⅓	1.250	40
York, N.Y.	1.788	40	1.544	40
Gravure	1.800	40	1.613	40
Color	1.875	40	1.688	40
olk, Va.	1.250	40	1.093	40
homa City, Okla.	1.500	37½	1.219	40
Color press	1.567	37½	1.281	40
ha, Nebr.	1.498	40	1.275	40
ia, Ill.	1.450	38⅓	1.260	38⅓
delphia, Pa.	1.433	37½	1.300	37½
Gravure:				
Pressmen	1.594	40	1.469	40
Journeymen	1.460	40	1.335	40
nix, Ariz.	1.420	37½	1.320	37½
burgh, Pa.	1.595	37½	1.329	37½
and, Maine:				
greement A	1.375	40	1.240	40
greement B	1.200	40	1.200	40
and, Oreg.	1.600	37½	1.313	37½
dence, R. I.	1.680	40	1.550	40
ing Pa.	1.460	37½	1.280	37½
nond, Va.	1.343	40	1.193	40
ester, N. Y.	1.547	37½	1.351	40
Island (Ill.) district[1]	1.540	37	1.399	37
uis, Mo.	1.780	37½	1.425	40
ul, Minn.	1.515	40	1.258	40
ake City, Utah	1.457	37½	1.224	37½
ntonio, Texas	1.300	40	1.094	40
rancisco, Calif.	1.760	37½	1.400	37½
ton, Pa.	1.551	40	1.333	40
e, Wash.	1.733	37½	1.380	37½
hopping News	2.000	35	1.621	35
ne, Wash.	1.519	40	1.186	40
gfield, Mass.	1.375	40	1.250	40
hopping News	1.400	40	1.250	40
a, Fla.:				
greement A	1.433	37½	1.240	37½
greement B	1.440	37½	1.080	37½
, Ohio:				
greement A	1.540	37½	1.407	37½
greement B	1.540	37½	1.385	37½
ngton, D. C.	1.579	37½	1.413	37½
a, Kans.	1.064	40	.944	40
ter, Mass.	1.320	40	1.220	40
Pa.	1.150	40	1.075	40
stown, Ohio	1.388	40	1.238	40

JOURNEYMEN PRESSMEN: NIGHT WORK

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
a, Ga.	$1.735	37½	$1.367	37½
ore, Md.	1.736	35	1.507	35
mton, N.Y.	1.480	37½	1.373	37½
gham, Ala.	1.643	35	1.400	35
, Mass.	2.100	36	1.605	36
, N.Y.	1.641	37½	1.447	37½
Mont.	1.503	40	1.383	40
ton, W.Va.	1.400	40	1.350	40
te, N.C.	1.286	40	1.166	40
, Ill.	1.925	35	1.574	35
or press	1.997	35	1.646	35

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udes Rock Island and Moline, Ill., and Davenport, Iowa.

TABLE 14.—*Union scales of wages and hours in the* NEWSPAPER *printing trades in selected cities, July 1, 1946, and July 1, 1945*—Continued

JOURNEYMEN PRESSMEN: NIGHT WORK—Continued

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Cincinnati, Ohio	$1.770	40	$1.466	40
Cleveland, Ohio	1.943	35	1.514	35
Offside and color press	2.039	35	1.590	35
Gravure	2.086	35	1.657	35
Offside and color press	2.085	35	1.804	35
Columbus, Ohio	1.641	37½	1.397	37½
Dallas, Tex	1.388	35	1.188	40
Dayton, Ohio	1.536	40	1.411	40
Denver, Colo.:				
Agreement A	1.536	35	1.393	35
Agreement B	1.586	35	1.439	35
Des Moines, Iowa	1.670	40	1.433	40
Detroit, Mich.:				
Agreement A	1.969	35	1.629	35
Agreement B	1.969	35	1.629	35
Offside register men	2.040	35	1.700	35
Duluth, Minn	1.365	35	1.365	35
El Paso, Tex	1.423	40	1.160	40
Grand Rapids, Mich	1.525	40	1.225	40
Houston, Tex	1.546	35	1.413	35
Indianapolis, Ind	1.570	37½	1.470	37½
Jacksonville, Fla	1.750	40	1.455	40
Kansas City, Mo	1.461	40	1.276	40
Colormen	1.493	40	1.308	40
Little Rock, Ark	1.360	37½	1.180	37½
Los Angeles, Calif	1.720	35	1.413	35
Louisville, Ky	1.625	40	1.355	40
Manchester, N.H	1.440	37½	1.440	37½
Memphis, Tenn	1.567	37½	1.327	37½
Milwaukee, Wis	1.829	35	1.509	35
Colormen	1.921	35	1.566	35
Minneapolis, Minn	1.680	40	1.405	40
Mobile, Ala	1.330	37½	1.190	37
Nashville, Tenn	1.445	37½	1.289	37
Newark, N.J	1.990	35	1.790	35
New Haven, Conn	1.350	40	1.225	40
New York, N.Y	2.113	35½	1.810	35
Gravure	2.051	39	1.858	39
Color	2.128	39	1.936	39
Norfolk, Va	1.319	40	1.143	40
Oklahoma City, Okla	1.567	37½	1.281	40
Color press	1.633	37½	1.344	40
Omaha, Nebr	1.594	40	1.340	40
Peoria, Ill	1.590	38⅓	1.310	38
Philadelphia, Pa	1.579	35⅓	1.440	35
Gravure:				
Pressmen	1.719	40	1.594	40
Journeymen	1.575	40	1.450	40
Phoenix, Ariz	1.490	37½	1.390	37
Pittsburgh, Pa	1.662	37½	1.395	37
Portland, Maine	1.475	40	1.340	40
Portland, Oreg	1.750	35	1.443	35
Providence, R.I	1.733	38	1.600	38
Reading, Pa	1.610	35	1.417	35
Richmond, Va	1.405	40	1.255	40
Rochester, N.Y	1.653	37½	1.435	40
St. Louis, Mo	1.907	35	1.625	35
St. Paul, Minn	1.628	40	1.320	40
Salt Lake City, Utah	1.524	37½	1.290	37
San Antonio, Tex	1.300	40	1.094	40
San Francisco, Calif	1.867	37½	1.440	37
Scranton, Pa	1.801	35	1.551	35
Seattle, Wash	1.857	35	1.479	35
Spokane, Wash	1.619	40	1.236	40
Springfield, Mass	1.375	40	1.250	40
Tampa, Fla	1.527	37½	1.360	37
Toledo, Ohio:				
Agreement A	1.607	37½	1.473	37
Agreement B	1.607	37½	1.452	37
Washington, D.C	1.679	37½	1.513	37
Wichita, Kans	1.114	40	.994	40
Worcester, Mass	1.509	35	1.394	35
York, Pa	1.300	37½	1.180	37
Youngstown, Ohio	1.743	35	1.556	3

TABLE 14.—*Union scales of wages and hours in the* NEWSPAPER *printing trades in selected cities, July 1, 1946, and July 1, 1945*—Continued

PRESSMEN-IN-CHARGE: DAY WORK

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
tlanta, Ga	$1.780	37½	$1.425	40
altimore, Md	1.644	40	1.444	40
irmingham, Ala	1.531	40	1.319	40
oston, Mass.:				
Agreement A	2.040	40	1.600	40
Agreement B	2.115	40	1.612	40
uffalo, N.Y.:				
Agreement A	1.589	40	1.419	40
Agreement B	1.695	37½	1.513	37½
utte, Mont	1.590	40	1.470	40
harleston, W. Va	1.628	40	1.475	40
hicago, Ill	1.873	37½	1.585	37½
Color press	2.007	37½	1.719	37½
incinnati, Ohio	1.782	40	1.484	40
leveland, Ohio:				
Agreement A	2.032	40	1.644	40
Agreement B	1.841	40	1.456	40
Gravure	1.960	40	1.579	40
Shopping News	2.190	37½	1.800	37½
olumbus, Ohio	1.921	37½	1.477	37½
allas, Tex	1.402	35	1.264	40
ayton, Ohio	1.573	40	1.473	40
enver, Colo	1.533	37½	1.400	37½
es Moines, Iowa	2.560	40	2.100	40
etroit, Mich:				
Agreement A	2.037	37½	1.684	38⅓
Agreement B	2.171	37½	1.684	38⅓
Color press	2.037	37½	1.684	38⅓
Black press	1.971	37½	1.619	38⅓
uluth, Minn	1.361	35	1.361	35
Color press	1.433	35	1.433	35
Paso, Tex	1.391	40	1.191	40
ie, Pa	1.399	40	1.399	40
ouston, Tex	1.415	40	1.299	40
dianapolis, Ind	1.620	37½	1.520	37½
cksonville, Fla	1.775	40	1.480	40
nsas City, Mo	1.424	40	1.278	40
ttle Rock, Ark	1.390	37½	1.210	37½
s Angeles, Calif	1.809	37½	1.395	37½
uisville, Ky	1.625	40	1.345	40
adison, Wis	1.525	40	1.386	35
nchester, N.H	1.447	37½	1.447	37½
mphis, Tenn	1.639	37½	1.427	37½
lwaukee, Wis	1.827	37½	1.501	37½
nneapolis, Minn	1.730	40	1.455	40
shville, Tenn	1.341	40	1.341	40
wark, N.J	1.835	40	1.660	40
w Haven, Conn	1.475	40	1.300	40
w Orleans, La	1.413	33⅓	1.363	40
w York, N.Y	1.975	40	1.732	40
Gravure	2.025	40	1.838	40
rfolk, Va	1.375	40	1.218	40
lahoma City, Okla	1.633	37½	1.344	40
aha, Nebr	1.623	40	1.350	40
ria, Ill	1.580	38⅓	1.392	38⅓
iladelphia, Pa	1.567	37½	1.433	37½
Gravure	1.753	40	1.628	40
tsburgh, Pa	1.662	37½	1.395	37½
tland, Oreg	1.700	37½	1.413	37½
ovidence, R.I	1.758	40	1.628	40
ading, Pa	1.594	37½	1.413	37½
hmond, Va	1.593	40	1.318	40
chester, N.Y	1.680	37½	1.445	40
k Island (Ill.) district [1]	1.702	37	1.551	37
Louis, Mo	1.893	37½	1.552	40
Paul, Minn	1.640	40	1.383	40
t Lake City, Utah	1.590	37½	1.357	37½
Antonio, Tex	1.456	40	1.219	40
Francisco, Calif	1.936	37½	1.467	37½
anton, Pa	1.601	40	1.333	40

Includes Rock Island and Moline, Ill., and Davenport, Iowa.

TABLE 14.—*Union scales of wages and hours in the* NEWSPAPER *printing trades in selected cities, July 1, 1946, and July 1, 1945*—Continued

PRESSMEN-IN-CHARGE: DAY WORK—Continued

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Seattle, Wash.	$1.867	37½	$1.513	37½
Shopping News	2.143	35	1.907	35
Spokane, Wash.	1.652	40	1.300	40
Springfield, Mass.	1.500	40	1.375	40
Tampa, Fla.	1.566	37½	1.373	37½
Toledo, Ohio	1.687	37½	1.553	37½
Assistant men-in-charge	1.613	37½	1.480	37½
Washington, D.C.	1.712	37½	1.547	37½
Wichita, Kans.	1.127	40	1.007	40
Worcester, Mass.	1.445	40	1.300	40
Youngstown, Ohio	1.513	40	1.363	40

PRESSMEN-IN-CHARGE: NIGHT WORK

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Atlanta, Ga.	$1.888	37½	$1.520	37½
Baltimore, Md.	1.879	35	1.650	35
Birmingham, Ala.	1.750	35	1.507	35
Boston, Mass.	2.267	36	1.778	36
Buffalo, N.Y.	1.775	37½	1.580	37½
Butte, Mont.	1.628	40	1.508	40
Charleston, W. Va.	1.628	40	1.577	40
Chicago, Ill.	2.121	35	1.770	35
Color press	2.264	35	1.913	35
Cincinnati, Ohio	1.868	40	1.564	40
Cleveland, Ohio	2.136	35	1.664	35
Gravure	2.271	35	1.804	35
Columbus, Ohio	1.775	37½	1.531	37½
Dallas, Tex.	1.451	35	1.313	40
Dayton, Ohio	1.663	40	1.538	40
Denver, Colo.:				
Agreement A	1.643	35	1.500	35
Agreement B	1.693	35	1.546	35
Des Moines, Iowa	2.670	40	2.277	40
Detroit, Mich.	2.185	35	1.843	35
Black press	2.111	35	1.771	35
Duluth, Minn.	1.519	35	1.519	35
El Paso, Tex.	1.454	40	1.191	40
Houston, Tex.	1.617	35	1.484	35
Indianapolis, Ind.	1.710	37½	1.610	37½
Jacksonville, Fla.	1.875	40	1.580	40
Kansas City, Mo.	1.524	40	1.339	40
Little Rock, Ark.	1.460	37½	1.280	37½
Los Angeles, Calif.	2.073	35	1.495	35
Louisville, Ky.	1.750	40	1.418	40
Manchester, N.H.	1.547	37½	1.547	37½
Memphis, Tenn.	1.708	37½	1.447	37½
Milwaukee, Wis.	1.993	35	1.623	35
Minneapolis, Minn.	1.805	40	1.530	40
Nashville, Tenn.	1.431	37½	1.431	37½
Newark, N.J.	2.205	35	2.005	35
New Haven, Conn.	1.475	40	1.300	40
New York, N.Y.	2.324	35½	2.021	35½
Gravure	2.282	39	2.090	39
Norfolk, Va.	1.438	40	1.268	40
Oklahoma City, Okla.	1.767	37½	1.406	40
Omaha, Nebr.	1.719	40	1.403	40
Peoria, Ill.	1.720	38⅓	1.441	38⅓
Philadelphia, Pa.	1.721	35⅓	1.582	35⅓
Gravure	1.890	40	1.765	40
Pittsburgh, Pa.	1.729	37½	1.463	37
Portland, Oreg.	1.857	35	1.550	35
Providence, R.I.	1.815	38	1.681	38
Reading, Pa.	1.753	35	1.560	35
Richmond, Va.	1.655	40	1.380	40
Rochester, N.Y.	1.787	37½	1.529	40
St. Louis, Mo.	2.029	35	1.746	35
St. Paul, Minn.	1.753	40	1.445	40
Salt Lake City, Utah	1.657	37½	1.423	37
San Antonio, Tex.	1.456	40	1.219	40
San Francisco, Calif.	2.053	37½	1.507	37

ABLE 14.—*Union scales of wages and hours in the* NEWSPAPER *printing trades in selected cities, July 1, 1946, and July 1, 1945*—Continued

PRESSMEN-IN-CHARGE: NIGHT WORK—Continued

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
ranton, Pa.	$1.858	35	$1.551	35
attle, Wash.	2.000	35	1.621	35
okane, Wash.	1.752	40	1.350	40
ringfield, Mass.	1.500	40	1.375	40
mpa, Fla.	1.660	37½	1.493	37½
ledo, Ohio:				
Agreement A	1.753	37½	1.620	37½
Assistant men-in-charge	1.680	37½	1.547	37½
Agreement B	1.747	37½	1.620	37½
shington, D.C.	1.812	37½	1.647	37½
chita, Kans.	1.177	40	1.057	40
reester, Mass.	1.651	35	1.486	35

STEREOTYPERS: DAY WORK

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
anta, Ga.	$1.627	37½	$1.469	37½
timore, Md.	1.475	40	1.275	40
ghamton, N.Y.	1.400	37½	1.293	37½
mingham, Ala:				
Agreement A	1.475	40	1.225	40
Agreement B	1.500	40	----	----
ton, Mass.	1.729	35	1.560	35
falo, N.Y.	1.561	37½	1.380	37½
te, Mont.	1.500	35	1.380	35
rleston, W.Va.	1.450	40	1.250	40
rlotte, N.C.	1.280	40	1.100	40
cago, Ill.	1.634	40	1.414	40
Foreign language dailies	2.057	35	1.815	35
cinnati, Ohio	1.733	38¾	1.435	38¾
veland, Ohio	1.750	40	1.350	40
Syndicates	1.987	37½	1.537	37½
Shopping News	2.017	37½	1.456	37½
mbus, Ohio	1.649	37½	1.487	37½
as, Tex.	1.577	35	1.392	37½
ton, Ohio	1.478	40	1.379	40
ver, Colo.:				
Agreement A	1.433	37½	1.300	37½
Agreement B	1.493	37½	1.360	37½
Agreement C	1.490	40	1.375	40
Moines, Iowa	1.560	40	1.380	40
oit, Mich.	1.904	37½	1.555	40
ith, Minn.	1.290	36⅔	1.250	36⅔
aso, Tex.	1.360	40	1.160	40
Pa.	1.333	40	1.095	40
d Rapids, Mich.	1.575	38¾	1.325	40
ston, Tex.	1.384	40	1.294	40
napolis, Ind.	1.850	37½	1.438	37½
sonville, Fla.	1.650	40	1.380	40
as City, Mo.:				
greement A	1.450	40	1.310	40
greement B	1.500	40	1.310	40
Rock, Ark.	1.133	37½	1.133	37½
ngeles, Calif.:				
greement A	1.605	37½	1.300	37½
greement B	1.605	37½	1.319	37½
ville, Ky.	1.500	40	1.283	40
son, Wis.	1.450	40	1.175	40
hester, N.H.	1.340	37½	1.340	37½
his, Tenn.	1.344	40	1.225	40
ukee, Wis.	1.521	37½	1.448	37½
apolis, Minn.	1.605	40	1.330	40
e, Ala.	1.290	37½	1.170	40
ille, Tenn.	1.355	40	1.207	40
rk, N.J.	1.575	40	1.400	40
Haven, Conn.	1.450	40	1.250	40
rleans, La.	1.350	40	1.225	40
ork, N.Y.	1.840	37½	1.600	37½
k, Va.	1.250	40	1.093	40
oma City, Okla.	1.409	40	1.221	40
a, Nebr.	1.510	40	1.310	40

TABLE 14.—*Union scales of wages and hours in the* NEWSPAPER *printing trades in selected cities, July 1, 1946, and July 1, 1945*—Continued

STEREOTYPERS: DAY WORK—Continued

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Peoria, Ill.	$1.390	40	$1.268	40
Philadelphia, Pa.	1.493	37½	1.380	37½
Phoenix, Ariz.	1.420	37½	1.320	37½
Pittsburgh, Pa.	1.724	37½	1.391	37½
Portland, Maine	1.375	40	1.225	40
Portland, Oreg.	1.667	37½	1.333	37½
Providence, R.I.	1.650	33⅓	1.536	33⅓
Reading, Pa.	1.460	37½	1.280	37½
Richmond, Va.	1.343	40	1.193	40
Rochester, N.Y.	1.595	37½	1.319	40
Rock Island (Ill.) district[1]	1.546	37½	1.300	40
St. Louis, Mo.	1.780	37½	1.341	40
St. Paul, Minn.	1.540	40	1.294	40
Salt Lake City, Utah	1.375	40	1.150	40
San Antonio, Tex.	1.300	40	1.200	40
San Francisco, Calif.	1.749	37½	1.388	37½
Scranton, Pa.	1.594	40	1.291	40
Seattle, Wash.	1.733	35	1.479	35
South Bend, Ind.	1.393	40	1.163	40
Spokane, Wash.	1.567	40	1.267	40
Springfield, Mass.	1.500	40	1.250	40
Shopping News	1.250	40	1.100	40
Tampa, Fla.	1.433	37½	1.260	37½
Toledo, Ohio	1.710	37½	1.440	37½
Washington, D.C.	1.562	37½	1.400	37½
Wichita, Kans.	1.238	40	1.100	40
Worcester, Mass.	1.448	37½	1.341	37½
York, Pa.	1.060	40	1.060	40
Youngstown, Ohio	1.630	40	1.438	40

STEREOTYPERS: NIGHT WORK

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Atlanta, Ga.	$1.707	37½	$1.536	37½
Baltimore, Md.	1.686	35	1.457	35
Binghamton, N.Y.	1.480	37½	1.373	37½
Birmingham, Ala.	1.538	40	1.288	40
Boston, Mass.	1.921	31⅔	1.723	31
Buffalo, N.Y.	1.641	37½	1.447	37
Butte, Mont.	1.500	35	1.380	35
Charleston, W.Va.	1.525	40	1.350	40
Charlotte, N.C.	1.345	40	1.208	40
Chicago, Ill.	1.800	37½	1.556	37
Foreign language dailies	2.483	30	2.178	30
Cincinnati, Ohio	1.867	37½	1.535	37
Cleveland, Ohio	1.920	37½	1.493	37
Syndicates	2.067	37½	1.621	37
Shopping News (part time)	2.017	37½	1.627	37
Columbus, Ohio	1.702	37½	1.540	37
Dallas, Tex.	1.634	35	1.445	37
Dayton, Ohio	1.567	40	1.443	40
Denver, Colo.:				
Agreement A	1.487	37½	1.353	37
Agreement B	1.549	37½	1.413	37
Agreement C	1.553	40	1.428	40
Des Moines, Iowa	1.660	40	1.460	40
Detroit, Mich.	2.040	35	1.777	35
Duluth, Minn.	1.365	36⅔	1.325	36
El Paso, Tex.	1.423	40	1.223	40
Grand Rapids, Mich.	1.655	38¾	1.375	40
Houston, Texas	1.415	40	1.325	40
Indianapolis, Ind.	1.950	37½	1.533	37
Jacksonville, Fla.	1.750	40	1.455	40
Kansas City, Mo.:				
Agreement A	1.550	40	1.373	40
Agreement B	1.625	40	1.373	40
Little Rock, Ark.	1.200	37½	1.200	37
Los Angeles, Calif.:				
Agreement A	1.672	37½	1.366	37
Agreement B	1.672	37½	1.385	37
Louisville, Ky.	1.600	40	1.355	4

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[1] Includes Rock Island and Moline, Ill., and Davenport, Iowa.

ABLE 14.—*Union scales of wages and hours in the* NEWSPAPER *printing trades in selected cities, July 1, 1946, and July 1, 1945*—Continued

STEREOTYPERS: NIGHT WORK—Continued

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
nchester, N.H.	$1.440	37½	$1.440	37½
mphis, Tenn.	1.500	37½	1.327	37½
waukee, Wis.	1.628	37½	1.515	37½
neapolis, Minn.	1.680	40	1.405	40
bile, Ala.	1.310	37½	1.190	40
hville, Tenn.	1.440	40	1.286	40
vark, N.J.	2.100	30	1.867	30
Haven, Conn.	1.500	40	1.281	40
Orleans, La.	1.413	40	1.288	40
York, N.Y.	2.300	31½	2.000	31½
folk, Va.	1.313	40	1.143	40
ahoma City, Okla.	1.471	40	1.284	40
aha, Nebr.	1.660	40	1.376	40
ria, Ill.	1.589	35	1.449	35
adelphia, Pa.	1.547	37½	1.433	37½
enix, Ariz.	1.490	37½	1.390	37½
sburgh, Pa.	1.790	37½	1.457	37½
land, Maine	1.475	40	1.325	40
land, Oreg	1.786	35	1.429	35
idence, R.I.	1.693	31⅔	1.613	31⅔
ling, Pa.	1.610	35	1.417	35
mond, Va.	1.405	40	1.255	40
ester, N.Y.	1.739	37½	1.403	40
Island (Ill.) district[1]	1.609	37½	1.350	40
ouis, Mo.	1.907	35	1.533	35
aul, Minn.	1.654	40	1.356	40
Lake City, Utah	1.438	40	1.213	40
Antonio, Tex.	1.300	40	1.200	40
Francisco, Calif.	1.860	37½	1.433	37½
ton, Pa.	1.821	35	1.476	35
le, Wash.	1.833	35	1.550	35
Bend, Ind.	1.393	40	1.163	40
ane, Wash.	1.667	40	1.317	40
gfield, Mass.	1.714	35	1.429	35
hopping News	1.300	40	1.150	40
a, Fla.	1.500	37½	1.360	37½
o, Ohio	1.810	37½	1.493	37½
ngton, D.C.	1.846	32½	1.658	32½
ta, Kans.	1.276	40	1.139	40
ster, Mass.	1.551	35	1.437	35
Pa.	1.060	40	1.060	40
stown, Ohio	1.740	38¾	1.557	38¾

cludes Rock Island and Moline, Ill., and Davenport, Iowa.

TABLE 15.—*Wage changes for the* BOOK AND JOB *printing industry since July 1, 1946*

City	Rate per hour	Effective date
Bindery women		
Charleston, W.Va.	$1.000	2/ 1/47
Detroit, Mich.	.920	3/ 1/47
Minneapolis, Minn.	.790	2/ 1/47
Pittsburgh, Pa.	.893	3/10/47
Portland, Oreg.	1.000	10/ 1/46
St. Paul, Minn.	.790	2/ 1/47
San Antonio, Tex	.750	2/21/47
San Francisco, Calif.	1.066	9/30/46
Youngstown, Ohio	.700	1/ 1/47
Bookbinders		
Charleston, W.Va.	1.750	2/ 1/47
Detroit, Mich.	1.650	3/ 1/47
Minneapolis, Minn.	1.470	2/ 1/47
Pittsburgh, Pa.	1.653	3/10/47
Portland, Oreg.	1.667	10/ 1/46
St. Paul, Minn.	1.470	2/ 1/47
San Antonio, Tex.	1.500	2/21/47
San Francisco, Calif.	1.855	9/30/46
Washington, D.C.	1.450	8/16/46
Youngstown, Ohio	1.400	1/ 1/47
Electrotypers		
Buffalo, N.Y.	1.550	4/ 1/47
Des Moines, Iowa	1.750	7/15/47
Springfield, Mass.	1.750	8/ 7/46
Washington, D.C.	2.000	11/19/46
Mailers		
Baltimore, Md.	1.100	10/ 1/46
Chicago, Ill.	1.978	2/14/47
Dallas, Tex.	1.080	7/17/46
Indianapolis, Ind.	1.705	11/ 8/46
Oklahoma City, Okla.	1.325	9/22/46
Philadelphia, Pa.	1.250	9/29/46
St. Paul, Minn.	1.470	7/17/46
Washington, D.C.	1.500	1/23/47
Photoengravers		
Boston, Mass.	1.947	1/ 1/47
Cincinnati, Ohio	1.867	1/ 1/47
Milwaukee, Wis.	2.000	1/ 1/47
New York, N.Y.	2.371	1/ 1/47
Gravure	2.457	1/ 1/47
Pressmen		
Birmingham, Ala.	1.470	8/21/46
Chicago, Ill.	2.055	12/ 2/46
Detroit, Mich.:		
Platen	1.520	8/15/46
Rotary	1.820	8/15/46
Cylinder	1.750	8/15/46
Pittsburgh, Pa.:		
Cylinder	1.920	2/28/47
Platen	1.830	2/28/47
San Antonio, Tex.:		
Web	$1.563	8/24/46
San Francisco, Calif.:		
Cylinder	1.855	10/ 1/46
Rotary:		
First position	2.013	10/ 1/46
Second position	1.855	10/ 1/46
Platen	1.776	10/ 1/46
Toledo, Ohio:		
Cylinder	1.645	9/ 1/46
Platen	1.520	9/ 1/46
Platen (3 presses)	1.570	9/ 1/46
Press assistants		
Birmingham, Ala.:		
Cylinder	1.020	8/21/46
Platen	.720	8/21/46
Chicago, Ill	1.843	12/ 2/46
Detroit, Mich.:		
Rotary	1.470	8/15/46
Cylinder	1.450	8/15/46
Job cylinder	1.270	8/15/46
Platen	1.150	8/15/46
Toledo, Ohio	1.370	9/ 1/46
Typographers		
Binghamton, N.Y.	1.733	11/ 1/46
Birmingham, Ala.	1.750	11/16/46
Butte, Mont.	1.704	9/ 1/46
Chicago, Ill.	2.210	9/ 4/46
Cincinnati, Ohio	1.966	9/ 1/46
Cleveland, Ohio	1.900	10/ 1/46
Dallas, Tex.	2.070	2/20/47
Des Moines, Iowa	1.700	11/ 1/46
Detroit, Mich.	2.125	11/11/46
Houston, Tex.	1.970	11/ 1/46
Indianapolis, Ind.	1.760	11/ 1/46
Kansas City, Mo.	1.750	11/ 1/46
Los Angeles, Calif.	1.925	11/ 1/4
Manchester, N.H.	1.450	11/ 1/4
Milwaukee, Wis.	1.750	1/ 1/47
Nashville, Tenn.	1.450	10/ 1/4
New Orleans, La.	1.550	9/15/4
New York, N.Y.	2.226	1/20/4
Philadelphia, Pa.	1.840	2/28/4
Pittsburgh, Pa.	1.920	1/ 1/4
Portland, Oreg.	1.667	10/ 1/4
Providence, R.I.	1.500	8/ 1/4
St. Louis, Mo.	1.639	11/ 4/4
St. Paul, Minn.	1.600	12/23/4
San Antonio, Tex.	1.575	9/31/4
San Francisco, Calif.	2.133	1/19/4
Seattle, Wash.	2.143	11/ 1/4
Toledo, Ohio	1.700	9/ 1/4
Washington, D.C.	1.870	8/11/4
Wichita, Kans.	1.613	1/ 1/4
York, Pa.	1.500	1/ 1/4

TABLE 16.—*Wage changes for the* NEWSPAPER *printing industry since July 1, 1946*

City	Rate per hour	Effective date
Mailers		
Baltimore, Md.:		
Day	$1.363	1/ 1/47
Night	1.629	1/ 1/47
Boston, Mass.:		
Day	1.860	7/12/46
Night	1.920	7/12/46
Detroit, Mich.:		
Day	1.960	11/ 1/46
Night	2.120	11/ 1/46
Indianapolis, Ind.:		
Day	1.690	9/15/46
Night	1.790	9/15/46
Minneapolis, Minn.:		
Day	1.600	12/27/46
Night	1.680	12/27/46
Newark, N.J.:		
Day	1.680	12/12/46
Night	2.000	12/12/46
Oklahoma City, Okla.:		
Day	1.250	9/22/46
Night	1.313	9/22/46
t. Paul, Minn.:		
Day	1.518	1/ 1/47
Night	1.631	1/ 1/47
ichita, Kans.:		
Day	1.200	12/15/46
Night	1.263	12/15/46
Photoengravers		
etroit, Mich.:		
Shopping news:		
Day	2.000	9/15/46
Night	2.200	9/15/46
Newspaper:		
Day	2.413	11/ 1/46
Night	2.600	11/ 1/46
chester, N.Y.:		
Day	2.240	2/10/47
Night	2.373	2/10/47
Pressmen		
ianapolis, Ind.:		
Day	1.800	9/ 1/46
Night	1.900	9/ 1/46
n charge:		
Day	1.960	9/ 1/46
Night	2.060	9/ 1/46
edo, Ohio:		
greement A:		
Day	1.980	9/ 1/46
Night	2.100	9/ 1/46
Assistant in charge:		
Day	2.053	9/ 1/46
Night	2.173	9/ 1/46
In charge:		
Day	2.100	9/ 1/46
Night	2.247	9/ 1/46
greement B:		
Day	2.046	11/ 1/46
Night	2.113	11/ 1/46
In charge:		
Day	2.327	11/ 1/46
Night	2.393	11/ 1/46
ester, Mass.:		
Day	1.345	11/ 6/46
Night	1.537	11/ 6/46
charge:		
Day	1.470	11/ 6/46
Night	1.680	11/ 6/46
Stereotypers		
s, Tex.:		
Day	1.891	8/26/46
ight	1.977	8/26/46
it, Mich.:		
ay	2.200	11/ 1/46
ight	2.385	11/ 1/46
Portland, Maine	$2.000	7/15/46
Rochester, N.Y.:		
Day	1.973	2/ 8/47
Night	2.107	2/ 8/47
Worcester, Mass.:		
Day	1.474	9/30/46
Night	1.580	9/30/46
Typographers		
Atlanta, Ga.:		
Day	1.920	10/ 1/46
Night	2.000	10/ 1/46
Baltimore, Md.:		
Day	2.044	1/ 1/47
Night	2.180	1/ 1/47
Boston, Mass.:		
Day	2.090	9/27/46
Night	2.200	9/27/46
Buffalo, N.Y.:		
Day	1.973	8/20/46
Night	2.080	8/20/46
Butte, Mont.:		
Day	1.806	9/ 1/46
Night	1.929	9/ 1/46
Chicago, Ill.:		
Day	2.358	10/22/46
Night	2.510	10/22/46
Cincinnati, Ohio:		
Day	2.160	1/ 1/47
Night	2.293	1/ 1/47
Columbus, Ohio:		
Day	2.080	10/ 3/46
Night	2.213	10/ 3/46
Dallas, Tex.:		
Day	1.971	8/ 1/46
Night	2.071	8/ 1/46
Detroit, Mich.:		
German text	1.500	11/ 1/46
Erie, Pa.:		
Day	1.760	10/ 1/46
Night	1.850	10/ 1/46
Louisville, Ky.:		
Day	1.707	8/ 1/46
Night	1.813	8/ 1/46
Minneapolis, Minn.:		
Day	2.140	9/ 1/46
Night	2.280	9/ 1/46
Newark, N.J.:		
Day	1.926	9/19/46
Night	1.989	9/19/46
Oklahoma City, Okla.:		
Day	1.827	1/ 5/47
Night	1.933	1/ 5/47
Portland, Maine:		
Agreement A:		
Day	1.400	9/ 1/46
Night	1.500	9/ 1/46
Reading, Pa.:		
Day	1.533	12/31/46
Night	1.689	12/31/46
Machinist tenders:		
Day	1.586	12/31/46
Night	1.746	12/31/46
Rochester, N.Y.:		
Day	1.973	2/ 8/47
Night	2.107	2/ 8/47
St. Louis, Mo.:		
Day	2.014	8/ 4/46
Night	2.724	8/ 4/46
South Bend, Ind.:		
Day	1.784	1/ 1/47
Night	1.874	1/ 1/47
Washington, D.C.:		
Day	2.200	11/12/46
Night	2.343	11/12/46
Wichita, Kans.:		
Day	1.625	11/ 5/46
Night	1.719	11/ 5/46

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UNITED STATES DEPARTMENT OF LABOR
L. B. SCHWELLENBACH, *Secretary*
BUREAU OF LABOR STATISTICS
EWAN CLAGUE, *Commissioner*

Summary of Proceedings
of
Conference on Productivity

October 28–29, 1946

Bulletin No. 913

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Letter of Transmittal

UNITED STATES DEPARTMENT OF LABOR,
BUREAU OF LABOR STATISTICS,
Washington, D. C., May 1, 1947.

HE SECRETARY OF LABOR:

I have the honor to transmit herewith a report which summarizes the
roceedings of the Conference on Productivity, held in Washington on
)ctober 28 and 29, 1946. This summary of the voluminous proceedings
vas prepared by Mrs. Celia Star Gody, of the Bureau's staff, and was
ubmitted to the participants in the conference, for their editorial ap-
roval. The report also includes an evaluation of the conference by
olomon Fabricant, of the National Bureau of Economic Research, who
cted as chairman of the executive committee which planned the details
nd agenda of the conference.

The conference brought together an outstanding group of research
vorkers from labor, industry, government, and the universities for a
utual exchange of views on a topic of great current importance. The
onference may confidently be expected to have a beneficial effect on the
ontent and direction of research activities in the field of productivity for
any years to come. This report is designed to make generally available
e discussions and results of the conference.

EWAN CLAGUE, *Commissioner.*

ON. L. B. SCHWELLENBACH,
Secretary of Labor.

Bulletin No. 913 of the
United States Bureau of Labor Statistics

Preface

After the close of the war, in 1945, increasing attention was given in ublic discussion to the subject of productivity, and in some instances arp controversies arose. Some differences of opinion seemed rooted divergent interpretations of scanty data; others could apparently be aced to such basic difficulties as lack of agreement on the meaning and gnificance which should be attached to the term productivity. Many ersons felt that under these circumstances a mutual exchange of views the conceptual and measurement problems in the field of productivity ight help materially to substitute agreement for argument.

The Bureau of Labor Statistics of the U. S. Department of Labor d the Division of Statistical Standards of the U. S. Bureau of the dget joined in sponsoring a Conference on Productivity to be attended representatives of labor, industry, private research groups, and gov- nment agencies. The agenda and details of the conference were planned an executive committee which included members representing labor d industry, selected with the advice and assistance of the major labor d business organizations.

The conference was held on October 28 and 29, 1946, at Washington, C. It was attended by about 100 active participants and approximately equal number of observers.

This bulletin is intended to make available to others the ideas which re developed during the two days of the conference. The following es present an evaluation of the conference by Mr. Solomon Fabricant the National Bureau of Economic Research, who acted as chairman the executive committee; the official program of the conference; and igest of the proceedings of the conference. The digest was prepared Mrs. Celia Star Gody of the Bureau of Labor Statistics, a member he executive committee. This digest was submitted to the participants he conference for their editorial approval.

he membership of the executive committee which made arrangements the conference was as follows:

enry B. Arthur, Swift & Co.
olomon Barkin, Textile Workers Union of America, CIO.

George Brown, United Association of Plumbers and Steamfitters, AFL.
Katherine P. Ellickson, Congress of Industrial Organizations.
W. Duane Evans (Secretary), U. S. Bureau of Labor Statistics.
Solomon Fabricant (Chairman), National Bureau of Economic Research.
Celia Star Gody, U. S. Bureau of Labor Statistics.
Everett Hagen, National Planning Association.
Douglas H. Holmes, Westinghouse Electric & Manufacturing Co.
Thomas Mills, U. S. Bureau of the Budget.
Margaret Scattergood, American Federation of Labor.
Ernst Swanson, U. S. Chamber of Commerce.
Samuel Thompson, U. S. Department of Commerce.
Charles Young, Westinghouse Electric & Manufacturing Co.

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CONFERENCE ON PRODUCTIVITY, OCTOBER 28–29, 1946

An Evaluation of the Productivity Conference

The aims of the conference, as set forth by the executive committee r the conference, in inviting participation, were as follows:

> he subject of productivity is generally recognized to be of unparalleled current ortance. It is directly related to the employment and unemployment prob- . It is at the center of any discussions relating to wages, prices, and profits. It cts the ability of the United States to maintain its position in international trade. s the means whereby a constant improvement in the living standards of American ilies is achieved. Despite the importance of productivity, there is lack of agree- nt on the concepts and measures which are appropriate to its evaluation and on implications of current measures.
>
> n this situation, a technical conference is planned as a forum for the discussion productivity concepts and measurements, in the hope that this will clarify and lve genuine differences in viewpoint which now exist in the field. The conference also provide a vehicle for discussing the current state of knowledge regarding luctivity and labor cost, the adequacy of present programs, and related questions.
>
> he conference is sponsored jointly by the Bureau of Labor Statistics of the S. Department of Labor and the Division of Statistical Standards of the U. S. eau of the Budget. The conference is not intended to act as an official advisory , but rather to be a discussion meeting. Papers will be presented by invitation elected subjects, but there will be ample provision for general discussion. Further erences may be scheduled, depending on the wishes of the participants.
>
> limited number of participants will be invited from labor, industry, government, ate research agencies, and academic institutions, and will be present in their idual capacities, not as official representatives of organizations. The participants be selected from among those who may be expected to contribute to the discus- of productivity.

arents are always a little startled to find their infants grown up and a bulk and personality of mature proportions. The sponsoring cies and the executive committee were similarly surprised to dis- r what had come out of this invitation. Instead of a small group of nicians mulling over some rather abstruse concepts and measurements, e assembled over 200 people, all told, from labor, business, govern- t, research, and the academic world, engaging enthusiastically in a d discussion. Interest was fully as great at the end as at the beginning e two solid days of discussion.

t it should not have surprised us too much. The American people come to see the value of a wide and firm basis of accepted fact mutual understanding as a common meeting ground. They know that

it is the only sure foundation for threshing out common problems. They
realize that concepts and measurements are essential in the building of
this foundation, and therefore that concepts and measurements are well
worth discussion. The conference provided a forum for a free discussio
and demonstrated the value of joining persons of diverse points of vie
in it. This was a real accomplishment, perhaps the outstanding accom-
plishment of the conference. It showed how wrong are those who stres
only differences and clashes of interest, who deny the possibility or valu
of meeting on a common ground of accepted fact and standard usage
who see all things simply as matters of opinion.

The conference of course also yielded fruits of immediate bearing o
the question at issue, namely, concepts and measurements of productivit
The abstract of the proceedings which follows summarizes fairly exten
sively the successive statements and remarks of the various participant
and clearly indicates the value of the discussion. The reader will want t
study this record with the care it deserves. It is desirable, however, t
preface the abstract by a review of and commentary on what came out
the conference, along other than chronological lines; and to indicate,
the same time, plans for the future work declared so necessary by all w
attended.

Definitions and Measurements of Productivity

First of all, the discussion clearly brought out how general is the ter
"productivity." The term relates to a whole family of concepts rath
than to any specific member of that family. Almost any comparison
output with input is covered by it. Output may be defined in various wa
however, and input may be measured by one factor or another or
several factors in combination. Further, productivity may be the relati
between output and the input of one factor, all other input factors bei
kept constant, as in an experiment under controlled conditions; or it m
be the relation between output and the input of one factor, with chan
occurring in all other factors. Still further, productivity may be the r
tion between the total output and input of a period, or it may be the r
tion between the increment in output associated with the addition of
unit of a given factor of production; that is, it may be "average"
"marginal." Thus, economists writing on the "theory of marginal p
ductivity" use the term quite differently from statisticians who comp
indexes of productivity. Even statistical measures of productivity
differ among themselves, fundamentally, as well as in detail. To av
confusion, therefore, it was agreed that the term "productivity" be u
only in a general way to describe the area with which the conference
concerned, and to use more specific terms in referring to particular

ts or measurements. "Physical output per man-hour," for example, is ter than "labor productivity" as a term descriptive of most currently plished indexes. Since no reasonably short term can be completely criptive, however, it was felt that terminology should always be defined explicitly as possible whenever used.

temming from the acceptance that there is a whole group of producty concepts was the realization that a variety of measures is possible. asures may be made of output per unit of capital equipment or per of labor; of output per man or per man-hour; of physical output man-hour or value output per man-hour; of "net" physical output man-hour or "gross" physical output per man-hour; and so on. re is no way of deciding which measure is appropriate, except with tion to a particular purpose. For different purposes different measures be suitable. Even for a particular purpose, several different measures be better than one; they may complement, rather than compete with, another. With a variety of measures possible and desirable, it is of se all the more necessary to label each carefully and define each rately. Just what these purposes are and what indexes are most able for particular uses remain subjects for further investigation. e the conference pointed up a job to be done.

onsiderable attention was given to currently prepared measures of ut per man-hour, and also to some historical measures; and various tions were raised concerning their scope and accuracy. It goes withsaying, of course, that no current or even historical statistical index hope to attain complete coverage and perfect accuracy, but there are ees of accuracy and coverage and it is well to strive for the highest oth. The discussion and critical comments brought out at the conice will, I am sure, stimulate even greater efforts on the part of piling agencies to better their indexes. Almost as important, it will them to indicate as fully as possible the margins of error and the ations of representation inevitably still resident in their measures. imber of the criticisms raised at the conference had already been coned by the compiling agencies and had been determined to be of small ficance. However, the discussion taught one clear lesson: results of considerations and evaluations of limitations should be made public, erably in advance of the appearance of criticisms. The range of ts that beset consumers of statistics concerning their validity must irrowed.

iny of the points raised in criticism were, in essence, that alternative ods and measures are possible and perhaps desirable. Some of these isms can be satisfied by a variety of carefully defined measures of ictivity. Others require further examination and discussion before their comparative merits and demerits can be understood, and the discu sion thus provides a list of topics for further investigation, such as th following:

Choice between value weights and man-hour weights, in combining diver physical units of output.
Adjustments for changes in coverage of output or employment by samples products or samples of establishments.
Hours paid versus hours worked.
Machine-hours versus other measures of capital input, such as deflated capi assets.
Quality changes in products and materials, and the development of entirely n products and materials.
Ways of combining different types of input and the related problems choosing between weighted and unweighted aggregates of labor input.
Treatment of overhead, maintenance, and other indirect labor.
Analysis of the representativeness of the sample group of industries for wh current indexes of productivity can be prepared.
Attainment of consistency of measures at the national level with measures subsidiary levels, such as the industry, the plant, or the job level.
Measurement of productivity in long-cycle or custom industries.
Measurement of productivity in service and trade.

We need, especially, to learn the quantitative importance of some these questions.

Limitations of Basic Data

Discussion of the limitations of current indexes indicated their obvi dependence on the availability of basic statistics. No index can be m better than the data which it summarizes. A deeper appreciation t came out of the conference of the great need for more and better ba data collections. Many of the questions raised concerning the accur of the current indexes, for example, can be answered finally only w we can check our current sample statistics against complete surveys s as the Censuses of Manufactures and Mines. Indeed, if such "ben mark" data were made available at reasonably frequent intervals, many these questions would never arise. We need not only more Census s veys, but also to collect more information in them: for example, infor tion on capital assets, equipment, and kinds and quantities of mate consumed. This information should be presented in detail—for exam by size of plant. In addition to complete surveys, there is of co need for broader and more intensive current surveys by government a private organizations, if the information on contemporary change i productivity is to possess the accuracy and scope desired. One of t interesting facts brought out was the rather widespread lack eve private plant records on productivity changes. It is probably fair to re conference as favoring wholeheartedly the most comprehensive statis- possible, as a basis for learning from the past, reporting on the ent, and guidance to the future.

Factors in Productivity

ith the discussion ranging over the full list of different kinds of t—materials, fuel, and use of capital equipment, for example, as well bor—attention was drawn to the possibilities of reducing the require- s, per unit of product, of factors of production other than labor. les labor savings there could be—and the historical records show been—savings of materials and other factors. The more efficient ction of energy from coal is an example.

is may be put differently, to fit the view of many of the discussants. r can be and has been saved directly, by cutting man-hour require- s for a given job or volume of production. Labor can be and has saved also indirectly, by cutting fuel and capital and other require- s for a given job or volume of production. Fuel, for example, em- s in large part labor put into production at earlier stages of produc- To save a ton of coal means to save the labor of coal miners, of ad workers, of distributors. These indirect labor savings contribute ir advancing standard of living as definitely as do direct labor gs themselves. The gain from increased productivity is equal to the of all these direct and indirect savings, and not merely to the savings e factor of production.

th this recognized, conference discussion advanced to another, re- point. When material or capital savings occur, these are to be to direct labor savings to get a measure of productivity increase; hen more materials or more capital are required to turn out a unit oduct, then direct labor savings must be offset correspondingly. To extent increases rather than decreases in unit material or capital ements have occurred is determinable only by appeal to the facts. It uggested by some speakers that, on the whole, material require- per unit of product have been reduced rather than increased; and e period of increasing capital investment relatively to output, so teristic of early industrial development, had more recently been ed by a period in which many industries' capital requirements per ere reduced. It is important to distinguish carefully between long- rends and shorter movements, however, and between one industry nt and another. Broad generalizations always imply exceptions. too, there is open a field for serious research and historical study. recognition that in an industry or plant various factors cooperate job of production, that these influence one another, and that they

are also influenced by factors outside the industry or plant, advance
understanding in still another way. The discussion at the conference high
lighted the dangers of imputing responsibility for advance—or decline-
in productivity to any one factor. To isolate the influence of a singl
element in a complex process has always been the most difficult proble
of science. It has been solved, satisfactorily, only in the physical science
where experimentation under controlled conditions has been develope
In the social sciences, statistical methods to accomplish the same aims ar
still in the process of development, and in any case, the data to which t
apply these methods and the skill with which to interpret the results ar
largely lacking. This does not mean that now and then the immedia
cause of a particular change cannot be determined; but this is probab
rare, and determination of the ultimate cause is quite another thing. A
one speaker so well put it, shall we try to figure Lord Kelvin's contrib
tion in assessing the factors aiding in recent developments in electr
motors? To try to determine credit or responsibility is to enter an endle
maze. Only in Heaven will judgments of this kind be made and grac
fully accepted.

As planned, emphasis was placed in the conference on questions
concept and measurement. Effort was made to avoid such controvers
and speculative matters as how to divide the gains from productivity. I
evitably, however, the talk at the conference touched—even if lightly
on such matters as wage rates, profits, and prices, as well as numbers
workers, volume of equipment, and volume of goods produced, for
viously there are important questions of developing and maintaining
centives to raise productivity. There are questions of the bearing on p
ductivity of "balance" among industries, plants, and factors of prod
tion, of "equilibrium" of costs and prices, incomes and expenditur
The important fact could not be overlooked, that raising the Nation's p
ductivity is an economic problem, not merely a problem of technology
engineering. More must be learned not only about concepts and measu
ments but also about the economics of productivity, if the factors det
mining our economic progress are to be ascertained. The confere
members showed great awareness of our ignorance of the economics
productivity. It is for this reason that they stressed the need for m
work in analyzing this intricate set of relationships. Only by coming
grips with this problem can a decision be made as to the concepts
measurements needed.

Work Still to be Done

It is hoped that this quick review will give the reader a notion of
went on and stimulate him to read the more detailed story that foll

though, naturally enough, the main points of agreement have been essed, in a sense the conference may be summarized also by saying that accomplished not so much explicit agreement on particular points as ter understanding and appreciation of diverse points of view. This , however, implies agreement that more work has to be done.

This means more work of the type that has been done. Understanding the facts concerning productivity and the factors stimulating (or reding) advances in it is furthered by the preparation of current indexes orting changes in such quantities as output per man-hour and labor t per unit of product. These indexes can be increased in number and proved in construction. They are valuable. Understanding can also be adened and deepened by other types of work. Studies of marginal costs l of the functional relation between production, labor and capital (the oduction function"), are interesting approaches which should be conied. Studies of such relationships as the following also need to be conied and expanded:

Changes in productivity in relation to changes in selling prices, employment, wages, and other economic quantities.
Variation in productivity among plants of different size, age, and organization.
The extent of and reasons for international differences in productivity.
The origin and diffusion of technological developments of all sorts.
The economic histories of particular industries and of the relations between industries.
Obstacles to the introduction of technological advances.
Cyclical changes in productivity.
Productivity differences among individuals.

n attacking a set of problems with such wide ramifications, no apich or aspect should be neglected.

became apparent during the conference that the participants not only ize that much work remains to be done in this field but expect the connce, acting through the executive committee, to carry on a good deal his work and stimulate its undertaking in other quarters. It is approte therefore to report the plans now being made by this committee to y out the mandate laid upon it. It is hoped to start a series of round- discussions at which experts will be asked to present papers or rwise lead discussions bearing on particular and well-defined ques- related to productivity. These questions will be drawn from those n above and from additions to them. Participating in the discussions be not only members of the committee but also other persons qualified ntribute. It is hoped to keep the groups small and active—essentials intensive discussions of technical subjects. The discussions will be available to the public in the form of papers or abstracts published ppropriate journals or bulletins. It is expected, also, that as experience with the discussions accumulates, it will again be desirable to arrange a large-scale conference, open to a wider audience, to discuss the past work, bring to public attention the work currently being done in this area, and plan for the future.

Obviously, no one group can hope to do all the work required. Consideration should and must be given to these various questions by men and women throughout industry, labor, academic circles, and government. Experience with particular industries and access to special bodies of data are real advantages possessed by many of these persons. It is hoped that they will bring these advantages to bear effectively on the common problem. It is hoped, too, that they will advise the sponsoring agencies, through the chairman or the secretary of the executive committee, of the work they are doing. With all thus working intensively, in constant touch with one another, there is hope of enlarging the broad conceptual and factual basis so valuable as a common meeting ground for persons and groups with diverse points of view.

Solomon Fabricant,
Chairman, Executive Committee,
Conference on Productivity.

Summary of Proceedings

OCTOBER 28—MORNING SESSION

Chairman, Leon Henderson, Research Institute of America

Welcome to Conferees

STUART A. RICE (Assistant Director of the U. S. Bureau of the Budget) : A warm welcome is extended to the members of the conference. The conference was arranged through an executive committee composed f representatives of management, organized labor, the Department of Labor, the Department of Commerce, and the Bureau of the Budget. The ork of the National Income Conference in clarifying and developing oncepts in that field should be noted. It is hoped that the Productivity Conference will contribute to greater agreement on productivity concepts nd to the improvement of measures of productivity.

Scope of Conference

EWAN CLAGUE (Commissioner of Labor Statistics) : The conference as not called to discuss means of improving productivity or the methods hereby the social benefits of production economies should be divided or istributed. Its purpose is to reach agreements, if possible, on what ysical facts of the economy the word "productivity" should cover. The nference may wish to differentiate the various concepts now encomssed by the term "productivity," both in definitions and measurements. he participants will discuss the indexes and measures of productivity w available, what they cover in the way of physical facts, and what ysical facts they ignore or obscure. The meeting will also consider eans of improving measures of productivity, extending them, and makg them more useful to greater numbers of persons. It is hoped that the nference will give direction to all research in this field, both private and blic.

The conference is to be a discussion meeting in which the members rticipate. A transcript of the proceedings will be taken but will not made available for general distribution. A summary of the proceedings ll be distributed to all participants. After approval of the participants, s summary may be made available to the public. A limited number of blications representatives have been admitted to the conference, with understanding that no quotations will be attributed to individuals cept with their express permission. Moreover, all individuals represent mselves only and not their organizations.

Productivity and Its General Economic Setting

Robert Nathan (Robert Nathan Associates): Although the conference is concerned only with the questions of concepts and measurements, clarification of these questions would help in policy considerations.

Over the past half century, there has been a tremendous increase in productivity in terms of the relationship between output and every factor of production. The increase in productivity has not been limited to a rise in production in relation to man-hours worked. It is probable that productivity has also increased as regards the relationship between production and capital equipment, provided capital equipment is measured not in dollars but in terms of the efforts and resources put into capital equipment.

This increase in productivity has many implications, one of the foremost being its relationship to the question of employment. In the past, when the problem of technological unemployment was discussed, it was thought that there was only a given volume of production to be created and that when increased output per unit of effort was achieved, the total effort previously used would not be required. However, as a consequence of analysis of what people can consume, the concept of technological unemployment has begun to be replaced with positive and constructive thinking of full employment. The benefits of increased productivity should be considered in terms of standards of living rather than of technological unemployment. The more rapid technological development and the more speedy increase in productivity that may take place in the future is not a threat and must not be regarded as a threat to full employment. Society must make certain that, as output increases, employment is maintained, so that participation in consumption and production shall not be narrowed to a limited and decreasing percentage of people.

On the basis of the speaker's experiences overseas, it appears that the rest of the world is just beginning to recognize the importance of productivity in the development of the tremendous economic power of the United States. In France, for example, there is a keen recognition of the need for industrial development, modernization, and higher productivity if the nation is to be able to compete in world activities with the United States, Great Britain, and other countries. Moreover, other countries look to the United States for leadership, for guidance, for "know-how," for help.

Productivity also has significant implications with respect to domestic policy on wages, prices, and profits. Increased consumption can emerge only through production. Monetary benefits to any group mean nothing unless expressed in terms of real output and real consumption.

Problems of Concepts and Measurement in the Field of Productivity

HIRAM DAVIS (Director of Industrial Research, Wharton School, University of Pennsylvania): Most persons, in using the term "productivity" have meant the physical output obtained for a given physical input. The usual measure of productivity—output per input of labor—is inadequate, however, since one input factor is used to represent all input. The change in output per man-hour may be greater than the change in output per unit of total input, for example, when power or machines have been substituted for labor. On the other hand, even though man-hour output shows no change, the input of other factors may be changing materially. Thus, capital consumption may be speeded up by obsolescence or reduced by improved machines with a longer service life. Input factors cannot be measured by money costs, since money costs are both a measure of input and a measure of what the input agents receive.

Several methods of measuring input have been suggested. The embodied labor method involves the expression of machinery and other factors in terms of the labor content represented. One difficulty is that it is not possible to express risk-bearing, for example, in terms of labor content. Moreover, it is extremely difficult to express capital consumption in terms of labor content. Another proposal is the use of costs at constant prices. However, there is the practical objection that the compilation of appropriate indexes for correcting the value series is extremely difficult. Because of the many difficulties in the measurement of total input, it might be more useful, for analytical purposes, to develop a series of ratios relating output to each of the important input items.

Change in the composition of output, the substitution of new products for old, and changes in quality all make it extremely difficult to measure output. The equivalent-unit method—the method of reducing output of different grades to an equivalent grade—involves the problem of the method of conversion used. If prices are used as weights, the output measure may be influenced by differences in marketing methods or differences in demand for the various classes of products. If labor time is used as weight, the output series would correspond to the man-hour series. Another method proposed is the potential service of the commodity, for example, tire-miles. Although this measure is useful for certain purposes, it has its limitations. In the case of tires, it would credit the tire industry for improvements in automobiles, in highways, and in the quality of crude rubber, that were brought about by other industries. Many indexes of physical production are weighted by value or value added. Since value added changes from year to year, depending upon profits, it may be desirable, where possible, to refine the value-added weights to the point where they represent manufacturing costs.

Since the problem of measuring output falls particularly at the industry level, it is hoped that out of the conference may come a decision to develop working committees in each of the important industries.

In connection with input measurement, it might be desirable to consider not only the input used up, but also the input supply assembled for an undertaking. Another important concept is the measurement of output not only in relation to physical factors, but in relation to real costs.

In relating output to man-hours, it might be preferable to express the results in terms of labor requirements per unit of output rather than output per man-hour. A similar form might be used in showing the ratios between output and capital and other production factors. The term "productivity" might well be restricted to those cases in which it is possible to present more than one measure of input or in which the broad sweep of developments over a substantial period is considered.

Concepts and Measures of Productivity at the Job Level

Martin Gainsbrugh (National Industrial Conference Board):[1] A questionnaire was sent out to the NICB panel of business executives, concerning changes between the prewar and current period in labor productivity on comparable jobs performed under comparable conditions. The reports indicated a general dissatisfaction in industry with the term "labor productivity." Some replies indicated a belief that the number of labor hours per unit was determined primarily by the type of equipment and not by human factors. Many companies had no measures either of productivity on comparable jobs or of output per man. Several measures were used in the replies—output per man, dollar value of products per productive man-hour, dollar sales per employee, etc. Although the survey indicated that there is an interest in labor productivity, few plants have quantitative information on this subject.

Nathan Spero (United Electrical, Radio and Machine Workers, CIO): Management has been carrying on a Nation-wide publicity drive, singling out worker effort as the important factor in productivity and implying that worker effort has decreased. This campaign obscures the fact that the effort of the individual worker is inseparable from many of the other important factors that affect productivity. Worker effort is affected by such factors as patriotism, the cost of living, profits, and other influences. A constant flow of materials of the right quality is extremely important to efficient production at the worker's level. Shortages of materials have resulted from speculative stock piling to anticipate price increases or hoarding to force price increases. In addition, the nature of the plant's physical equipment determines, to a large extent, the worker's efficiency. The efficiency of the workers also depends on the efficiency of management. Frequently management has raised the cry of decreased workers' effort to hide its own shortcomings. Similarly, systems of wage payment influence worker effort. Incentive systems provide some estimate of the extent of productivity increase and of the extent to which management passes along the gains resulting from increased productivity. However, even incentive systems can sometimes be turned into their opposites, resulting in a lack of incentive for production. Finally, relations between the company and union have an extremely important effect on worker efficiency—for example, the way in which negotiations are conducted, the way the grievance procedure operates, and the nature of supervisory relationships.

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[1] Editor's Note—The remarks of Mr. Gainsbrugh, scheduled for the morning session, were actually delivered in the afternoon. They are given here for the sake of clarity and in order to round out the presentation of the subject. The same was done in a few other cases.

Discussion

Solomon Barkin (Textile Workers Union of America, CIO): Management has employed numerous measures which allegedly measure output. The one which is very widely used is the time study. It is not a true measure of productivity. It provides a method of judging, through inadequate means, the increase in output expected for varying additions in the application of human effort and skill. Many incentive systems are based on the premise that labor should be compensated only for the additional output which arises from more than normal effort and skill. They therefore recapture all increases in output arising from causes other than human effort and skill. They do not measure output. Measures of physical output which do not seek to distinguish the source of the increased output more nearly conform to the measure which is being sought. Thus, for example, incentive systems which provide payment for output and which do not allow for the change of this rate for any cause more nearly approximate compensation for increased productivity from all sources. During the war certain plant-wide incentive systems were based on his principle.

H. B. Maynard (Methods Engineering Council): Difficulties are in-olved in establishing performance ratings. With fixed methods, the ontribution of the worker to production is dependent on his skill and n the effort with which he works. While performance ratings are based n a process of judgment, it is possible to achieve a fair degree of onsistency by using carefully worked-out definitions, motion pictures epresenting different performance levels, etc. Another approach to this problem is effort rating, which endeavors to arrive at an evaluation of performance level by judging the speed of the motions made by the operator. A different approach being evolved establishes, as the result of considerable research, predetermined motion time standards which, if once accepted, will take the element of judgment out of the problem.

LAZARE TEPER (International Ladies' Garment Workers' Union, AFL): Mr. Maynard has discussed the question of measuring efficiency at the job level under fixed conditions, but the main problem arises when conditions change. If a particular operation is changed, for example, from a 5-motion job to a 4-motion job, efficiency is not always measured in relation to the former 5-motion standard but in relation to a new 4-motion standard, and the worker loses the benefits of increased physical productivity. If labor is not to pass judgment on management's efficiency, performance on the job must be judged in terms of the physical units produced.

H. B. MAYNARD: When a worker, through his own ingenuity, reduces the number of motions involved in a job, he should have a substantial award. However, the standard should be reset and rewards for ingenuity should not be included in the incentive plan. If they are, the earnings structure is distorted, with some workers earning considerably more than others for the same expenditure of effort; the workers themselves consider such a wage structure unfair.

RUFUS TUCKER (General Motors Corporation): Although it is perfectly true that bad morale and bad labor relations result in decreased productivity, output is reduced only because such conditions cause the laborer either deliberately or unconsciously to hold back. Consequently, such conditions should not be charged to management, since the effect in reducing output depends wholly on the laborers' attitude.

MR. CLAGUE: The problem of measurement of productivity at the job level leads quickly to the problem of shares in the output. For example, assume that man-hours per unit were reduced because of the workers' ingenuity, wages were raised proportionately, and the same number of people were at work. Production would be increased, but it would not be possible to sell the whole output at the same prices. One is thus forced to a consideration of wages, interest, rent, and payments for other factors of production. Nevertheless, it is desirable to work out methods of measurement that will not be confused by the issue of sharing the profits. Another difficulty is that the job is constantly changing, and any measure of productivity at the job level cannot be put into a long series. In view of these difficulties, it appears that measurements of productivity at the job level are the concern of labor and management at the particular plant, and both labor and management will have to get into the study of job output.

Gardner Means (Committee for Economic Development): In a boom period there is a small proportion of overhead workers relative to production workers. In a depression, the number of overhead workers may be the same, but the number of operating workers is reduced, with the result that total man-hours per unit of output are increased, even though each worker is just as productive in his particular job. There is a question as to whether such a change should be called a decline in productivity or whether the effect of changes in the proportion of overhead workers should not be separated from other changes.

Hiram Davis: It would be possible to develop a series of ratios, relating output to the various categories of labor and not merely to labor input as a whole. Changes in the proportion of overhead workers may not be only a cyclical relationship; it has been suggested that there is a decided trend in this country toward an increase in the proportion of overhead workers.

(Seth Levine of the CIO Maritime Committee, Charles E. Young of Westinghouse Electric & Manufacturing Co., and Rosalind Schulman of the Industrial Union of Marine and Shipbuilding Workers of America also discussed briefly the relationship between productivity and the level of output.)

Duane Evans (U. S. Bureau of Labor Statistics): Cyclical changes are not so likely to affect measures of productivity at the job level as at the industry level. Physical output per unit of labor input is of primary importance, rather than per capital input or input of other factors. On the one hand, the physical output produced determines the standard of living. On the other hand, the labor force is the one resource whose utilization cannot be deferred. Tremendous numbers of separate things determine the output of the individual worker—management factors, mechanical factors, machine factors, materials factors, and worker factors. A very big element in the high productivity of the United States is the accumulated skill and experience of the labor force, which is not wholly industrial but is due, in part, to familiarity with mechanical devices in daily life.

There is no typical situation with respect to reports concerning worker effort. Some plant-managers have stated that their labor force is better today than when we entered the war, while others hold strong opinions to the contrary.

Robert W. Burgess (Western Electric Co.): Referring to remarks by Mr. Barkin and others which questioned the accuracy of available measures of output at the job and plant level, as a matter of concept, measures of productivity (according to the orthodox definition of output divided by man-hours worked) could readily be constructed in plants which use the piece-work system with predetermined "standard" costs and standard times for each job. The point is that the concept of productivity in such cases is clear-cut and its measurement available without question. How accurately and fairly standard costs and standard times have been established in any plant is another question, separable from that of the concept of productivity. There is still another question of the operating type: whether day-by-day adjustments should be made in the application of piece-work rates to recognize unusual current irregularities in production conditions.

Solomon Barkin: A piece-rate system does provide for payment in proportion to output. In contrast, engineered incentive systems are based on the concept that there should not be compensation for increased output if the increase is attributable to some factor other than the worker's effort. Thus confusion arises because of the attempt to identify worker's effort and output.

OCTOBER 28—AFTERNOON SESSION

Chairman, Robert Nathan, Robert Nathan Associates

Concepts and Measures of Productivity at the Plant and Company Levels

Benjamin Haskell (United Textile Workers, AFL): The statistical approach to productivity—the measurement of the relationship between output and labor—has very serious and dangerous inadequacies. The desire of the statistician for some single over-all measure is a stumbling block to obtaining genuine knowledge. For example, a variety of very different products may be called by the same name. The averages presented by the statistician often obscure rather than disclose what should be measured.

The statistical approach ignores the meanings and explanations. However, the explanations and qualitative factors are just as significant as the figures. For instance, when a strike broke out at a cotton mill, it was discovered that the employer had bought a poor batch of cotton. On the basis of production during that period, one might conclude that labor was falling down on the job, but the factor of poor cotton had as much importance as the time input. In the same way, the organization of the plant, labor relations, the kind of machinery, and the flow of materials ıffect the volume of output. Those who handle statistics have a moral ›bligation to give explanations, because the tendency has been to imply esponsibility whenever the statistics show an apparent decline in physical ›utput per unit of labor input.

The farther productivity statistics depart from the plant level, the nore obscure and meaningless they become. The statistical approach hould therefore be supplemented by the case-history approach at the lant level. The case-history approach will provide the qualitative factor, ıe explanation of why things are as the statistics claim them to be. The ıformation will be based on actual experience of management and labor nd not on reported statistics which have many flaws. A valuable byroduct of this approach will be to increase the cooperation of local labor ıd management in matters of common concern, such as productivity.

H. B. MAYNARD (Methods Engineering Council): In considering proıctivity at the company level, it is necessary to include not only the oductivity attributable to the application of the worker but also that tributable to methods. First, productivity is affected by methods deterined by job conditions, including design. For example, in the dress dustry, productivity will depend on the presence or absence of sleeves, llars, pockets, frills, and the like; in coal mining, on the presence or sence of gas, the height of the seam, the hardness of the floor, and nilar factors. Second, methods determined by physical equipment affect oductivity—whether the operations are performed by hand or machine, d the types of machines used. The third method variable, under given › conditions and physical equipment, is the sequence of motions emyed by the operator.

Because of these factors, the measurement of productivity is difficult. ıe various yardsticks used (volume per man-hour, volume per man-day, lume per crew-day, volume per machine-hour, dollar value of sales man-year) measure productivity incompletely and must be used h understanding. General units like tons, molds, and pieces do not relate well with the time and effort required to produce them, if the ge of sizes, weights, etc., is varied. In many instances difficulties have n experienced with incentive plans because differences in the design the products handled resulted in large variations in earnings.

The solution is generally to establish additional units of measure, with tandard for each. In coal mining, for example, instead of a single nage per man-day figure, it would be necessary to establish standards gaseous and nongaseous mines, for various ranges of seam height, various grades of coal, and for various types of physical equipment. ıagement officials, through long experience, are able to establish irical relationships so that even incomplete measures take on value and meaning. However, in order to obtain productivity figures that are comparable and useful at the plant level, it would appear necessary to establish well-defined classifications of product, job conditions, and physical equipment. Then any differences may be attributed to labor effectiveness, including in the latter term such factors as skill, effort, heat, light, ventilation, training procedures, morale, managerial skill, and so on. Such information would appear to be most useful in raising productivity throughout a given industry.

Charles E. Young (Westinghouse Electric Co.): Output per man-hour of factory labor is only one of several interrelated productivity concepts that are important in managing a manufacturing enterprise. For purposes of reaching valid business judgments, comparisons of results with costs must ultimately be expressed in monetary terms. Analysis of physical output per man-hour is useful primarily as a refinement of technique aimed at eliminating the vagaries of money as a means of measurement. However, the concepts and measurements must eventually be reinterpreted into monetary terms.

Physical measurement of productivity at plant and company levels i necessarily inexact. Even if a plant or company produces a single produc all the units of which are identical, problems may arise. If the plant ha been generating its own electricity but later buys its power, for exampl the man-hours per unit of finished product will be reduced, but it i questionable whether this change should be called an increase in produc tivity. Measurement becomes more complex when a second product introduced, for this involves a weighting problem. This lack of hom geneity also applies to man-hours, since there are differences in skill an effort between different individuals and in different occupations. Anoth problem concerns what part of the total hours worked in a plant company shall be used. Because of these difficulties, comparisons pu porting to show differences in productivity must be subjected to the mo careful scrutiny. Possibly the proper function of physical measureme of productivity at the plant or company level is to delineate broad tren rather than to support detailed conclusions as to management acti or wage policy.

Many of the improvements in manufacturing efficiency come ab product by product, or even part by part. There is no reason to supp that each and every operation included in an average has become m efficient in the same degree. An example of productivity change operati virtually on a plant-wide level is the redesign of the electric-motor l of the Westinghouse Electric Co., which resulted in a 30-perc reduction in the man-hours required to produce a given motor. This p gram involved investigation of the characteristics that customers de ı motors, extensive development work, and the investment of 20 million ollars in a new plant. The number of parts required for the new motors 'as reduced by over 90 percent. This example indicates that substantial nprovements in productivity do not accrue merely by the passage of time, ut must be conceived, studied, implemented, and backed by substantial ıvestment.

Many of the forces which operate to increase productivity have little onnection with the earnestness and skill of the individual worker. Among e foremost requisites of growing efficiently is alert aggressive management. Friction between management and workers, however, can hinder ıd even undo many promising technological gains. If friction is replaced mutual confidence and respect, management and labor can go forward gether, to their mutual advantage and to the benefit of the general public.

oncepts and Measures of Productivity at the Industry Level

Solomon Barkin (Textile Workers' Union of America, CIO): This a summary of two papers already distributed to the participants.

One, "Measuring Man-Hour Output in the Synthetic-Yarn Industry," scusses the deficiencies of the index prepared by the Bureau of Labor atistics as well as of an alternative measure prepared by the Textile onomics Bureau. The Textile Economics Bureau production index, ıich is based on the total yardage of rayon yarn, is invalid, for there no direct relationship in the synthetic-yarn industry between yardage d man-hours. The Textile Economics Bureau and Bureau of Labor atistics indexes have a number of deficiencies in common. The comnies in the industry produce many products in addition to rayon yarn d the proportion of these products has continuously increased; for ımple, two plants are devoted exclusively to the production of nylon. is incorrect to derive output per man-hour by dividing an index of on-yarn production by a man-hours index which includes nylon and er products, as well as rayon yarn. Moreover, the man-hours figures primarily the number of man-hours paid for and not man-hours rked. As unions obtain provisions for more liberal vacations and kness and lunch-period pay, the discrepancy between the index of n-hours paid for and the actual hours worked is constantly widened.

Mr. Young: The experience of Westinghouse Electric Co. is that "net owed hours" are about the same as in 1941. Elapsed hours for the entive workers are somewhat lower, and indicate a gain in efficiency. wever, for hourly paid workers, there has been a considerable reduc- ı in the number of "net allowed hours" as against the elapsed hours. addition, there has been a large increase in the number of salaried and staff people, brought in on the expectation of a high volume of output. The company is currently making inefficient use of some labor; this is no reflection on the willingness or skill of the workers, but may be bad management.

Per capita income has been growing at an accelerated rate and it is important that the remuneration of labor be reviewed quite frequently. This should be done by considering total productivity and sharing the increases, making only such distinctions between workers as are possible through very detailed studies of performance at the job level. The general movement of wages must be based on the general movement in productivity. It is possible, by studying the changes in real per capita income of the country as a whole, to determine what changes should be made in the income of labor as a whole to provide equilibrium in the economy. About a year ago the speaker made an attempt of this kind. Assuming that wages, prices, and productivity were in balance as of January 1941, making allowances for the increased cost of living, and projecting the annual productivity increase of the years before the war, it was found that as of August of last year [1945] there was a needed adjustment of 18 or 19 percent in the general wage level. Although thi study yielded only a first rough approximation, it was a starting point

John D. Gill (Atlantic Refining Co.): Repeated attempts to mak measurements of labor productivity in the petroleum industry have bee unsuccessful because of changes in equipment, in processes, in th quality of output, and in the quality of raw materials. The chief reaso for attempting to measure labor productivity is with respect to the remuneration of labor. However, it makes no difference whether labo productivity can be measured at the plant and industry level. It is possibl to depend on competition from department to department, from plant t plant, and from industry to industry, for high labor productivity, in th sense of the workers' attitude and qualities of mind and muscle. It i absurd to think that there can be vast differences in the remuneration o for example, Number 1 machinists in different plants because of differences in productivity at the plants. The apparent differences in productivity between the plants may be almost entirely the result of managemen efforts, which are quite irrelevant to the value of the machinists.

The original interest in man-hour output centered in the question displacement and reemployment, but current interest centers in th creation of new wealth for distribution. Therefore, it is necessary t consider how the results of our industrial activity may be more rationall distributed. Output per man-hour gives one phase of the approach t productivity, but it is also necessary to consider other phases of produ tivity in the sense of creation of wealth at a lower cost. Enormous savin cur in industry through more economic use of materials and savings of erhead items.

The second paper, "Measuring Productivity Rather Than Man-Hour itput In an Industry," discusses changes in total productivity in the tton-textile industry between 1937 and 1939. The value of products, s wages and profits, corrected for price changes, is used to show the out of factors other than labor. Output per unit of input of these factors ist be considered along with output per man-hour. This paper is preited only as an approach to the problem of measuring total productivity l may need refinement.

Discussion

NATHAN FINE (Research Director, Metal Trades Department, Ameri- Federation of Labor): Mr. Young's implication was that shares uld be based on the contribution of the various productive factors. The nmon assumption is a very static one. It is assumed that the worker ys pretty much on the same level, but that the research division has no itation. The status of the industrial arts, which is so largely determined the universities and Government agencies, is taken for granted. In last 4 or 5 years, the Government has invested hundreds of millions lollars in machinery and has given it mostly as free goods to industry. it contribution will automatically be assumed to be the contribution research of the companies. No effort is made to determine what part he workers' products goes into the company treasury for depreciation research, which in turn becomes a company contribution to further elopment. When analysis is made from the viewpoint of relative tributions and it is assumed that management takes over everything ept the workers' contribution, the whole question of productivity lies something which is a little pernicious from the labor standpoint. tudies were made plant by plant, or job by job, and all the factors e analyzed, the common assumptions would not necessarily be shown .

IR. YOUNG: It is agreed that the integration of research activities make fficult to determine the specific contribution of any one group.

ARRY MAGDOFF (U. S. Department of Commerce): There is need relating what is being measured to the purpose of measurement. erent measures are needed for different purposes. There is the onal aspect of distribution of income, from the standpoint of adequate nce to maintain full production and full employment. Secondly, a sure is needed for negotiations with respect to wages. Third, measures needed for management problems with respect to controls and efficiency. In the opinion of the speaker, there is no scientific method of measuring performance on the job. The only constructive way is for labor and management to get together and to settle on techniques and standards.

Mr. Gill: Industrial engineers can do much to affect productivity, in the sense of power to produce, but the individual who might be operating at 80 or 85 percent of his personal effectiveness cannot have that effectiveness greatly increased. The main concern is productivity, in the larger sense of capacity to produce. The problem is to increase total production; this can be done only by attaining and maintaining equilibrium in the economy.

Mr. Barkin: Industrial profit figures are not real indicators of productivity. There is, first, no set rule as to how much industry should receive; nor is there uniformity as to the methods of calculation. The figures usually discount increases in productivity which have been passed on through lower prices and reflect the bargaining powers of the various economic groups. It is therefore necessary to study the relations of various factors that enter into productivity at the industry level.

Everett Hagen (National Planning Association): There is a method by which it is possible to get double entry bookkeeping into our thinking The changes in productivity—total physical output divided by man-hour —together with the change in prices and the shift in the nature of th output should add up to the change in the value of output per man-hour A study made by Sam Cohn, under the direction of the speaker, o the change in the value of output per man-hour between 1939 and 194 both for all nonagricultural industries and for manufacturing showe that for all nonagricultural industries the increase was 55 percent. Th increase in prices may be estimated at 28 percent. Thus, the increase i physical output per man-hour, plus shifts in the nature of the product must have accounted for a 20-percent rise in the value of nonagricultur output per man-hour. It is possible to estimate the change in physic productivity, the effect of the shift in the composition of output, an the change in prices. If all three will not add up to the change in th value per man-hour, then something is wrong with one of the fo measures.

Duane Evans (U. S. Bureau of Labor Statistics): One way of a proaching economies in the use of input factors other than labor is l the use of the interindustry relationship technique. The Bureau of Lab Statistics, for the year 1939, divided the entire economy into maj industry groups and investigated quantitatively the kinds and amou of products which proceed from each industry to the others for furth processing or for use. For example, over the past 20 years there has been a marked reduction in the amount of coal required to produce a kilowatt-hour of electric power. This change does not show up in the productivity figures either for the coal industry or for electric power, but it does show up on the interindustry balance sheet.

Many different types of measures can be useful. In the tire industry, for instance, one can measure the number of tires produced or the total tire-mileage. These may be related to total man-hours, skilled and unskilled, together and without differentiation, or it is possible to separate the man-hours worked by skilled workers and unskilled workers and to weight them to derive an adjusted figure. None of these measures is intrinsically wrong, and each may convey useful information, but the user must understand what is included, what is excluded, and what s ignored.

OCTOBER 28—EVENING SESSION

Chairman, George W. Taylor, University of Pennsylvania

oncepts and Measures of Productivity at the National Level

Marion Hedges (International Brotherhood of Electrical Workers, FL): Whether the United States operates under a free economy, a lanned economy, or a mixed economy, its achievements depend upon roduction. Productivity is a secondary concept, of importance because bears directly on the question of equitable distribution of the results f production.

The salient fact about American industry is that it is mechanized. Our eakness has been that we have never clearly visualized our destiny with elation to mechanized production. Mechanized production enables inustry to pass from piecemeal production with high unit costs to mass roduction with low unit costs. Mass production with low unit cost, howver, must depend upon high income for each citizen. The United States as elected to follow the free-enterprise concept in the operation of our onomy. Our economy can be operated under this concept, but not ithout controls.

An article by Benjamin Graham, in the Commercial and Financial hronicle, presents a point of view in business that may be of great oment. Mr. Graham traces mass unemployment in time of prosperity to persistent tendency for productivity to expand faster than per capita come and to a recent tendency for the working force to expand relative population. Mr. Graham states that wages should advance with proctivity, while the workweek should decline to the extent needed to aintain full employment.

Some way must be found to take into consideration, in any productivity index, intangible values. Moreover, in some industries, as in building construction, productivity cannot be measured quantitatively.

Labor can hope to profit by a more scientific operation of industry, with national goals in mind. Labor believes generally that labor is not now receiving and never has received a just share of the fruits of production. Labor wishes to see the gap closed between the growth of productivity and the income distributed. Labor does not believe productivity can be quantitatively measured, since intangibles are all-important. Labor believes that any gauge of productivity will be advantageous—even physical output per man-hour, but labor wants such a gauge, when promulgated, to be seen for exactly what it is, and advocates that a complete description be published with each set of periodic figures.

EVERETT HAGEN (National Planning Association): The first conceptual problem in the measurement of productivity at the national level relates to the weights to be used to combine into one index the trends for the different types of goods, when the proportions of the different goods change. As an example, assume that the two types of goods are automobiles and tables, with tables representing forest products in general, and that the wage payment per man-hour and the value of output per man-hour are higher in automobile production. The increase in productivity in the automobile industry has been much more rapid than in the forest-products industry. If the two industries are weighted together in accordance with the number of man-hours in each, there will be one result for the combined productivity index. If the weights are the wages in each industry, on the basis that a man-hour at $1.50 is not the same as a man-hour at $1.00, a different index will be obtained. If the price that the final purchasers of the products put upon them and weight by value of product are considered more relevant, still a different combined index is obtained. In general, weighting by value of product is most appropriate.

Another problem is, which year is to be selected in weighting the two series together. If automobiles and forest products are weighted in accordance with their relative importance in 1940, automobiles will be weighted much more heavily than if relative importance in 1900 determined the weights, and the index will therefore go up faster.

The problem of shifts in the proportions of different goods arises between the goods-producing and service-producing industries. In the services, the growth in productivity has been much more slow than in the goods industries. In the thirties, the service industries grew greatly in relative importance, because of disguised unemployment of persons who shifted into small businesses and attempted to sell services. A marked reverse shift occurred during the war. If the trend in productivity for the economy as a whole is estimated by comparing the deflated value of output with man-hours, the effect of shifts between industries is included in the estimate. In the opinion of the speaker it is correct to include the effect of such shifts. Because of such shifts, it was estimated in the Hagen-Kirkpatrick study that the increase in over-all productivity between 1939 and 1950 would be 2.3 percent per year, compared with 1.7 percent between 1923 and 1939.

Another conceptual problem which enters at the national level is the lifficulty of measuring output in some industries. There is no definable unit of output in such fields as the law, services of government workers, anking, and the like. A final problem is the lack of data for some fields, ven where there are no conceptual difficulties.

The conference might consider why there are no data in certain areas, hether there are conceptual problems and, if so, what problems. In this ay, it could make some technical advance in the problem of measuring oductivity.

Robert W. Burgess (Western Electric Co.): Studies of productivity the top level may lead to the formulation of decisions on particular erating questions; studies at the plant level may facilitate the task of nagement; studies at the industry level may furnish a standard of mparison of industries. At the national level two types of measures of oductivity would be desirable. To measure the typical gain in producity that the economy as a whole is making, a composite should be structed by the use of constant weights applied to the productivity ies for the different industries. On the other hand, to meet the probs raised by Mr. Gill and others concerning changes in total product to distributed, a measure based on current varying weights for different ustries is needed. This measure is probably one of the most fundatal in the application of productivity studies to wage questions, since the over-all gains in national productivity which have justified, during past century, the continued improvement in our standard of living similar over-all gains which are expected to justify corresponding rovements in the future.

he concept of gross national product is more helpful in this problem the concept of national income. Gross national product is the ary concept, since national income is derived by subtracting from s national product depreciation accruals; i. e., the capital assets osed to have been consumed. Annual depreciation accruals never very satisfactory as measures of the capital value used up per year they were never designed for that purpose, but are simply the ts of convenient and conventional accounting procedures for spreading capital costs by years. During the next few years, annual depreciation accruals, as recorded in the books of manufacturing companies, are going to be still less satisfactory measures of capital value used up since many companies are going to use, without any depreciation charges, equipment that was paid for and amortized during the war, and in addition, depreciation accruals based on plant cost will be much lower than the value of plant used up as measured by replacement cost.

A defect in both national income and gross national product is the inclusion of interest on the public debt. In the speaker's opinion, it would be preferable to consider only nongovernment output, even though it is possible to justify the inclusion of some of the government expenditures because they represent consumer services. However, most government services are not valued in the market place and the only value that can be assigned to them is the conventional one of what is paid for them.

It is important that measures of national production reflect gains through technological improvements and replacements. Natural gas will perhaps be brought to the eastern part of the country, replacing some coal. If it serves the same purpose, gross national output is increased or is maintained at less input.

In some industries, it is very difficult to consider productivity as due to the efforts of the workers immediately concerned. In the exhibition of motion pictures, for instance, there is, according to the formula, greater production per usher where the theater is filled than when there is a small audience. In fishing, again, production depends mostly on natural factors which the individual fisherman merely accepts. It is difficult to think of productivity as having anything to do with efficiency of labor and management factors in such cases.

Discussion

Duane Evans (U. S. Bureau of Labor Statistics): An illustration will show the difference in results attained by weighting with man-hours and with value added. The number of man-hours required to produce a thousand cigars decreased about 30 percent from 1939 to 1945, and the number required per thousand cigarettes decreased about 20 percent If we determine how many man-hours it would have taken in 1945 to reproduce what we actually did make in 1939, we will get a figure between 20 and 30 percent as our average. If we determine the value per man-hour in constant prices, created in these two industries together, we get 60-percent increase.

Value-added weighting is useful for some purposes but not for other One cannot conclude, on the basis of such a measure, that it is possib to increase profits, to lower prices, or to raise wages to the extent o a 60 percent increase in efficiency. The change is due partly to a shift of production from industry to industry, and no single plant in either industry is necessarily 60 percent more efficient.

For the national economy, it becomes virtually impossible to measure physical productivity and it is necessary to use the value concept. Each has its own field of use. The physical concept has a much more immediate relation to economies in the usual sense.

Solomon Barkin (Textile Workers Union of America, CIO): As suggested earlier there are sources of increased efficiency which are not reflected in the measures of output per man-hour but which are relevant to the process of trying to distribute increased productivity among the various components of our productive system. For example, in a number of industries chaotic competition has been ruinous. As a result of stabilizing controls there will be fair-trade practices. In some industries, as for example in the apparel group, the unions have contributed to greater stability, and the result of such stabilization is a diminution of the amount of capital that gets destroyed.

Another illustration is the cotton-textile industry, in which the function of selling is being integrated with the function of manufacture. The integration of these two operations will not show up in any of the figures that we have. However, it will mean a reorganization of the systems of production and designing, of fabrication, and of marketing, which will stabilize the industry and possibly result in less loss and less capital involved in the industry for the same output. In wage negotiations, the union will be tapping this economy because it will tend to show up in a higher level of profits. Another example is the tendency in the men's clothing industry for the manufacturer to have his own retail store.

Mr. Hagen: Where there is an economy in a given industry which s associated with a saving of material, without any saving of labor, a study of man-hour output in the separate industries will not reflect it. However, because of the reduction of employment in a previous industry which was producing the material, without reduction in the Nation's otal output of finished products, the economy as a whole will show uch a saving.

Concepts and Measures of Productivity at the International Level

Julius Hirsch (Consulting Economist): Professor Rostas has tried o show that for manufacturing industries as a whole, output per person mployed was roughly twice as great in the United States as in the United Kingdom, and a similar result was obtained for the textile industry by the Textile Mission. He states that it is possible that American supremacy in manufacturing is obtained only at the cost of relative inefficiency in the other four-fifths of the economy.

Comparisons made by the speaker for the year 1944[2] showed that British labor received, in dollars, approximately two-thirds of what American labor received, but purchasing power probably would not have been so far from that of American labor.

It is greatly one-sided to measure productivity only by considering output in relation to human labor hours. For national and international comparisons various other standards have been developed, especially those of net output per kilowatt-hour and net output per installed horsepower. Data from the British Census of Production for 1935 show that where there is much human labor and little machinery, net output value per kilowatt-hour is high. Where there is little labor and much machinery, the reverse is true.

A specific German approach to the question of efficiency was a systematic nation-wide comparison of costs and performances in industry. Professor Schmalenbach developed schemes for uniform cost accounting for more than 60 industries, and industry and government assisted in this work. In this way, it was possible to compare every individual cost element in a business with those in other businesses in the same industry. These methods brought about an enormous increase in efficiency. German statistics show an increase in value added by manufacture per man-hour of about 50 percent from 1926 to 1936.

In the Soviet Union, there is a decided attempt to bring about an increase in productivity with all means available to the concentrated power. Production quotas are allocated to every factory, every department, and ultimately, every laborer. The goals of the 5-year plan called for an average annual rate of increase in productivity of 12 percent in all industries, and 15 percent in the heavy industries. The Russian publications say that in most cases the performance of the Russian industry is somewhat better than the plan; the statistical evidence, as far as we have it, does not yet show how far this has been the case.

In the field of international comparisons, the first work was done on distribution—wholesaling and retailing. The great area of retailing has been neglected in the usual discussions of productivity. It is, however, probably the area where there is the greatest need for a change. The Harvard Business School has stated that the costs of distribution, including transportation, absorbed 54 to 59 percent of the total cost of producing and distributing goods. International collaboration in eliminating sources of waste has been adapted to great advantage by the members of the International Association of Department Stores. There are new attempts in the United States, as in Sweden and Switzerland, to lower the increasingly heavy burden of distribution costs, though none has as yet had decisive results.

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[2] Mr. Hirsch's comments were based on tables on "Productivity and Productivity Measurement and International Cost Comparisons," which he had distributed to the members of the conference.

Comparison of materials, wages, overhead, and profit in the main manufacturing and mining industries for Sweden, England, and the United States in three different years at different stages of the business cycle shows that the share of materials in the total is almost identical. The share of wages is highest in England and lowest in the United States.

The best international exports we can make are those of knowledge—how the suffering nations may soon reach the level of highest productivity. We have ourselves reaped enormous profits through such exchanges. In showing others how to increase productivity, we teach them how to help themselves to better and better standards of living.

CHARLES MERWIN (International Monetary Fund): All of the difficulties encountered in making comparisons of productivity at the national level, the industry level, the plant level, and the job level arise in an accentuated form in international comparisons. The problem of index numbers is even more difficult to resolve on a spatial basis than on a temporal basis. In using broad measures, there is the difficulty of determining what exchange rates to use. Finally, differences in definition and classification usually present more practical problems in an international comparison than in a temporal comparison.

Nevertheless, a comprehensive comparison of productivity at the international level should be attempted, and the appropriate time is the present, when we can profit from wartime experience. It would be necessary to have an international working party. This working party would try to define the problem, uncover usable data, and determine differences n productivity for the economy as a whole, for particular industries, for particular products, and even for particular jobs. Finally, such a working party would appraise the strategic factors accounting for the differences n productivity.

Such a study could be sponsored on a nongovernmental basis by, say, philanthropic foundations in two or more countries, or it could be done on the governmental level. Since the Board of Trade in Great Britain has engaged Professor Rostas to study the productivity of competitor ountries, an obvious international working party would be, say, the Board of Trade and the U. S. Department of Labor. Private business nterprise should participate in such a study. Corporations which operate n an international scale should be an ideal source of information as to etails concerning productivity on the job and in the plant.

HANS STAEHLE (International Monetary Fund): The usual procedure in dealing with the question of comparisons of the change in productivity over time within one country with the change in another country, is to compute a production index, which is weighted by value added at one particular moment of time. On the other hand, the employment index usually is the unweighted, unadjusted sum of all man-hours worked.

In any kind of index-number computation it is always conducive to clarity to consider an index number as a weighted average of some variable. Since the variable usually measured is the ratio of output to man-hours, such an index gains in clarity if it can be built up as a weighted average of such ratios, and then combined into some aggregate expression.

Interpretation of the usual type of index (based on a production index weighted by base-year value added) in terms of the original industry indexes is extremely difficult and leads to a weighting system which looks at least awkward in symbols. If a weighted average of indexes pertaining to particular industries is desired, then of necessity weighting by man-hours should be used. In this case, the index is clear-cut, and its computation would not exclude such other extra measures as might be found useful or necessary for other purposes. Such an index would measure the *average* change in productivity per man-hour actually worked. The weights should be the man-hours worked currently, year for year, in each industry.

For the purpose of checking on this idea, the speaker had taken 15 out of 17 of the industry groups that Dr. Fabricant presents in his work, and had computed output per man in each one, weighting them together with shifting weights, year for year, by the number of men actually at work. Finally, an over-all and very rough correction was made for the disproportional change in total man-hours as compared to total employment in terms of the number of men.

For the period 1899 to 1939, the speaker computed from Dr. Fabricant's productivity index an average annual rate of increase of 2.98 percent. Taking the index computed with changing employment weights, the result of 1.95 percent a year—a tremendous difference—was obtained. For the period 1899 to 1929, Fabricant's index leads to an averag increase of 2.94, whereas the speaker got 1.79 percent.

The speaker by no means subscribes to the idea of a normal continuin increase in productivity. Conceptually, there is no doubt whatsoever tha there can be no automatic, virtually self-perpetuating increase in produc tivity of that sort.

Any rates of increase, over time, of productivity in a country are onl loosely related to the increases in real income as it can be measured, fo example, by deflating money incomes. Thus, if a country imports a larg part of its food supply and food becomes cheaper, real incomes wi increase. However, if that decrease in food prices is due to increased efficiency in other countries, it is one more instance of the world solidarity in greater efficiency.

Discussion

Prof. J. R. Hicks (University of Manchester, England): The more price and value are used as weights, the closer you bring the discussion to the general field of national income. Possibly the next thing which needs doing is to get the national accounts divided up properly by industries, so that the contribution of different industries becomes clearly appreciated. A good deal of the discussions at the conference have tended more in that direction than in the direction of productivity. Productivity work proper does have a further function, in the direction of trying to explain why the real national income, or contributions of particular industries to the real national income, move the way they do.

Solomon Fabricant (National Bureau of Economic Research): The differences that Mr. Staehle mentioned in the indexes of manufacturing output compiled with different weights were very much larger than those found by the speaker's own experimental computations along the same line, and it would be well for Mr. Staehle to check his computations. The consistency criterion mentioned by Mr. Staehle can be met in several ways. One way is to define the output figures for the individual industries so as to attain that consistency. An index of "net physical output," something analogous to net value added, will yield a measure for an individual industry such that when averaged for all industries the result is consistent with deflated national product. Moreover, such an index of net physical output takes into account some of the points Mr. Barkin mentioned. For example, savings in materials would result in a greater rise in net output than in the usual indexes of "gross physical output."

Charles Roos (Econometric Institute, Inc.): It would be desirable first to define the purpose for which a productivity index is to be used and then to build one to meet that purpose. Since the greatest productivity changes are in the newer and growing industries, national productivity might be the summation of growth functions and it is thus wrong to use a logarithmic function to describe productivity. With respect to costs of distribution, if the customer is willing to pay for services, it is up to ndustry to provide the service and it is not our province to say that the cost of distribution should be lowered. Finally, it is important to state very clearly how any index is constructed. If that is done, there will be a use for almost any weighted index.

E. J. Riches (International Labor Office): The ILO would welcome suggestions on means to insure that the basic data collected in different countries are as nearly uniform as possible and that methods followed in making measurements of productivity are standardized internationally. In drafting proposed international standards for employment statistics for submission to the Sixth International Conference of Labor Statisticians, which will convene in Montreal in August 1947, careful consideration will be given to the discussions of this Productivity Conference and to suggestions which members in the conference may send to the ILO.

OCTOBER 29—MORNING SESSION

Chairman, Isador Lubin, President of the American Statistical Association

Scope and Limitations of Existing Measures of Productivity

Duane Evans (U. S. Bureau of Labor Statistics) : All the participants have received a bibliography which attempts to list the main references to quantitative work in the field of productivity. The Bureau of Labor Statistics should be informed of important omissions, since the bibliography may be reissued later.

The Bureau of Labor Statistics has been working in the field of productivity since at least 1898. Its present work owes a substantial debt to the activities of the National Research Project on Reemployment Opportunities and Recent Changes in Industrial Techniques. Continuing work in the Bureau of Labor Statistics was started in 1941 with a staff of 25 people, but within the past year the number has grown to about 65.

At one time or another, the Bureau of Labor Statistics has done some work on almost every aspect of productivity. That part of its work which has probably received the most attention is the preparation of productivity indexes, or indexes of physical output per man-hour. Before the war, there was the invaluable help of a Census of Manufactures every 2 years, but such a census has not been taken since 1939. There may be one covering the year 1947, but the results will probably not be available until 1949. The census is especially valuable because it presents necessarily comparable production and employment statistics for the same establishments.

Since 1939, employment reports have been obtained from one source and production reports from others. The question of comparability between the production and labor reports presents continual difficulties The Bureau has systematically examined the statistics collected by al agencies, trade as well as government, to see whether there is any material which can be used to prepare additional indexes of outpu per man-hour, and this work will continue.

None of the indexes is perfect. It is a commonplace to the statistician
hat all figures of broad coverage include imperfections. The real ques-
on is the permissible range of uncertainty. The guide on this question
; the following: Would anyone be likely to reach a different policy deci-
ion because of errors or imperfections in the figures?

The Bureau naturally receives criticisms of its indexes and sugges-
ons for improvement. These are all carefully examined and appraised.
Ioreover, there is a substantial amount of self-examination and self-
iticism, and a continuous effort to improve the validity and field of use
productivity figures.

One of the criticisms made is that the man-hour figures include, to
me extent, hours which are paid for but not worked. If such hours
uld be excluded, the indexes of output per man-hour would be some-
hat higher. The Bureau's figures on employment and pay rolls are
t collected primarily for the purpose of computing productivity
easures. The series are in part designed so that there will not be erratic
riations in average hourly earnings. The inclusion of paid vacations in
man-hour figures tends to balance out the average hourly earnings
ures during those periods of the year when vacations are common.
may be possible that some correction can be made to exclude hours
id for but not worked, but productivity work is not the prime factor
determining what type of information is collected.

Another problem is that the employment series collected by the Bureau
based on month-to-month changes in identical groups of plants. Such
ies require periodic adjustments to a benchmark. At present, many
the series are not adjusted, and the general direction of the bias is
wnward. The speaker is more concerned about this problem than any
er single source of bias which might affect the indexes.

Several statements which had been made, to the effect that the field
use of these indexes is limited, are heartily endorsed. The indexes have
n incorrectly used, and as a result there has been criticism of the
S. It may be that the BLS has failed to qualify the indexes sufficiently,
even when extensive and lengthy qualifications are attached to an
ex, the index is sometimes stripped of the qualifications and presented
mmutable fact. For example, the Bureau has not been able to prepare
measure of output per man-hour which covers all manufacturing
ing the war period. Measures have been prepared for a limited
nber of nonwar industries, mostly those producing nondurable goods
naterials. The average for that limited number of industries has been
l in some instances to represent manufacturing as a whole. This is
use or misrepresentation.

he Bureau of Labor Statistics is compiling a brief report for each
stry for which it has published indexes of output per man-hour.

These reports will include all the basic figures, all the weights, and such analysis as can be made of the effects of various possible revisions. The BLS will send these reports to interested people in the unions and companies in the industries concerned; their criticisms and comments will be invited. No promise can be made that this will be done for all the industries, but an effort will be made to complete the task before final indexes covering the year 1946 are published.

A new program, now under way, is designed to yield for a number of industries more satisfactory measures of annual change in output per man-hour than have been available in the past, and more particularly it will give productivity measures for durable-goods industries about which nothing previously was known. In each industry selected for study, a group of products is chosen to represent the industry. Careful specifications are drawn up for each product, and a sample of plants manufacturing each product is selected. From each plant, the Bureau is attempting to secure an annual report on the average number of man-hours required to produce the specified product. The direct reporting arrangement eliminates many questions of comparability, makes productivity measuremen independent of secondary sources of information on production an employment, and permits the collection of collateral information explaining the reasons for changes in output per man-hour. The survey in each industry can be designed to accommodate the special problems an operating characteristics of the industry.

Statistics of productivity, or of anything else, are tools; they are no themselves things. Recognizing that figures are tools, it is up to us t understand them, to polish them as well as we can, and to apply them t the particular jobs which they are best fitted to do.

LIMITATIONS OF PRESENT BLS MEASURES OF PRODUCTIVITY AND LABOR COSTS

Katherine Pollack Ellickson (Assistant Director of Researc Congress of Industrial Organizations): The BLS indexes of produ tivity and unit labor costs have serious shortcomings and have expand unduly to fill the void in this important field. It is the responsibility the BLS to try to avoid this result, first, by hemming in the indexes wi a sufficient explanation of their limitations and, second, to seek to in the gap in other ways so as to present a properly balanced pictu In addition, the indexes should be carefully reviewed in order to impro them where possible, or to terminate them if they are unreliable.

The following are specific limitations of the indexes which the Burea should both seek to remove and explain fully in all releases and sta- ments:

(1) Production patterns within many industries were greatly changed y the war, so that the degree to which the output series represented ach industry undoubtedly fluctuated considerably. Government-procured ems generally were made to higher specifications and required more ork than civilian items, as for example paratroopers' boots as comared with ordinary shoes. It would seem to be incumbent on the BLS make an analysis of this matter generally available.

(2) Various systems of weighting may be used to combine the compoent parts of the production series for each industry. It would be helpful explore the effect of different bases for weighting, to indicate the ossible range in which the indexes might vary if different methods ere employed.

(3) If the employees covered in the man-hour series are making roducts not represented in the production series, then obviously errors sult. Many companies changed their products during the war but conme to be classified according to the 1939 basis in the compilation of the LS employment and man-hours data. Although the BLS dropped dexes for industries in which it knew that a considerable shift in the ture of products had occurred, no thorough canvass was undertaken in e remaining industries to make sure that the employment and man-hours gures actually matched the products with which they were compared. It should be possible to make some check for at least some of the dustries, in the same manner as attempted by Mr. Barkin for the nthetic-yarn industry. At the very least, this limitation should be menned, not just here but in all publications.

(4) The BLS employment and man-hours data are artificially inflated the inclusion of time paid for but not worked; that is, vacations, lidays, call-in time, lunch time, sickness for which benefits are paid, d so on. The BLS specifically asks the reporting firms to include in eir employment and man-hours reports all hours which were paid for t not worked. Since unions have won very marked gains along these es in recent years, a definite downward bias results. Thus, each week vacation with pay during which no work was performed adds 2 rcent to the man-hours reported for the employees affected. The BLS dustrial Relations Branch reports 2 million workers as covered by ion contracts with provisions for paid vacations in 1940, but 11½ llion in November 1944. Vacation time is only one of the types of time at are paid for but not worked. This question requires careful investition and possibly some adjustments; it could mean an error of 3 to ercent.

(5) Also, the BLS employment and man-hour series are affected by a wnward bias that results in part from delay in securing information new firms. Unemployment-compensation data are used to check BLS

employment reports for major industry groups, and some subgroups are also being adjusted by these benchmarks, but some downward bias remains. This operates to offset the upward bias in the man-hours data etc., but there is no reason to assume that the errors cancel each other out

(6) The BLS indexes of unit labor cost are derived by relating pay rolls to output per man-hour. All the errors already mentioned therefore are carried over into the labor-costs series, and some may well be compounded. The pay-roll figures include items, such as premium pay for night shifts, which are granted labor not merely because of the inconvenience to the workers but also because of the savings resulting to employers. Obviously, running two or three shifts produces savings in overhead which are likely to more than offset the premium pay, so tha including it in unit labor costs produces a misleading result.

(7) Output per man-hour as measured by the BLS is too narrow concept of productivity. Economies in production brought about by bette integration of industries, substitution of improved materials, and mo economical use of fuel and power are not taken into account. The BL should place its series in proper perspective by discussing these factor

(8) The 29 nonmunitions industries for which the BLS has issue indexes in recent years are unrepresentative of all manufacturing b cause they are industries in which the effects of the war tended impede rather than enhance productivity advances. Autos, aircraft, shi building, steel, and all the metal-fabricating industries are omitted. good many nonessential industries are covered, which suffered especial from shortages of manpower, materials, repairs, and equipment. As result, the BLS release for 1945 and earlier releases have erroneous conveyed the impression that productivity did not rise during the wa and in 1945 was only slightly above 1939 levels. Since the data ha already been released, the BLS should immediately issue an offic statement on their proper interpretation.

Although the preprint of the December 1946 Monthly Labor Revi article partly covered the speaker's proposals about interpretation of the indexes and putting them in proper perspective, the article still relied t heavily on the indexes and implied that they had a degree of accura which cannot be substantiated. All releases should carry an explanat of these limitations.

Special industry studies are being undertaken by the BLS, which follow through changes in man-hours required for specific operations production processes. This approach is worth exploring, but therei grave danger that the products of operations selected will be conside representative of the industry when they are not. The most stable opera tions are those which can be most easily studied. In areas where rai change is taking place, continuous measurement may well prove imp ble. The reporting companies know very well that labor may use the sults to seek wage increases. There will be a temptation to err on the le of understating increases in productivity, not through misrepresention of the figures so much as through selecting processes which, for me reasons, the employer may think are more representative of the lustry, but which in many ways are not.

The planning of these special studies, including the choice of operations d the review of results from time to time, should be done in consultan with union representatives. Although the BLS may be placed in the emma of making the studies on the employers' terms or not making m at all, the Bureau should take a firm stand against employer prese and should explore the possibilities of compulsory reporting of ential information.

The BLS should explore new methods of approach along lines sugted by this conference. It should offset the erroneous impression ated by its indexes of output per man-hour and labor costs by explain- the wartime factors which interfered with full development of protion potentialities. It should also stress the tremendous increases in luctivity which occurred in war industries, the vast effects that can expected from plant expansion, the significant increase in machine s with harder cutting edges, the pooling of research information, the ulation of research by the Government, the acquisition of German nts, etc.

nstead of simply assuming that the long-time trend of a 3-percent ease in productivity will continue after the war, the BLS should ilert to explore whether this long-time trend may not have been lerated by the wartime developments. Only through a broader apch can the BLS place its indexes in proper perspective and avoid the nful, even though unintentional, underestimation of the increase in uctivity in our economy.

PROBLEM OF PRODUCTIVITY MEASUREMENT IN THE SHIPBUILDING AND SHIP-REPAIR INDUSTRY

SALIND SCHULMAN (Research Director of Industrial Union of ne & Shipbuilding Workers, CIO): In peacetime shipbuilding, like locomotive production and large turbine building, is custom produc- There has not been, except during wartime, any measure or attempt asure of production in this industry. The Bureau of Labor Statistics oublished a study of productivity changes during the war, when numbers of vessels were built, but this study has absolutely no use eacetime production.

any form of custom production, certain operations remain comparatively stable over a decade or so. It might be possible to develop a series of ratios measuring operational cost as adjusted to quantity of operational production. Such a series of measures would reflect, over a short period, major technological change and improvement and major changes in labor utilization.

Rapid technological changes in phases of construction, which perhaps cannot be measured on an operational basis, could make the index for one particular operation meaningless, but if a series of common-denominator operations were developed, the limitations of any single operation might be overcome. Another limitation is that the earnings figures may be inadequate because of modifications of rate structures and modifications of the operations themselves. Continual changes in design will also invalidate this approach.

However, if a series of operational ratios is developed and used over not too long a period, valuable information may be obtained on the custom-production industries which cannot be derived in any other way.

SCOPE AND LIMITATIONS OF EXISTING PRODUCTIVITY MEASURES

ANDREW COURT (General Motors Corporation): The speaker canno agree that Government wartime research has made a large contributio to all types of manufacturing industries. It has in some areas, but it ha not in others.

In the auto industry, the poundage of product per man-hour, compute according to a crude formula developed by the U. S. Department o Commerce, showed 18½ pounds per man-hour in 1941. For 1946, th output per man-hour has been running less than 14 pounds.

It is possible to compare accurately the productivity of different ind viduals on the same job. Where the union permits, such compariso enables the employer to reward individual effort and skill. This ten to maximize the income of the workers. Comparison of different jobs a given period, or of jobs which change from period to period, is e tremely difficult or impossible. For any industry that is evolving, pr ductivity comparisons over a long time span are likely to be crude, least. In the speaker's opinion, attempts to measure or compare pla productivity are practically useless as factual tools in negotiating chang in wage levels or other union-management economic issues. The wh idea of attempting to base wage rates on productivity in a speci company or industry is inconsistent with equal pay for equal wo

Much of the change which occurs in productivity is due to for developed outside the industry in which the results appear. Ma factors in the high productivity of the American motor-vehicle indus include a large market free of tariff walls, good roads, and progress upplying industries such as rubber, steel, glass, and machine tools. nother important factor is the American ideal of free competition. ndustry-wide production planning and pricing have probably restricted ompetition and the growth of the industry in England and Europe. tandardization is also of great importance in the motor-vehicle industry. is possible because Americans are willing to buy cars which look alike. hus, it is very difficult to interpret industry productivity data.

On the national level, there is a great delusion that productive capacity unlimited and that the only problem is to provide mass purchasing ower. Actually, the farms and factories of this country have never pro- iced nearly enough to provide a fully satisfactory standard of living r everybody. For example, the amount of meat and fat and cheese quired by the BLS maintenance budget was about twice the amount at could be purchased with ration points in 1944 and 1945.

Discussion

Boris Stern (U. S. Bureau of Labor Statistics): The productivity ta published in the past by the Bureau of Labor Statistics have been tremely useful in describing, in general terms, developments with spect to machinery, increased productivity, higher wages, and shorter urs. The work the Bureau may do in the future may become more fective because it is now a more-integrated agency, it has more skills, d the need for productivity data is more generally recognized.

There is a serious danger, however, in that this new tool is being used r purposes for which it is not intended and cannot be effectively used— llective bargaining. The data hitherto available cannot be used for col- tive bargaining except in a general way for describing the history of e industrial arts or the effect of the use of machinery on our standards living.

If productivity information is desirable for collective bargaining, labor d management should agree, industry by industry, on what methods ould be used to develop such data. With such agreement, the Bureau Labor Statistics would be ready and able to work with labor and nagement in the development of the data, provided labor and manage- nt also agree that the results obtained will be acceptable irrespective whether they show a decline or an increase in productivity. Unless re is such agreement, it must be recognized that although productivity ta are useful to illustrate certain developments nationally or in various es of industries, they should not be used for collective-bargaining rposes.

Frank R. Garfield (Federal Reserve Board): The concept of pro- tion is basic to productivity measures. If the concept of production is considered in relation to the final product and the scale of living. It is clear that many factors enter into the production process. In any particular industry, materials and fuels are consumed and transposed into finished products by workers, machinery, and management. Electric-power consumption obviously is not a satisfactory measure of the whole production activity in an industry, and neither is man-hours. In the textile industry, it takes a great many man-hours to produce $10 worth of net product; in the chemicals industry, very few man-hours. For measures such as gross national product and national income, the whole community of statisticians is agreed on including all of the product and including it in value terms.

It is true that when values added are used as weights, elements of the market enter into the picture. Value is influenced by decisions of the customers as to what they are willing to pay and by the decisions of the producers as to what they are willing to receive for their services and their goods. Granted that there are elements of monopoly and of Government price fixing, the value-added figures reflect, as nearly as anything, the combined judgments of the community. Therefore value added for the most representative period for which data are available should be used as weights.

Solomon Fabricant (National Bureau of Economic Research): The National Bureau of Economic Research has published studies on productivity, production, and employment in manufacturing, agriculture, and mining, and is now working on other sectors of the economy. Its indexes are simply byproducts of these studies. The National Bureau is interested in the factors affecting the growth of our industries, or, in some cases, the decline. Studies are made not only of the factors affecting productivity, but also of the relations between trends in productivity, in employment, in production, in capital, in prices, in wages, and so on.

John D. Gill (Atlantic Refining Co.): Regarding Dr. Stern's remarks, we can use the present productivity measures in bargaining, but we need to understand that they are not accurate and to use them as approximations. Unless there is a balance between our power to produce and the ability to clear the market of that production by appropriate measures of compensation, there will be severe dislocations; thus we need to know something about the increase in production which becomes the basis for collective bargaining.

Economic measures which lack the dollar mark should be used only when it is impossible to make a report based on dollar magnitude. Because of competition, it is possible to lean heavily on accounting profit-and-loss statements which make possible a comparison of the results o any operation with the operations of comparable firms elsewhere.

If the general change in production—either gross national product or national income—is used to measure the general change in compensation, there remains only the problem of administration. A 10-percent increase in wages in a mass-production industry may be possible without an increase in prices, but a 10-percent increase in wages in a firm hand-tooling belts, for example, may require an increase in prices and may result in the loss of the market. We should anticipate such changes and prepare either to substitute machine-worked belts for hand-worked belts or go out of business.

MARTIN GAINSBRUGH (National Industrial Conference Board): One desirable result of the conference might be that the BLS prepare a reply to the CIO criticisms of the BLS indexes of productivity.

CELIA STAR GODY (U. S. Bureau of Labor Standards): The ques-
ions raised by Mrs. Ellickson concerning the BLS productivity indexes
night be separated into three categories. The first question is whether
he measures are correct for what they are intended to show. It is agreed
hat the indexes are not correct to the last decimal place, but many of
he factors mentioned are much less significant than they are generally
elieved to be. For example, on the question of the time paid for and
ot worked, if every worker had a 1-week vacation, there would be
n error of something less than 2 percent in the man-hour series. The
ctual average is doubtless considerably less, since many workers are
ot covered by vacation provisions, many who are covered have not
orked long enough to be eligible, etc. The error in the man-hours
ndex is the difference between the extent to which there are paid vaca-
ions in the base year and the extent to which there are paid vacations
n the year under consideration, and may be in the neighborhood of 1
ercent. When there have been more significant changes in the reporting
f man-hours, the BLS has made explicit adjustments; for example, in
oal mining, for which, after the change to portal-to-portal pay, the re-
orted hours figures included travel time.

It is true that there have been, in many industries, changes in the
ecifications of products, new types of goods, and changes in the pro-
ortions of different products. The BLS has not continued to show
dexes for those industries in which such changes were so great that
was impossible to make any comparison. For the remaining indus-
ies, the Bureau attempted to learn all it could about the changes in
e nature of the products and to make tests of the accuracy of the pub-
shed indexes. For example, it has been stated that the index for the
oe industry is too low, since military shoes are bigger and heavier
d presumably better than civilian-type shoes. The information ob-
ined indicates that the military work-type shoe does require more

labor than a civilian work-type shoe, but less labor than a civilian dress-type shoe. If the index is reweighted to take this factor into account, the result differs by only 2 percent from the published figures.

In cases in which the indexes incorporate weights for some old period, tests have been made, changing the weights to the year 1939. In practically all cases, this reweighting has resulted in only small changes in the indexes.

Two problems raised by Mrs. Ellickson—the possible bias in the employment series, and the comparability between the production and employment series—cannot be solved completely until there is another census. Many of the industries for which indexes are shown are fairly well defined and it is possible to state with confidence that the indexes include their total production and that the production figures are comparable with the employment series. In other cases, varying amounts of products are not included in the production series and there is no information on whether there has been any shift in the importance of such products. A complete evaluation cannot be made until there is another census; until then, all that is possible is to determine from available sources whether there is any indication of such shifts.

A second question concerns the factors which make the indexes go up or down. These are not limitations, but rather explanations, of the indexes. For example, where there are special wartime factors which make for declines in some of the indexes, it is important to know them, not because the indexes are not good measures but because it should not be assumed that the wartime levels will be the levels in the future when those factors have disappeared. In the building-materials industries, for example, there were substantial drops in output per man-hour during the war simply because of the decline in production. It is important to know the reason, because it can definitely be expected that as soon as production increases, output per man-hour will also rise. This has actually happened during 1946.

A third question is what additional measures would be desirable. Output per man-hour is only a partial measure; the ratio of output to man-hours in itself does not give a complete story of what is happening in the economy. For example, data on unit labor cost must be used together with other information. It is necessary to consider changes in costs of materials, in overhead, and in all the factors which enter into the cost structure. The Bureau would like to do as much as possible in the way of providing additional measures of productivity in this broader sense. Whether it can do so depends, first, on the availability of information on these other factors — materials, overhead, etc. — and, secondly, on the availability of staff for such work.

Duane Evans: Mr. Garfield's comments on the desirability of weight ing with value added were probably based on his experience with the Federal Reserve index of industrial production. Conceptually such a measure tells us what the value of our production would be, relative to the base period, had there been no changes in the prices paid for all factors used in production, including labor. The speaker knows no better method of measuring the general level of industrial activity than the one used by the Federal Reserve Board.

In the use of man-hour weights, there is an attempt to answer a different, clearly stated problem: If we were to reproduce the physical amounts produced in some base period, how many man-hours would it take relative to the man-hours used in the base period? This physical approach is useful at the plant and industry level. The bigger the sphere encompassed, the less the utility of this approach because the necessary figures cannot be obtained.

It is believed that the other points which have been raised will be met by the analyses of the indexes which will be sent to the interested parties, and that these statements will also answer Mr. Gainsbrugh's point.

OCTOBER 29—AFTERNOON SESSION

Chairman, Thomas Blaisdell, U. S. Department of State

Need for Additional Productivity Measures

Lazare Teper (International Ladies' Garment Workers' Union, AFL): The significance of the physical output man-hour ratio will be examined, first under a set of theoretically controlled conditions and then under conditions complicated to bring them into relation with reality.

First, consider a single plant which turns out a single product and assume that the product manufactured by this plant did not undergo any changes in its specifications; that the raw materials used remained similarly unchanged; and that there were no changes in any of the manufacturing methods or equipment. Under such conditions, variations in the physical output/man-hour input ratios can be interpreted as indicators of changes in the relative average efficiency of the labor force. Of course, the ratio does not, in any way, throw light on the causes responsible for the changes.

Next, assume that the theoretical plant changed its methods and techniques of internal operations (including installation of different capital equipment). Since the factors responsible for changes are no longer exclusively on the labor side, this concept of efficiency changes must be deemed a function of the many independent and interdependent forces which take labor, management, and equipment into account.

If the specifications of the product turned out by the plant have also been evolving, the ratio of physical output to man-hour input will reflect not only the changes in efficiency, but the effect of changes in the specifications of the product as well. When additional factors are permitted to influence the quanta of the physical output/man-hour input ratios, the meaning of the resultant statistics is complicated to an even greater extent. Thus, the nature of integration between the productive processes of a given plant and those of its suppliers and customers changes over a period of time, and such changes either increase or decrease the need for workers. Similarly, changes in the specifications, character and nature of raw materials may also affect the plant's worker requirements. As long as it is impossible to segregate the various factors which may be responsible for the fluctuations in the physical output/man-hour ratios, the designation of such ratios as measures of productive efficiency seems hardly tenable.

On the other hand, a statistical series showing the ratios of man-hour input to physical output does serve as an indicator of manpower utilization—measured in units of time input—within the confines of a particular plant, needed to turn out a unit of product by changing specifications under the conditions of changing efficiency of the various factors of production and of changing position of the plant in the economy. These conclusions apply equally well to a group of plants manufacturing a single article.

If a plant is engaged in the production of two or more commodities, the meaning of the data is further affected by the inability to combine noncommensurate entities without converting them into some other quantities, commensurate with each other as a matter of statistical convenience. Thus, the technique recommended by the National Research Project and the Bureau of Labor Statistics permits the computation of a combined index for a group of products by weighting "manpower utilization" figures for the individual commodities by the units of physical output for some preselected "weight" base year. An index so computed for more than one product, in accordance with the NRP-BLS techniques, should be described in terms which denote its significance as an index of manpower utilization (measured in units of time input) needed to produce "weight" base-year units of physical output, as influenced by changes in the product specifications, efficiency of the different factors of production, and the nature of the plant's (or industry's) relationship to the economy.

The theoretical advantage of an index computed on a fixed-weight base lies in the fact that it measures but a single element of change, to the exclusion of others. Yet, in this case, there is the infusion of many factors, each of which changes in time. As long as such influences are not eliminated, one can properly raise a question as to whether an index number, which would incorporate in its make-up the effect of all of the dynamic changes which affect the economy, including changes in the relative importance of the different products, would be of greater significance for economic analysis. Such an index would reflect changes in the relative importance of the different products in the course of time, and would permit the inclusion of new products as they make their appearance. It could be described, in terms of its significance, as an index of manpower utilization (measured in units of time input) needed at different times to produce a unit of physical output in accordance with specifications, efficiency, and nature of economic organizations at each of the periods under consideration.

Since "productivity" indexes do not portray changes in productive efficiency, their designation as such should be abandoned and full qualifications made as to their meaning at the time of publication. At the same time, it would seem desirable for the investigators of productive efficiency to direct their attention, to a greater degree than heretofore, to the collection of descriptive information which is a necessary prerequisite before refinements in the productivity measures are attempted on a large scale. Research should be undertaken on the plant level to find out, in greater detail, how changes in productive efficiency are brought about and the influence thereon of machinery, management, individual effort, flow of work, demand for goods, specifications and variety of product, nature of raw material, and so on. Such studies should investigate how changes within the plant affect the skills and composition of the labor force, and what displacements, if any, changed methods of production bring. Statistical investigations, dealing as they do in averages, may actually conceal the full importance of such changes.

More information is needed about the effects on workers of management pressure for higher output, and the necessity for earning a living. Are there socially desirable optimum levels of human effort beyond which it is undesirable to go? What is the effect of the existing methods of ncentive payments on the workers' well-being? What is the effect of management's behavior on the efficiency of workers and the enterprise?

More information is needed on the influences, from outside the plant, on its productive efficiency. To what extent do changes in the demand for goods or competitors' activities induce variations in the production methods? How rapid is the process of change as between the different plants? What is the relation between capacity output and productive efficiency? How is productive efficiency affected by changes in the naure of integration between the plant and other businesses? What is he effect of developments in the field of communications and transportation on the plant?

The present interest in the question of productivity stems from a universal desire to find the clue to a better standard of living. If it is held that the answer lies in greater productive efficiency, there is no question but that econometric studies must be supplemented by investigations of cause, effects, and byproducts of such change. It is to this area that the attention of investigators of productive efficiency must turn.

In making studies at the plant level, it is particularly important that such plant studies be undertaken by an impartial agency such as the Government, with joint cooperation of advisory groups representing both labor and management.

(Mr. Teper presented an additional paper criticizing the formula used by the Bureau of Labor Statistics in computing its indexes of unit labor cost. The paper indicated that the appropriate weights for a production index to be used in deriving unit labor cost were pay rolls per unit of output and not man-hours per unit.)

Presentation of Productivity Measurements

Solomon Fabricant (National Bureau of Economic Research): The speaker, in behalf of those who produce productivity measurements, believes they must do the best possible job of presenting such measurements. They should continue to review terminology and should define terms. They should make clear what the figures mean and note some of the things they do not mean. They should be explicit about the sources of the data, about accuracy, about limitations. They should note the methods of combination, the weight systems, the weight-base periods. They should compute alternative measurements and publish them now and then, if only to dispose of questions concerning the importance of the difference between them and the figures issued regularly. They should have a base book, revised and expanded every so often, to which they can refer in the shorter public statements.

They should call attention to the representativeness and homogeneity of their samples. When the samples are not homogeneous, they should avoid combining the individual items into an average. When an average for a homogeneous group is prepared, but the group is not representative of the whole of which it is a part, they should avoid implying that it is.

When they don't know, or are not sure, they should say so clearly and emphatically. Whenever they revise, they should spell out the reasons for the revisions, and the uncertainties still remaining even in the new figures. They should dissociate questions of fact from matters of policy. They should dissociate guesses about the future from statements about the past.

It is hoped that the consumers of productivity data really read the notes and textual qualifications and refer back to the more-extended discussions provided before raising questions; that when they think of a reason why the figures *might* be off, they won't jump to the conclusion that they are in fact off, or if off, that the error is always and *necessarily* important.

Producers of productivity data welcome questions and suggestions, but hope that such questions and suggestions would not be made, at least in the first instance, via the public press. They have a weakness in particularly liking constructive suggestions.

All of us must have some common meeting ground, if our kind of economic and political system is to survive. Established fact is an essential ingredient of this common meeting ground. There are enough differences dividing us on which it is not easy to come to common agreement. Facts need not be among them. Our fact-finding agencies should be kept nonpartisan, for our mutual advantage.

From the discussion, during the conference, of the limitations of the BLS indexes of output per man-hour, it is feared that some people may get the impression that these indexes are of little value. That impression would be quite wrong. The indexes for the period since 1939 cover only a few industries. It is true, too, that they are subject to adjustment when he censuses come out. Indeed, like all statistics, they are surrounded by a margin of error. This does not mean, however, that BLS indexes re subject to so much error that they are worthless. On the contrary, for the industries to which they relate and which they are intended to over, they convey useful and valuable information.

Discussion

Irving H. Siegel (U. S. Veterans Administration, formerly with the National Research Project and the Bureau of Labor Statistics): Conumers of productivity statistics have apparently expected too much, r have ignored the cautions accompanying such measures as long as the ndicated changes conformed to their intuitions or interests. Though the vailable indexes are probably the best that can be made with available ata, they have outstanding limitations which must be taken into acount especially if they are used beyond their original purpose. In any ase, the differences concerning the definition and measurement of productivity do not seriously impede solution of the important practical roblem which motivates much of the theoretical discussion, namely, the naximization of output, however defined, of a given work force through the improvement of production processes and of labor-management relations.

George Brown (United Association of Plumbers and Steamfitters, AFL): Labor people want to see accurate productivity figures developed and want those figures to reflect efficiency. The study of productivity can occur at two levels—first, in the area of academic interests, in the development of industry and national figures; and, second, in the area of practical application, at the plant level. Enough deficiencies have been pointed out to indicate there is a large area for work at the plant level.

Lyle Cooper (United Packinghouse Workers of America, CIO): The speaker's union has not found the BLS index for slaughtering and meat packing good for bargaining purposes. The index is computed by weighting with fixed prices. The Federal Reserve index, which is on a 1935-39 base, shows that man-hour output went up substantially more after 1939 than the BLS index indicates. There is a good reason for using several years as the base period, particularly in meat packing, where prices of the different products fluctuate considerably. Between 1944 and 1945, the BLS index went up about 9 points, but a company negotiator pointed out that this change was due to the fact that hog slaughtering had decreased and beef (which is higher priced) therefore received a greater weight. The BLS itself has indicated in correspondence many limitations of the type described.

Henry B. Arthur (Swift & Co.): The explanation of the change in the BLS index for meat packing is the fact that BLS uses the total value of the product as weight, rather than something approximating value added. This gives importance to the two species—beef and hogs—which represent the total input of the farmer as well as the packinghouse worker. Between 1944 and 1945, there was no change in the total weight produced, but there was a decline in the amount of work to be done because pork production, which requires a great deal of processing, declined.

In the presentation of productivity ratios, we have conventionally shown a ratio in which the whole (production) is divided by the part (man-hours), and this convention has occasionally led us into thinking in terms of labor productivity. If a series of ratios is prepared, with the various inputs in the numerators and the output in the denominator. one might say that the relationship which changed least from one year to the next was probably the factor which most nearly accounted for the change in production. As an example, assume that man-hours per unit of product decreased 20 percent and the amount of all the other input factors per unit decreased 20 percent except power, with the kilowatt-hours used showing no change. As a first step it might be preımed that the increase in production was a result of the application kilowatts. These ratios show that it was something other than the ctor in the numerator that caused the change in the denominator.

In working with measurements, we are operating within a part of the tal field. Even the broadest measures omit about a third of our total onomy—the output in households. From a social point of view, there ould perhaps be an appraisal of the total values of our economy.

SOLOMON BARKIN (Textile Workers Union of America, CIO): The ıphasis which originates from the collective-bargaining process and om the study of national incomes is on the desirability of obtaining ɔre all-embracing mathematical techniques for gaining insight into creased productivity. It is also necessary to evaluate the importance our neglect to use some of our resources—both capital and labor— d the importance of that part of our output, such as that of houselds, which is not converted into monetary business terms. Perhaps ıat is needed is an assimilation of the concepts of measurement of ysical output with some of the concepts in the national income field, ıs some approach on the problems of untapped resources and unɔped manpower.

MARGARET SCATTERGOOD (American Federation of Labor): The AFL mbers met during the noon period and made unanimous recommendans on two points: (1) They wish to emphasize the importance of the e-study method and to urge its use, with representation of unions and nagement on committees cooperating with the government agents.) They believe the work of the conference should be continued through continuing committee on which labor, management, and government represented. They would like to refer to such a committee the quesn of whether a set of figures for the economy as a whole can be deoped and, secondly, the problem of defining or perhaps changing ne of the specifications of the present Bureau of Labor Statistics exes.

EVERETT HAGEN (National Planning Association): One of the reas for dissatisfaction with the use that has been made of productivity a is failure to agree on the meaning of the term "productivity." In nomic theory, the term means the contribution of a particular factor production; statisticians in the field use the term simply to refer to put per man-hour, whatever the reason for the change. Another diflty arises in the use of data covering more than one product. Such index can change simply because of shifts in the proportion of the nmodities, depending on the weights used. We should not criticize figures because we are not sufficiently mathematically trained to unstand them, but should realize that a figure cannot be all things for all purposes and a technician is required for its proper use. A third difficulty is the inadequacy of the figures because of failure to take account of all relevant circumstances.

The conference should create a continuing smaller body to continue to examine the existing productivity series, to clear up misunderstandings, and to investigate changes which might be desirable for new purposes.

Hiram Davis (University of Pennsylvania): It might be more productive to develop a series of ratios relating various input factors to output than to attempt to measure total input. The conference might consider whether it would be worth while to form working parties in some of the industries in which there is disagreement over how output should be measured.

Duane Evans (U. S. Bureau of Labor Statistics): Even the most precise productivity figures are not necessarily a definite guide to the way in which the production economies of the system can be divided. In the long run, output per man-hours has been going up, but there are segments of the economy in which productivity has not increased, such as some of the service industries. It cannot be maintained that wages should not increase in such an industry if, over a period of time, general earnings have gone up. If society wants the products, it has to pay a high enough wage to keep people in that industry. On the other hand there are some industries, such as rayon, in which there have been extremely rapid increases in productivity. If wage levels in such an industry were increased accordingly, it would be necessary to have a guil system to keep people from entering the industry, because wages woul be so much above the general level.

Mr. Barkin: Those who suggest the need of data for collective bargaining certainly do not have the ideas imputed by Mr. Evans. To pos these theoretical alternatives does no service to the discussion of th problem, but bars constructive thinking in this field. The problem is t get a measure of productivity, so that the parties can then rationall discuss and possibly bargain about the methods of distributing the gain

H. H. Bookbinder (Amalgamated Clothing Workers of Americ CIO): The speaker represents the workers in the shirt industry, whe the union expects wages to rise in the future, but hopes that productivi as affected by worker effort will decline. Mechanization seems to ha reached its maximum limit, and the rate of production of a shirt d pends mostly on the fingers of the operator and not on the machi itself. Because of the piece-rate structure of the industry, the work has driven herself beyond reasonable human levels in an attempt crease her earnings. On one important operation, for example, the p stitch on the collar, a girl may work on as many as two to three ousand shirts a day. This type of work has led to countless cases of ıysical and psychological breakdown. In the future, it is expected, of ourse, that general productivity in American industry will continue increase. Shirt workers should benefit from this general increase. owever, it is hoped that some decent production standards can be reed upon for industries like the shirt industry. As for sharing the nefits of increased productivity, there will be times when labor will k for the extra share at the plant level, at times the industry level. the long run, however, it must be the economy level, either in the rm of generally higher wages or generally lower prices.

Ewan Clague (U. S. Commissioner of Labor Statistics): A governent agency can do effective work in studies of individual plants or os, but only if there is general management-labor agreement on such udies. Such data, while valuable locally, have very little significance tionally. On the other hand, the general indexes were not necessarily awn up for collective-bargaining purposes. When any of them are ed for specific purposes, they should be reexamined to see if they ll fit. It is hoped that some of these measures can be made useful for lective bargaining, at least for a first approach.

Summary of Conference

Samuel H. Thompson (U. S. Department of Commerce): The conence has been made up of people who believe in progress, in imovements, in the continued movement upward of the human race and our own industrial civilization and of the United States. The conees have agreed on several major areas.

The first is that, since it is desirable in the interests of all of us to rease productivity, measurements are needed that will help find out v to increase it. We need measures adapted for use as tools in the lysis of the productive process that will help us improve the total ntity and quality of production. We need many different kinds and les of tools. We certainly need physical measures of productivity, ed on physical production and the number of man-hours or manrs. We also need monetary measures. There are many other meass we need—for example, kilowatt-hours per unit of output, pounds coal per kilowatt-hour, etc. The conference has agreed that we must clear as to what the measures we use mean and what they are useful . In index numbers, we necessarily put together things which are not mensurate; we have to use index numbers, but must not forget that . Speaker after speaker has emphasized the need for a clear understanding of the purpose and then a careful design of the instrument. At the same time, it is interesting to note how amazingly few people are keeping systematic records from which the tools could be forged.

It has also been emphasized that we need to do a better job with what we already have. The conferees have agreed that we use these measures to analyze the factors that enter into production. It has been emphasized that there are many factors which affect production and productivity.

The conferees have also agreed that the ultimate responsibility for improvement in productivity or production cannot be assigned to any single factor. The technological progress of our industrial civilization arises from the whole of our society, perhaps the whole of mankind. Mathematically, every individual of the race contributes in some measure, to either his own generation or the next. We can improve our performance, and ultimately we all gain from each man's individual effort.

There are other areas which were omitted or in which there was some disagreement. One is the matter of the use of indexes in collective bargaining. There has been general agreement on the need for further analysis leading to the design of better tools for specific use in reachin collective bargains. The conference has not discussed very thoroughl the need for both physical and monetary indexes and therefore physica and monetary weights. It has not discussed at any length the actua techniques that are available or should be devised for getting the basi data.

The executive committee wishes to announce that there will be transcript of the meeting available for inspection, but there will be n attempt to make it generally available. A summary will be prepared b the executive committee which will be sent to all the participants, fc their approval or correction, which may later be published.

The executive committee will, if the conference approves, meet an discuss ways and means of continuing the work of this conference— whether through subcommittees, through recurrent meetings of th size, or through a combination of these and other means.

☆ U. S. GOVERNMENT PRINTING OFFICE 1947—745

aking Industry

UNITED STATES DEPARTMENT OF LABOR
L. B. Schwellenbach, Secretary

BUREAU OF LABOR STATISTICS
Ewan Clague, Commissioner

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Union Wages and Hours in the Baking Industry

July 1, 1946

Bulletin No. 914

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Letter of Transmittal

UNITED STATES DEPARTMENT OF LABOR,
BUREAU OF LABOR STATISTICS,
Washington, D. C., May 7, 1947

The SECRETARY OF LABOR:

I have the honor to transmit herewith the annual report on union wages and hours in the baking industry, July 1, 1946.

This report was prepared in the Bureau's Wage Analysis Branch by Herbert M. Abowitz, under the direction of Donald H. Gerrish.

EWAN CLAGUE, *Commissioner.*

Hon. L. B. SCHWELLENBACH,
Secretary of Labor.

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Bulletin No. 914 of the

United States Bureau of Labor Statistics

Union Wages and Hours in the Baking Industry

July 1, 1946

Summary

Hourly wage rates for union bakery workers in 70 cities on July 1, 1946 averaged $1.00, representing an advance in basic wage rates of 14.6 percent or 13 cents since July 1, 1945. Among the various branches of the industry the highest average was registered by Hebrew-products bakers ($1.65); the lowest by workers in establishments producing crackers and cookies ($0.75). Nine of every 10 workers received a wage increase with a majority of the workers receiving 10 to 20 percent above 1945 rates. Hourly rates in the industry ranged from $1.97 for first hands and foremen in New York City Hebrew-products shops to $0.375 for South Bend hand shop helpers.

Almost 8 of every 10 members worked under agreements stipulating a straight-time workweek of 40 hours. Overtime clauses providing time and a half for operations beyond the straight-time workweek covered 98 percent of the workers tabulated. Vacation clauses providing 2 weeks after 1 year of service covered over a fourth of the union members and an additional fourth were covered by agreements calling for 1 week after 1 year and 2 weeks after 5 years of service.

Scope and Method of Study

This survey is one of a series of annual Nation-wide studies, conducted by the Bureau of Labor Statistics since 1907, of union wage rates and related matters in various industries. The number of cities covered, ranging in population from 40,000 to over a million has been gradually increased from 39 to 75 in most of the industries. In the July 1946 survey in baking, usable data were obtained for 70 cities.[1]

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[1] The current study is based on wage scales and related data obtained directly from local union officials in 70 of the 75 cities surveyed by field representatives working out of the Bureau's regional offices. These scales cover approximately 64,228 bakery workers. Bread and cake hand shops comprised 12.3 percent of the total membership tabulated, bread and cake machine shops, 57.6 percent, pie and pastry shops, 3.0 percent, Hebrew baking shops, 7.5 percent, other specialized baking shops, 2.1 percent and cracker and cooky shops, 17.5 percent.

These cities are located in 40 States and the District of Columbia. The rates reported for the various trade classifications are union scales in effect on July 1, 1946. A union scale may be defined as a minimum wage rate or maximum schedule of hours agreed upon through collective bargaining between employers or their associations and trade unions. Individual rates in excess of the contracted minima, which are frequently paid for long service, special qualifications, personal or other reasons, were not used in the preparation of this report.

Prior to 1939 only one classification—bread baking—was included in this study. In 1939, the survey was expanded to cover all occupations in all types of baking except delivery drivers and plant-maintenance workers. Since 1941, the data presented have been segregated by type of baking involved; e.g. hand shop, machine shop, pie and pastry shop, cracker and cooky shop, Hebrew baking and other specialized baking such as French, Polish, Bohemian, Scandinavian, Spanish and Italian.

Trend of Wage Rates and Hours [2]

TREND OF HOURLY RATES

The index of union hourly wage rates (table 1) for bakery-trades workers in the 70 cities studied as of July 1, 1946 rose to 141.6 (1939 = 100), representing an increase of 14.6 percent (or about 13 cents an hour) since July 1, 1945. The most marked improvement in basic scales—20.1 percent (about 22 cents) was registered by the specialized baking branch and a substantial gain—18.1 percent (14 cents) was indicated for the pie and pastry group. Two branches, Hebrew baking (9.8 percent or 15 cents) and crackers and cookies (13.5 percent or 9 cents an hour) recorded increases below the over-all average for the combined trades. During this same period, the Bureau's index of consumer's prices increased by slightly over 9 percent.

Increases in basic scales were obtained by all the members engaged in specialized (National) baking in all seven cities in which the trade was active.

Basic hourly scales in the organized baking trades have shown constant improvement since 1939. Substantial rate betterment was registered in the interval between 1941 and 1943 (14.2 percent).

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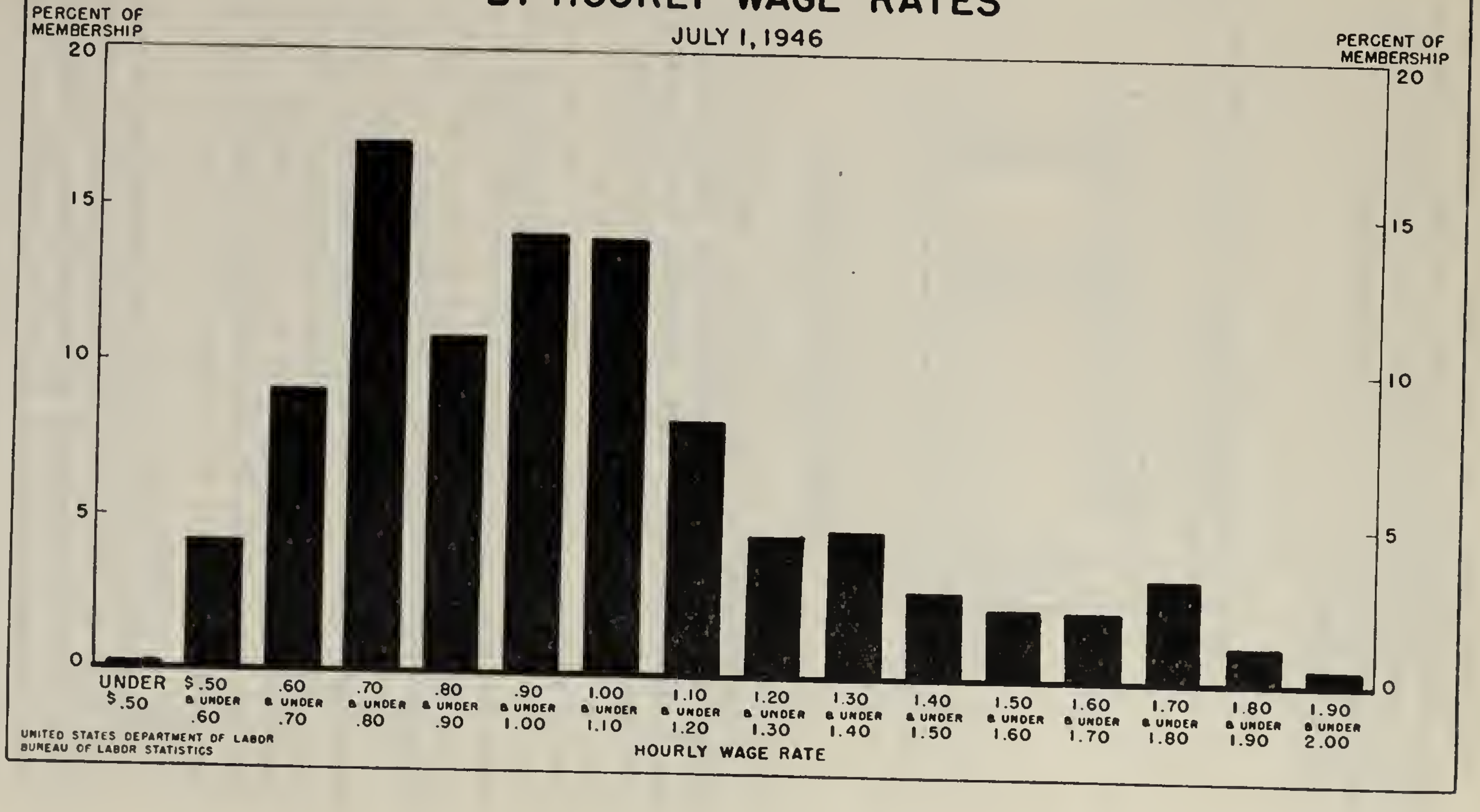
[2] In computing the index series (1939=100) which indicates the trend of wage rates, the annual percentage change from year to year is derived from aggregates of union quotations for identical classifications in two successive years. The membership weights in both of the aggregates used for each year-to-year comparison are those reported for the second year. To obtain the index for the current year, the total of the current aggregates is divided by the previous year's aggregates and the ratio thus obtained is multiplied by the previous year's index number. The indexes are computed on this basis in order to minimize the effect of changes in union membership which might obscure the real changes in wages. The index series, rather than the actual averages of rates in this and previous reports, should be used to determine the trend of hourly wage rates. Changes in coverage and shifts in union membership distort a direct comparison of average rates in two periods.

DISTRIBUTION OF UNION BAKERY WORKERS BY HOURLY WAGE RATES

JULY 1, 1946



UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS

TREND OF HOURS

The average straight-time workweek decreased by 0.3 percent during the study period. Between 1939 and 1942 the index of weekly hours reflected a gradual reduction in the workweek. From 1943 to 1945 hourly changes were not of sufficient weight to effect any movement of the index.

TABLE 1.—*Indexes of hourly wage rates and weekly hours for the baking industry, 1939-46. (1939=100.)*

Year	Wage rates	Hours
1939	100.0	100.0
1940	102.7	99.5
1941	106.1	99.2
1942	116.3	99.1
1943	121.2	98.6
1944	122.0	98.6
1945	123.6	98.6
1946	141.6	98.3

Average Hourly Wage Rates [3]

Wage rates for union bakery workers averaged $1.00 an hour in the 70 cities surveyed on July 1, 1946 (table 2). The highest trade average was indicated for the branch producing Hebrew products ($1.65). Averages exceeding the combined average for all branches of the trade were recorded for bread and cake hand shops ($1.24) and other specialized baking establishments ($1.32). Cracker and cooky bakers obtained the lowest average wage ($0.75) due mainly to the influence of the low wage rates prevailing in the unskilled occupations (such as female wrappers and packers) who make up a significant proportion of the workers in this branch of the industry.

Over 44 percent of the bakery workers tabulated reported rates of at least $1.00 an hour in contrast to 26 percent in this category on July 1, 1945. Although 31 percent of the members reported rates ranging between 50 and 70 cents last year, only 14 percent remained at this level by July 1, 1946. On the other hand, 32 percent of the workers were in the $1.00 to $1.40 brackets in 1946 as compared to 18 percent in 1945.

Better than 7 of every 10 Hebrew bakers had hourly rates of at least $1.60. A third of this group reported rates between $1.70 and $1.80. Well over a majority of the members in specialized shops received between $1.20 and $1.40, and in the cracker and cooky branch

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[3] The averages appearing in this report were based on union scales weighted by the number of union members actually employed at each individual rate.

TABLE 2.—*Distribution of union members in the baking trades by hourly wage rates, July 1, 1946*

Type of baking	Average rate per hour	Percent of union members whose rates (in cents) per hour were—															
		Under 50 cents	50 and under 60	60 and under 70	70 and under 80	80 and under 90	90 and under 100	100 and under 110	110 and under 120	120 and under 130	130 and under 140	140 and under 150	150 and under 160	160 and under 170	170 and under 180	180 and under 190	190 and under 200
All types........	$1.001	0.1	4.3	9.2	17.1	10.9	14.3	14.1	8.3	4.6	4.8	2.9	2.3	2.2	3.3	1.1	0.5
Bread and cake, hand..........	1.242	.2	.5	2.6	2.8	2.4	4.0	13.8	18.6	12.7	20.9	7.1	1.6	4.3	6.7	....	1.8
Bread and cake, machine	.935	(1)	2.7	6.5	19.1	13.9	20.9	18.8	8.5	3.9	1.9	2.4	1.2	.2	....	....	....
Pie and pastry...	.885	....	1.4	9.7	30.1	17.5	12.7	13.0	8.0	3.2	.1	2.1	2.2	....	....	....	....
Hebrew baking...	1.649	....	.5	....	.2	.3	(1)	1.7	1.6	1.1	6.4	4.1	13.0	20.2	32.9	11.9	6.1
Other national baking........	1.317	....	.7	.7	.1	.9	2.4	.7	9.6	24.7	27.9	13.8	17.4	.4	.7	....	....
Cracker and cooky..........	.751	.4	14.6	27.7	27.8	11.4	8.0	6.2	3.0	.6	.1	.2	....	....	....	....	....

[1] Less than .05 of 1 percent.

about the same membership proportion had hourly rates ranging from $0.60 to $0.80. Almost three-quarters of those engaged in bread and cake machine baking and in pie and pastry baking received between $0.70 and $1.10, while about two-thirds of the bread and cake hand workers had scales ranging from $1.00 to $1.40.

The lowest rate reported, 37.5 cents, covered hand-shop helpers in South Bend, Ind., while the highest rate tabulated covered foremen and first hands engaged in Hebrew baking in New York City ($1.97 an hour). The latter branch, reporting active members in 18 cities, constituted 7.5 percent of all workers studied. Approximately 65 percent of the Hebrew branch membership is concentrated in New York City.

Changes in Hourly Wage Rates, 1945–1946

Better than 9 of every 10 organized workers in the baking industry for whom comparable wage data were available for July 1, 1945 and July 1, 1946 registered increases in basic rates (table 3). A majority of those receiving increases reported advances of between 10 and 20 percent. This represented a substantial change since the previous survey (July 1, 1945) when but a fifth of the bakery workers recorded wage increases which, for the most part, amounted to less than 10 percent.

Although all of the workers tabulated in the Hebrew and the other national products branch (such as Italian, French, Scandinavian, etc.) reported wage increases during the year, the extent of the increases varied among the branches. Over three-fifths of those in Hebrew baking received rate gains of less than 10 percent and very few had advances of 20 percent, whereas practically all of the union workers in other national baking registered gains of at least 10 percent, with a majority securing increases of 20 percent or more. Of those reporting increases in the bread and cake hand shop branch, a majority did not improve their basic rate position by as much as 15 percent, but almost a fourth had increases of 25 percent or more. Two-thirds of those obtaining rate advances in the machine shop branch received raises of at least 15 percent, with a majority receiving less than 25 percent. Increases ranging from 10 to 20 percent were received by the largest individual membership aggregations in both the pie and pastry branch (50 percent) and the cracker and cooky branch (57 percent).

TABLE 3.—*Percent of union members covered by changes in union wage rates and extent of increases, July 1, 1945 to July 1, 1946*

Type of baking	Percent of members affected by wage rate changes of		Percent of members affected by wage rate increases of—							
	No change	Increase	Less than 5 percent	5 and under 10 percent	10 and under 15 percent	15 and under 20 percent	20 and under 25 percent	25 and under 30 percent	30 and under 35 percent	35 percent and over
All types	7.4	92.6	3.3	14.1	18.4	28.5	14.1	8.6	3.2	2.4
Regular bread or cake, hand shop	4.3	95.7	4.2	15.8	33.3	12.7	6.2	13.9	6.6	3.0
Regular bread or cake, machine shop	9.9	90.1	1.9	9.3	12.8	33.1	17.8	9.3	3.1	2.8
Pie and pastry	1.1	98.9	.7	12.4	17.1	33.1	16.1	9.9	2.8	6.8
Hebrew baking	......	100.0	10.5	51.0	18.3	13.8	4.4	.9	1.1	......
Other national baking	......	100.0	......	2.3	20.6	22.0	26.8	18.2	8.2	1.9
Cracker and cooky	6.6	93.4	5.1	14.1	26.3	31.0	10.1	4.5	1.3	1.0

Post Survey Rate Changes

Available data concerning wage changes effective after July 1, 1946 for union bakery trades workers are limited. Several contracts in New York City negotiated prior to the survey date, covering certain categories of bread and cake hand-shop bakers, provided for automatic increases of 50 and 75 cents per day beginning in 1947. Increases in basic rates of over 30 cents an hour for first hands and over 40 cents for second hands have been reported in one establishment in that city. Peoria hand-shop workers received a $10 weekly raise, amounting to 20 cents an hour. In Philadelphia a substantial number of machine bakers were reported to have gained 18.5 cents an hour. Advances of 15 cents an hour were reported for Worcester machine-shop workers and York cracker and cooky members. Pie and pastry bakers in York and cracker and cooky workers in Toledo benefited by a 5-cent addition to July 1, 1946 rates.

Average Union Rates by City and Percent of Change Over Previous Year [4]

RATES BY CITY

The Hebrew baking branch averaged the highest rates in the industry in 17 of 18 cities reporting scales for this type of operation. The highest city average recorded for any of the bakery groups was that for Hebrew products bakers in New York City ($1.73 an hour). Bread and cake machine shop baking, the largest branch in the industry from the standpoint of employment, revealed a substantially lower trade average ($0.94) than either the Hebrew or hand shop branches. This was mainly due to the inclusion of relatively unskilled workers engaged in routine icing, packing, wrapping, and decorating operations who represent a large proportion of the labor force of this branch. Butte ($1.22) had the highest city average for machine baking and 23 other cities exceeded the branch average. In the pie and pastry branch, San Francisco, with an average of $1.44, was far ahead of the second top city, Los Angeles ($0.96) as well as the three other cities with higher averages than that of the branch ($0.885). Detroit, which for some years past has registered the highest average in the other national baking branch, maintained its top position with an average of $1.425. San Francisco ($0.990) headed the cracker and cooky branch, whose comparatively low average ($0.751) also reflected the inclusion of a substantial proportion of wrapping and packing workers.

PERCENT OF CHANGE BY CITY BETWEEN 1945 AND 1946

Newark (33 percent, about 30 cents an hour) and Rock Island district (30 percent or 22 cents) reported the highest relative increases in the bread and cake hand shop branch between July 1945 and July 1946, while in the machine shop branch, Grand Rapids and Des Moines, both with increases of 32 percent (about 23 cents an hour for each city), were leaders in this respect. Average increases in the pie and pastry branch ranged from 4.8 percent (3 cents) in York to 34.1 percent (16 cents) in Duluth. The highest increase during the study year in the Hebrew baking branch was recorded by Providence (29 percent, about 31 cents), while San Francisco led the other national baking branch with a like percentage increase (amounting to 31.5 cents). Scranton reported the most significant increase in the cracker and cooky branch (26 percent or 13 cents).

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[4] These percentage changes were based on specific rates weighted by the number of members workng at each rate. Only those quotations showing comparable data for both 1945 and 1946 were included. Specific increases during the 12-month period of this study reflect larger percentage changes among those lassifications with comparatively lower scales. Thus, if cracker and cooky bakers in city A increased heir rate 10 cents an hour from 50 to 60 cents, an average increase of 20 percent was registered, while of the same absolute increase raised the rate for cracker bakers in city B from 90 cents to $1.00 an hour, he percentage change was only 11.1 percent.

TABLE 4.—*Average hourly rates for union bakery workers, by city and type of baking, July 1, 1946, and percent of increase over previous year.*

Type of baking and city	Average hourly rate	Percent of increase
Bread and cake, hand:		
New York, N.Y	$1.510	12.7
San Francisco, Calif	1.328	11.0
Cincinnati, Ohio	1.281	13.3
Average for all cities	*1.242*	......
Portland, Oreg	1.238	15.0
Chicago, Ill	1.221	20.7
Denver, Colo	1.211	12.9
Butte, Mont	1.203	15.0
Newark, N. J	1.201	32.5
Springfield, Mass	1.145	12.3
Rochester, N. Y	1.133	15.9
Cleveland, Ohio	1.097	8.7
St. Louis, Mo	1.094	15.1
Toledo, Ohio	1.090	17.2
New Haven, Conn	1.052	10.8
Los Angeles, Calif	1.046	7.6
Madison, Wis	1.041	(1)
Minneapolis, Minn	1.024	23.2
Providence, R. I	1.016	14.0
Phoenix, Ariz	.987	27.7
Salt Lake City, Utah	.961	17.0
St. Paul, Minn	.959	16.6
Indianapolis, Ind	.938	24.5
Youngstown, Ohio	.937	24.7
Des Moines, Iowa	.933	12.6
Rock Island (Ill.) district [2]	.931	30.3
Tampa, Fla	.904	(1)
Duluth, Minn	.872	18.5
Manchester, N. H	.870	8.4
South Bend, Ind	.864	0
Peoria, Ill	.850	0
Baltimore, Md	.832	17.7
Houston, Tex	.817	4.4
Scranton, Pa	.738	12.7
Boston, Mass	.730	5.6
Bread and cake, machine:		
Butte, Mont	1.215	17.7
San Francisco, Calif	1.193	15.4
Portland, Oreg	1.184	15.7
Los Angeles, Calif	1.181	28.5
Denver, Colo	1.149	16.8
Spokane, Wash	1.142	18.2
Seattle, Wash	1.103	15.6
Youngstown, Ohio	1.025	24.2
Cleveland, Ohio	1.021	16.2
Duluth, Minn	1.008	17.2
St. Louis, Mo	.999	17.7
Kansas City, Mo	.997	21.3
Peoria, Ill	.989	20.0
Madison, Wis	.987	(1)
New York, N. Y	.987	18.2
Oklahoma City, Okla	.987	26.5
Toledo, Ohio	.980	20.3
Rochester, N. Y	.974	8.2
Washington, D. C	.972	0
Des Moines, Iowa	.965	31.8
Pittsburgh, Pa	.951	21.8
Salt Lake City, Utah	.951	26.1
Dayton, Ohio	.939	20.4
St. Paul, Minn	.936	19.1
Average for all cities	*.935*	......
Detroit, Mich	.929	13.7
Grand Rapids, Mich	.929	32.0
Minneapolis, Minn	.928	24.6
Cincinnati, Ohio	.914	19.9
Chicago, Ill	.913	13.7
Wichita, Kans	.913	17.1
Louisville, Ky	.910	24.9
Springfield, Mass	.908	16.3
Columbus, Ohio	.899	18.9
Providence, R. I	.895	16.0
Reading, Pa	.887	13.5
South Bend, Ind	.883	20.2
Houston, Tex	.881	6.0
Indianapolis, Ind	.879	16.9
Newark, N. J	.878	0
New Orleans, La	.875	9.5
Dallas, Tex	.874	16.3
Buffalo, N. Y	.874	9.0
Bread and cake, machine—Con.:		
New Haven, Conn	$0.871	16.2
Omaha, Nebr	.858	16.5
Memphis, Tenn	.854	16.7
Philadelphia, Pa	.848	5.2
Tampa, Fla	.839	15.3
Worcester, Mass	.839	16.5
Little Rock, Ark	.836	22.0
Baltimore, Md	.826	16.9
Richmond, Va	.820	20.0
Boston, Mass	.809	7.9
El Paso, Tex	.802	8.6
Milwaukee, Wis	.787	14.4
Charleston, W. Va	.767	(1)
Scranton, Pa	.763	15.2
Binghamton, N. Y	.750	10.1
Jacksonville, Fla	.748	(1)
Atlanta, Ga	.744	(1)
Norfolk, Va	.727	17.1
Rock Island (Ill.) district [2]	.722	17.6
Birmingham, Ala	.722	25.7
Charlotte, N. C	.712	8.2
Nashville, Tenn	.703	16.6
Pie and pastry:		
San Francisco, Calif	1.440	14.8
Los Angeles, Calif	.963	30.0
New York, N. Y	.927	14.0
Indianapolis, Ind	.907	29.6
Detroit, Mich	.896	19.0
Average for all cities	*.885*	......
Toledo, Ohio	.876	27.2
Rock Island (Ill.) district [2]	.847	14.3
Philadelphia, Pa	.839	9.9
Cleveland, Ohio	.837	12.9
Boston, Mass	.835	6.4
Worcester, Mass	.815	14.0
Chicago, Ill	.813	20.9
Columbus, Ohio	.770	18.5
York, Pa	.723	4.8
Baltimore, Md	.722	10.3
Buffalo, N. Y	.705	16.2
Providence, R. I	.686	16.8
Duluth, Minn	.633	34.1
Hebrew baking:		
New York, N. Y	1.726	8.2
Los Angeles, Calif	1.715	13.2
Average for all cities	*1.649*	......
Detroit, Mich	1.606	8.4
Rochester, N. Y	1.596	23.2
Boston, Mass	1.584	13.5
Philadelphia, Pa	1.560	19.2
Chicago, Ill	1.526	10.5
Newark, N. J	1.520	6.7
New Haven, Conn	1.507	16.0
Cleveland, Ohio	1.503	17.3
Springfield, Mass	1.398	12.0
Providence, R. I	1.384	29.1
Worcester, Mass	1.384	17.7
Minneapolis, Minn	1.192	21.8
Denver, Colo	1.168	15.4
Pittsburgh, Pa	1.152	9.9
St. Louis, Mo	1.143	10.0
Milwaukee, Wis	1.117	8.3
Other specialized baking:		
Detroit, Mich	1.425	15.0
New York, N. Y	1.374	19.1
San Francisco, Calif	1.364	29.3
Average for all cities	*1.317*	......
Chicago, Ill	1.284	18.8
Cleveland, Ohio	1.230	28.3
Buffalo, N. Y	1.227	25.6
Tampa, Fla	.732	7.6
Cracker and cooky:		
San Francisco, Calif	.990	16.9
New York, N. Y	.964	16.9
Duluth, Minn	.911	19.7
Seattle, Wash	.860	24.9
San Antonio, Tex	.848	13.2
St. Paul, Minn	.845	18.4
Los Angeles, Calif	.825	22.4

See footnotes at end of table.

TABLE 4.—*Average hourly rates for union bakery workers, by city and type of baking, July 1, 1946, and percent of increase over previous year—Continued*

Type of baking and city	Average hourly rate	Percent of increase	Type of baking and city	Average hourly rate	Percent of increase
Cracker and cooky—Con.:			Cracker and cooky—Con.:		
Toledo, Ohio	$0.801	20.2	Memphis, Tenn	$0.734	11.4
Dayton, Ohio	.798	16.6	Rochester, N. Y	.728	4.3
Detroit, Mich	.795	14.6	Cleveland, Ohio	.700	5.8
Cincinnati, Ohio	.785	17.1	Denver, Colo	.686	12.1
Chicago, Ill	.782	16.8	Peoria, Ill	.684	19.5
Philadelphia, Pa	.768	11.4	Milwaukee, Wis	.658	11.3
St. Louis, Mo	.765	7.7	Minneapolis, Minn	.652	9.8
Atlanta, Ga	.755	(1)	Scranton, Pa	.647	26.1
Average for all cities	*.751*	......	Portland, Oreg	.643	0
Des Moines, Iowa	.751	15.4	York, Pa	.640	13.3
Kansas City, Mo	.748	11.1	Salt Lake City, Utah	.633	8.6
Spokane, Wash	.746	9.3	Columbus, Ohio	.620	3.1
Buffalo, N. Y	.741	14.9	Nashville, Tenn	.609	0
Boston, Mass	.736	0	Birmingham, Ala	.590	10.0
Louisville, Ky	.736	14.7			

[1] Data not available.

[2] Includes Rock Island and Moline Ill. and Davenport, Iowa.

Average Wage Rates by Size of City and Region

City size is a significant factor in wage rate levels in the baking industry. The average of hourly rates of cities having over 1 million population was 12 cents higher than that recorded for cities of 500,000 to 1 million, while a differential of 10 cents favored the latter group over cities with 250,000 to 500,000 population. Comparison of cities of 100,000 to 250,000 and cities of 40,000 to 100,000 with those in the next highest population group, revealed average differences of 3 cents an hour favoring the larger cities.

In 7 of 8 possible comparisons, the North and Pacific region had averages ranging higher by as much as 33 cents, than the South and Southwest regions. The 33-cent difference was recorded for group III bread and cake hand shops favoring the North and Pacific over the South and Southwest group.

TABLE 5.—*Average hourly wage rates in cities of specified population groups* [1]

Type of baking	Group I [2]	Group II [2]	Group III			Group IV			Group V		
	North and Pacific	North and Pacific	All cities	North and Pacific	South and Southwest	All cities	North and Pacific	South and Southwest	All cities	North and Pacific	South and Southwest
All baking	$1.118	$0.994	$0.891	$0.917	$0.813	$0.864	$0.894	$0.750	$0.834	$0.822	$0.866
Bread and cake, hand	1.357	1.153	1.133	1.148	.817	.925	.925	.904	1.037	1.087	.987
Bread and cake, machine	.951	.959	.927	.958	.847	.887	.923	.772	.856	.870	.825
Pie and pastry	.876	1.006	.765	.765	......	.817	.817	......	.723	.723	......
Hebrew baking	1.696	1.427	1.465	1.465	......	1.422	1.422	......	......	......	......
Other national baking [3]	1.339	1.322	......	......	......	.732	......	.732	......	......	......
Cracker and cooky	.805	.786	.709	.709	.711	.697	.717	.609	.640	.640	......

[1] Group I, over 1,000,000 population; group II, 500,000 to 1,000,000; group III, 250,000 to 500,000; group IV, 100,000 to 250,000; group V, 40,000 to 100,000.

[2] No city of this size in the South or Southwest.

[3] French, Polish, Bohemian, Scandinavian, Spanish, Italian, etc.

Straight-Time Weekly Hours [5]

The average straight-time workweek of the organized bakery workers covered in the 70 reporting cities was 41 hours (table 6). Bread and cake machine-shop and cracker and cooky workers had the shortest average hours (40 per week), while those in Hebrew products baking had the longest (45.8).

Almost 8 of every 10 members tabulated, worked under agreements providing for a workweek of 40 straight-time hours. A majority of the remaining members were limited to straight-time workweeks of 48 hours. The shortest workweek reported, 35 hours, was applicable to workers in Bohemian hand shops in New York City, while the longest, 54 hours, applied to shipping clerks in a Tampa, Fla., machine baking shop.

Straight-time hour reductions since July 1, 1945 affected 4 percent of the members tabulated, mainly in hand shops and other national baking. A few quotations, affecting but 2 percent of the workers in the latter branch indicated increased hours. In at least two cities reductions of as much as 8 hours per week were recorded.

TABLE 6.—*Distribution of union members in the bakery trades, by straight-time hours per week, July 1, 1946*

Weekly hours	Percent of union members with specified hours per week—						
	All types	Bread and cake, hand	Bread and cake, machine	Pie and pastry	Hebrew baking	Other national baking [1]	Crackers and cookies
Under 40	2.1	....	3.4	....	....	7.7	....
40	79.0	22.1	94.9	93.2	6.6	48.5	100.0
Over 40 and under 44	2.8	10.3	.9	4.8	10.9	....	....
44	1.3	9.3	.2	....	....	1.4	....
45	3.1	3.2	.2	....	33.8	....	....
Over 45 and under 48	.1	.6	....	....	....	....	....
48	11.6	54.6	.4	2.0	48.7	42.4	....
Over 48	(2)	....	(2)	....	....	....	....
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average weekly hours	41.1	45.1	40.0	40.3	45.8	43.1	40.0

[1] French, Polish, Bohemian, Spanish, Italian, etc.

[2] Less than .05 of 1 percent.

With few exceptions, virtually all of the workers in cracker and cooky shops, pie and pastry and bread and cake machine shops, as well as almost half of those engaged in other national baking, had a regular workweek of 40 hours. Over 40 percent of the latter branch, 55 percent of the bread and cake hand members and 49 percent of those employed in Hebrew baking worked 48 straight-time hours. At least a third of those in the Hebrew products branch had a workweek of 45 hours.

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[5] Weekly hours considered here refer to the maximum number of hours per week permitted by union agreements before overtime rates become effective. The actual number of hours worked in any 1 week may be greater or less than the weekly hours discussed.

Overtime and Sunday Rates

Ninety-eight percent of the workers tabulated were covered by overtime provisions stipulating payment of time and a half for weekly overtime operations (table 7). Most of the remaining members worked under agreements not specifying any definite rate for work performed beyond the contract hours.

Double time for work performed on the seventh consecutive day or Sunday, if an unscheduled work day, covered over 36 percent of the tradesmen studied; a slightly smaller proportion (33.6 percent) received time and a half for such assignments. Almost 3 of every 10 workers, encompassing substantial portions of Hebrew bakers (51 percent), pie and pastry workers (49 percent) and bread and cake hand shopmen (42 percent) worked under agreements in which no Sunday rate was specified. Agreements prohibiting Sunday work affected but a minute proportion (0.8 percent) of the members.

TABLE 7.—*Overtime rates provided in union bakery agreements, July 1, 1946*

Provisions	All types	Bread and cake, hand	Bread and cake, machine	Pie and pastry	Hebrew baking	Other national baking [1]	Crackers and cookies
Weekly:							
No overtime rate specified	2.1	14.3	(2)	....	3.2	....	0.3
Time and one-half	97.6	85.7	100.0	100.0	92.8	100.0	99.7
Other overtime rates	.3	....	....	....	4.0	....	....
Sunday:							
No overtime rate specified	29.1	41.5	27.9	49.2	51.4	19.9	12.3
Time and one-half	33.6	34.2	29.7	44.8	40.5	26.4	41.8
Double time	36.2	20.1	42.0	6.0	4.1	52.0	45.9
Other overtime rates	.3	....	....	....	3.4	....	....
Overtime work prohibited	.8	4.2	.4	....	.6	1.7	....

[1] French, Polish, Bohemian, Scandivian, Spanish, Italian, etc.
[2] Less than .05 of 1 percent.

Vacations

Practically all of the organized workers in the baking industry were covered by agreements providing for paid vacations. Better than 9 of every 10 members received at least 1 week after 1 year's service (table 8). Slightly under one-quarter of the tradesmen received 1 week after 1 year and 2 weeks after 3 years of service.

Among the individual trades, large proportions of the Hebrew bakers, bread and cake hand shopmen and those in specialized baking had vacation clauses providing for 2 weeks after 1 year. Slightly fewer than one-quarter of the pie and pastry workers had vacations of 1 week after 1 year and 2 weeks after 2 years, while better than a third of the remaining members had to serve an additional year to receive a second week. Almost two-thirds of those in the cracker and cooky branch and one-quarter of the bread and cake machine bakers were covered by contract clauses providing 1 week after 1 year and 2 weeks after 5 years.

About 9 percent of the members, mainly those in specialized shops, bread and cake hand and pie and pastry establishments worked under agreements providing other than standard vacation clauses.

TABLE 8.—*Distribution of union members in the baking trades according to vacation with pay, July 1. 1946*

Vacations provisions	All types	Bread and cake, hand	Bread and cake, machine	Pie and pastry	Hebrew baking	Other national baking [1]	Crackers and cookies
1 week after 1 year	3.3	0.6	2.2	0.8	18.5	15.9	1.2
2 weeks after 1 year	26.7	52.6	22.1	9.2	68.7	48.1	6.0
1 week after 1 year and 2 weeks after 2 years	7.4	5.4	10.1	23.8	....	....	1.0
1 week after 1 year and 2 weeks after 3 years	24.0	18.5	28.7	34.8	1.0	....	23.1
1 week after 1 year and 2 weeks after 5 years	27.1	6.3	24.7	16.2	4.6	2.8	64.5
1 week after 6 months and 2 weeks after 1 year	2.0	....	2.5	....	....	....	3.3
1 week after 1 year, 2 weeks after 5 years, and 3 weeks after 15 years	.8	....	1.2	....	....	....	.6
No paid vacation	(2)	....	....	....	.2	....	....
Other than any of the above	8.7	16.6	8.5	15.2	7.0	33.2	.3
No information	(2)	....	(2)	....	....	....	....

[1] French, Polish, Bohemian, Scandinavian, Spanish, Italian, etc.

[2] Less than .05 of 1 percent.

Union Scales of Wages and Hours, by City

Table 9 lists the union hourly wage scales and the hours per week in effect July 1, 1945 and July 1, 1946 for bakery trades workers (by type of baking and occupation) in each of the cities wherein data were obtained. Where more than one union rate is in effect for the same occupation in the same city all are listed, with the letters A, B, C, etc. indicating the various contracts. The letter designation is not intended to imply relative importance of the agreements. Daily or weekly scales have been converted to hourly units to render the data comparable and facilitate measurement.

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945*

City and classification	July 1, 1946 Rate per hour	July 1, 1946 Hours per week	July 1, 1945 Rate per hour	July 1, 1945 Hours per week
Atlanta, Ga.				
Bread and cake—Machine shops:				
Agreement A:				
Mixers, ovenmen, doughnut-machine operators	$1.000	40	....	....
Dividers, molders	.920	40	....	....
Checkers, wrapping-machine operators	.900	40	....	....
Mixers' and molders' helpers	.850	40	....	....
Selectors	.750	40	....	....
Bench hands, packers, twisters, panners, oven loaders, bread rackers, dumpers, machine catchers, pan greasers, general helpers	.700	40	....	....
Agreement B:				
Mixers	.800	40	....	....
Ovenmen, loaders	.650	40	....	....
Wrapping-machine operators, cuttermen, scalers	.600	40	....	....
Dumpers, enrobers, squeeze bagmen (icers)	.575	40	....	....
Hand wrappers, packers, general helpers	.550	40	....	....
Agreement C:				
Bread department:				
Foremen	1.175	40	....	....
Dough mixers, ovenmen	1.000	40	....	....
Dividers	.925	40	....	....
Benchmen, rolling-machine men, moldermen	.900	40	....	....
Dumpers	.700	40	....	....
Bread rackers, oven helpers, pan greasers	.650	40	....	....
Cake department:				
Foremen	1.120	40	....	....
Mixers and ovenmen	.975	40	....	....
Foreladies, scaling-machine operators	.800	40	....	....
Cake wrapping-machine operators	.725	40	....	....
Supervisors	.700	40	....	....
Icers, checkers, wrappers, packers, cutters, pan greasers, cake dumpers	.650	40	....	....
Shipping department:				
Shipping clerks	1.000	40	....	....
Checkers, bread and bun wrapping-machine operators	.875	40	....	....
Bread and bun wrapping-machine operators, helpers, bun trayers, hand wrappers	.650	40	....	....
Agreement D:				
Bread department:				
Foremen	1.175	40	....	....
Ovenmen, dough mixers	1.000	40	....	....
Dividers, molders, bench hands	.925	40	....	....
Benchmen and roll-machine operators	.900	40	....	....
Wrapping-machine operators, checkers	.875	40	....	....
Oven loaders and dumpers	.700	40	....	....
Helpers, packers and slicers, female wrappers' helpers, rackers, pan greasers, hand wrappers	.650	40	....	....
Cake department:				
Foremen	1.120	40	....	....
Mixers, ovenmen	.975	40	....	....
Scaling-machine operators	.800	40	....	....
Wrapping-machine Operators	.725	40	....	....
Dumpers and pan greasers, packers and icers, female checkers	.650	40	....	....
Shipping department:				
Shipping clerks	1.000	40	....	....
Agreement E:				
Cake department:				
Mixers	.780	40	....	....
Ovenmen's helpers, wrappers	.630	40	....	....
General helpers	.600	40	....	....
rackers and cookies:				
Sponge mixing:				
Head mixers	1.100	40	....	....
Mixers	1.000	40	....	....
Mixers' helpers	.850	40	....	....
Sweet mixing:				
Head mixers	1.100	40	....	....
Mixers	1.000	40	....	....
Mixers' helpers	.850	40	....	....
Sponge baking:				
Head bakers	1.070	40	....	....
Machine captains	1.040	40	....	....
Bakers (including sweet baking)	.970	40	....	....
Rollermen	.930	40	....	....

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Atlanta, Ga.—Continued				
Crackers and cookies—Continued				
Sweet baking:				
Machine captains	$1.040	40	....	....
Ovenmen	.850	40	....	....
Dough feeders	.800	40	....	....
Pan cleaners and feeders	.800	40	....	....
Icing department:				
Head mixers	1.025	40	....	....
Mixers' helpers	.900	40	....	....
Base cake weighers	.850	40	....	....
Machine set-up men	.800	40	....	....
Supervisors, female	.770	40	....	....
Floormen	.750	40	....	....
Machine operators and all other female helpers	.650	40	....	....
Packing department:				
Supervisors, supplymen	.900	40	....	....
Pastemen	.850	40	....	....
Wrapping-machine operators, machine set-up men	.800	40	....	....
Supervisors, female	.770	40	....	....
Floormen	.750	40	....	....
Tally clerks, female	.740	40	....	....
Sponge packers, bundlers, female	.670	40	....	....
Sealers and weighers, female	.660	40	....	....
Formers and stitchers, female, wrapping-machine operators	.650	40	....	....
Weighers and closers, female	.640	40	....	....
Shipping department:				
Supervisors	.900	40	....	....
Assemblymen	.850	40	....	....
Car loaders	.800	40	....	....
Baltimore, Md.				
Bread and cake—Hand shops:				
Dough mixers	.958	48	.833	48
Journeymen bakers	.854	48	729	48
Helpers	.729	48	.604	48
Bread and cake—Machine shops:				
Agreement A:				
Bread department:				
Mixers	1.050	40	.875	40
Ingredient scalers	1.025	40	.825	40
Bench hands, oven operators (trays, bread)	1.000	40	.825	40
Molder operators	.925	40	.750	40
Divider operators	.925	40	.725	40
Oven feeders	.825	40	.650	40
Mixers' helpers	.825	40	.625	40
Oven dumpers and helpers	.825	40	.675	40
Bread packers	.750	40	.625	40
Bread wrappers, machine	.750	40	.690	40
Flour blenders	.723	40	.583	40
Bakery helpers, men and women	.713	40	.583	40
Women bread wrappers	.675	40	.600	40
Pan greasers	.675	40	.583	40
Cake and sweet department:				
Mixers	1.050	40	.875	40
Ovenmen (first class)	1.000	40	.800	40
Bench hands, men	1.000	40	.875	40
Cake decorators, men	.975	40	.825	40
Ovenmen (second class)	.950	40	.750	40
Dividers (depositor operators)	.900	40	.700	40
Icing mixers	.900	40	.725	40
Cooky mixers	.900	40	.675	40
Decorators, women	.850	40	.675	40
Ingredient mixers	.825	40	.700	40
Cake packers	.775	40	.675	40
Oven feeders	.750	40	.600	40
Bench hands, women	.725	40	.625	40
Bakers' helpers	.713	40	.550	40
Pan greasers and bakery helpers	.675	40	.583	40
Cake icers, women	.650	40	.500	40
Cake wrappers, women	.625	40	.525	40
Packers	.622	40	.500	40
Agreement B:				
Bread department:				
Mixers, ovenmen	1.040	40	.890	40

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Baltimore, Md.—Continued				
Bread and cake—Machine shops—Continued				
Agreement B—Continued				
Set-up men	$0.985	40	$0.835	40
Dividermen	.940	40	.790	40
Oven dumpers	.865	40	.740	40
Molders, ovenmen's helpers, cooler men, bake-shop helpers	.790	40	.690	40
Wrappers and slicers, men	.715	40	.615	40
Molders' helpers, pan greasers	.700	40	.600	40
Wrappers and slicers, women	.625	40	.525	40
Cake department:				
Mixers, ovenmen	1.040	40	.890	40
Icing makers	1.030	40	.880	40
Ingredient scalers, dough scalers, sugar grinders	.865	40	.740	40
Scalers' helpers, oven dumpers	.790	40	.690	40
Flour blenders	.765	40	.665	40
Pan greasers, packers and shippers	.700	40	.600	40
Tray and mold boys	.685	40	.585	40
Icers, wrappers, women	.625	40	.525	40
Agreement C:				
Bread and cake:				
Working foremen	1.200	40	1.100	40
Mixers	1.140	40	1.040	40
Peel-oven men	1.070	40	.970	40
Traveling oven	1.050	40	.950	40
Ingredient scalers	1.020	40	.920	40
Bench hands, machine operators	.980	40	.880	40
Bread checkers	.920	40	.820	40
Icers, bread and cake wrappers	.880	40	.780	40
General help, men	.840	40	.740	40
General help, women	.635	40	.560	40
Agreement D:				
Bread department:				
Oven operators, dough mixers, shipping clerks	1.025	40	.875	40
Doughnut-machine operators, divider operators, molder operators, wrapping-machine operators, bench hands	.975	40	.825	40
Ingredient scalers, oven feeders and dumpers, mixers' helpers, stock clerks, doughnut-room men	.925	40	.775	40
Pan rackers and greasers, molders' helpers, chute and bread packers, selectors and order packers	.875	40	.725	40
Pan washers, flour handlers	.825	40	.725	40
Women helpers	.700	40	.600	40
Agreement E:				
Foremen, mixers, second hands	.750	40	.750	40
Icers	.675	40	.675	40
Third hands, sweet goods	.550	40	.550	40
Mixers' helpers, scalers, ovenmen, icers' helpers	.525	40	.525	40
Pan greasers and helpers	.450	40	.450	40
Wrappers, foreladies	.425	40	.425	40
Wrappers	.400	40	.400	40
Pie and pastry:				
Agreement A:				
Mixers, machine operators, enrobing-machine operators	.800	40	.700	40
Bench hands, fryers, miscellaneous yeast employees	.700	40	.650	40
Women packers and wrappers, after 6 months	.600	40	.550	40
Agreement B:				
Doughnut-machine operators	.850	40	.775	40
Bakery helpers	.750	40	.700	40
Packers	.600	40	.550	40
Binghamton, N. Y.				
Bread and cake—Machine shops:				
Bread department:				
Utilitymen	1.000	40	.920	40
Tray-ovenmen and mixers	.950	40	.870	40
Checkers	.920	40	.870	40
Benchmen, divider operators, traveling-oven feeders and dumpers, molders	.900	40	.820	40
Wrapping-machine operators	.850	40	.770	40
Flour handlers, mixers' helpers	.800	40	.720	40
Cooler pick-up men, machine helpers	.750	40	.670	40
Pan greasers, women helpers	.620	40	.570	40

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Binghamton, N. Y.—Continued				
Bread and cake—Machine shops—Continued				
Cake and cruller department:				
Mixers	$0.950	40	$0.870	40
Icing mixers, cake scalers, cruller box makers	.850	40	.770	40
Cleaning foremen, sugar grinders	.800	40	.720	40
Loaders	.750	40	.720	40
Kitchen helpers	.750	40	.670	40
Helpers, general	.700	40	.620	40
Cake finishers, icers, wrappers and packers, female	.620	40	.570	40
Birmingham, Ala.				
Bread and cake—Machine shops:				
Agreement A:				
Mixers	.800	40	.800	40
Head rolling-machine operators	.700	40	.700	40
Ovenmen	.675	40	.675	40
Rolling-machine operators	.650	40	.650	40
Utility men	.630	40	.630	40
Dividers and molders	.625	40	.625	40
Benchmen	.600	40	.600	40
Oven helpers, bake-shop helpers, machine wrappers	.525	40	.525	40
Shipping helpers:				
Beginners	.425	40	.425	40
After 3 months	.475	40	.475	40
Agreement B:				
Mixers	1.060	40	.885	40
Dividers and ovenmen	.960	40	.785	40
Molders	.905	40	.710	40
Wrapping-machine operators	.875	40	.650	40
Feeders and dumpers	.810	40	.635	40
Packers, checkers	.785	40	.610	40
Pan greasers and bake-shop helpers	.760	40	.585	40
Slicer feeders	.685	40	.510	40
Agreement C:				
Bread department:				
Head mixers	1.060	40	.885	40
Head ovenmen	1.025	40	.850	40
Head machinemen and head benchmen	.995	40	.820	40
Mixers	.975	40	.800	40
Ovenmen	.935	40	.760	40
Head wrapping-machine operators	.915	40	.740	40
Machinemen and benchmen	.905	40	.730	40
Wrapping-machine operators	.825	40	.650	40
Shippers	.785	40	.610	40
Bake-shop helpers, packers	.760	40	.585	40
Pan greasers	.760	40	.550	40
Wrapping helpers	.685	40	.510	40
Cake department:				
Mixers	.950	40	.750	40
Head ovenmen	.925	40	.750	40
Ovenmen	.875	40	.700	40
Dumpers	.760	40	.585	40
Mixers (fruit cake)	.675	40	.625	40
Icers, wrappers, pan greasers	.675	40	.500	40
Bakers and scalers	.625	40	.575	40
Packers, seal checkers, pan washers (fruit cake)	.500	40	.430	40
Wrappers (fruit cake)	.455	40	.430	40
Agreement D:				
Bread department:				
Mixers	1.060	40	.885	40
Ovenmen	1.025	40	.785	40
Dividers and machinemen	.960	40	.785	40
Molders and benchmen	.905	40	.710	40
Oven feeders and dumpers	.810	40	.635	40
Helpers	.760	40	.585	40
Flour dumpers	.710	40	.535	40
Helpers (under 3 months)	.660	40	.485	40
Cake department:				
Mixers	1.060	40	.885	40
Dividermen and machinemen	.960	40	.720	40
Icing mixers	.935	40	.760	40
Sugar grinders	.810	40	.635	40
Checkers and order fillers	.785	40	.610	40
Head icers and wrapping-machine operators	.770	40	.595	40
Packers, oven feeders, dumpers and helpers	.760	40	.585	40
Icers and wrappers	.675	40	.500	40

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Birmingham, Ala.—Continued				
Crackers and cookies:				
Machine operators	$0.810	40	$0.760	40
Head mixers	.785	40	.735	40
Sponge peelers, sponge-oven bakers	.750	40	.660	40
Mixers, head marshmallow mixers	.705	40	.655	40
Marshmallow mixers	.705	40	.605	40
Sweet-oven bakers	.680	40	.610	40
Dough rollers, traymen, sponge-oven helpers	.680	40	.590	40
Stackers, machine feeders	.660	40	.610	40
Sweet-oven helpers, sponge peelers (1 to 6 months)	.660	40	.590	40
Wrapping-machine operators, greasers, checkers, male	.655	40	.605	40
Day stock checkers	.655	40	.555	40
Icing mixers, mixers' helpers, issue clerks	.635	40	.585	40
Sponge packers, large-carton makers, large-wafer-machine operators, tray and pan dumpers, cold-room packers, stock helpers	.585	40	.535	40
Other helpers	.550	40	.505	40
Packers and bundlers	.535	40	.485	40
Stackers, learners	.505	40	.460	40
Women helpers, caddy and carton makers	.505	40	.455	40
Boston, Mass.				
read and cake—Hand shops:				
Agreement A:				
Bread and rolls:				
Night foremen	1.227	44	1.114	44
Mixers	1.091	44	.977	44
Assistant foremen	.977	44	.864	44
Ovenmen	.977	44	.864	44
Benchmen	.955	44	.841	44
Agreement B:				
Bread and pastry:				
Dough mixers	1.083	48	.958	48
Ovenmen	.875	48	.750	48
Bench hands	.875	48	.750	48
Molders, divider operators, filling cooks	.771	48	.646	48
Bakers, helpers, wrapping-machine operators, shippers	.729	48	.604	48
Women helpers	.625	48	.500	48
Agreement C:				
Pie, bread, and pastry:				
Foremen, second hands, mixers, cake decorators	.875	48	.875	48
Head benchmen	.853	48	.853	48
Ovenmen	.813	48	.813	48
Frosting makers	.771	48	.771	48
Filling cooks	.719	48	.719	48
Benchmen	.708	48	.708	48
Shippers, cleaners and greasers, bread wrapping-machine operators	.542	48	.542	48
General helpers	.531	48	.531	48
Frosters	.477	48	.477	48
Agreement D:				
Pie, bread, and pastry:				
Foremen	1.115	44	.990	48
Ovenmen, dough mixers	.969	44	.844	48
Benchmen	.906	44	.781	48
Frosters	.635	44	.510	48
read and cake—Machine shops:				
Agreement A:				
Mixers	1.130	40	1.080	40
Dividermen	1.010	40	.960	40
Mixers' helpers, moldermen, oven feeders, ingredient scalers	.960	40	.910	40
Flour blenders, wrappers	.925	40	.875	40
Floormen	.910	40	.860	40
Molders' helpers, rackers, pan greasers, packers	.875	40	.825	40
Agreement B:				
Mixers	1.063	40	1.013	40
Molder operators, ovenmen, machinemen	.975	40	.925	40
Mixers' and ovenmen's helpers, ingredient scalers	.938	40	.888	40
Benchmen	.928	40	.878	40
Bakery helpers, pan greasers	.868	40	.818	40
Checkers and rackers:				
First year	.788	40	.738	40
2 to 5 years	.875	40	.825	40
After 5 years	.900	40	.850	40

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Boston, Mass.—Continued				
Bread only—Machine shops:				
Mixers	$1.050	40	$1.000	40
Divider operators	.950	40	.900	40
Mixers' helpers	.920	40	.870	40
Molder operators	.910	40	.860	40
Ovenmen	.900	40	.820	40
Wrapping-machine operators	.880	40	.830	40
Benchmen, benchwomen	.870	40	.820	40
Bakery helpers	.830	40	.780	40
Wrapping-machine helpers	.775	40	.715	40
Packers	.775	40	.680	40
Stockmen, flour dumpers	.725	40	.650	40
Roll packers, strippers and baggers	.650	40	.600	40
Cake only—Machine shops:				
Agreement A:				
Mixers	1.050	40	.980	40
Ovenmen	1.020	40	.950	40
Ingredient scalers	.920	40	.850	40
Helpers:				
First 6 weeks	.740	40	.620	40
After 6 weeks	.790	40	.720	40
Table heads	.740	40	.640	40
Women helpers	.620	40	.560	40
Packers, icers, wrappers:				
First 6 weeks	.570	40	.500	40
After 6 weeks	.620	40	.560	40
Agreement B:				
Mixers	1.000	40	.970	40
Icing mixers	.955	40	.925	40
Ovenmen	.950	40	.920	40
Shippers	.880	40	.800	40
Ingredient scalers	.860	40	.830	40
Helpers	.780	40	.750	40
Table heads	.700	40	.620	40
Wrappers, women:				
First 3 months	.550	40	.500	40
After 3 months	.600	40	.540	40
Pie and pastry:				
Agreement A:				
Ovenmen	.950	40	.900	40
Soft-pie ovenmen, mixers, oven firemen	.938	40	.888	40
Flour handlers	.888	40	.838	40
Helpers	.813	40	.763	40
Agreement B:				
Foremen	1.008	48	.958	48
Ovenmen, bench hands	.850	48	.800	48
Wrappers and frosters	.663	48	.613	48
Helpers	.550	48	.500	48
Hebrew shops:				
Foremen	1.749	48	1.521	48
Second hands	1.612	48	1.417	48
Third hands	1.474	48	1.313	48
Crackers and cookies:				
Sponge department:				
Machine captains	.975	40	.975	40
Peelers	.900	40	.900	40
Mixers, bakers	.880	40	.880	40
Mixers' helpers	.855	40	.855	40
Rollermen	.850	40	.850	40
Oven firemen	.800	40	.800	40
Dough pullers	.795	40	.795	40
Utilitymen	.785	40	.785	40
Bakers' helpers	.755	40	.755	40
Edgers	.715	40	.715	40
Flour bag cleaners	.690	40	.690	40
Floormen	.685	40	.685	40
Dog food department:				
Machine captains, mixers	.875	40	.875	40
Bakers	.850	40	.850	40
Reliefmen	.845	40	.845	40
Kibblers	.685	40	.685	40
Dough feeders	.800	40	.800	40
Mixers' helpers	.750	40	.750	40
Pan feeders	.715	40	.715	40

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Boston, Mass.—Continued				
Crackers and cookies—Continued				
Packing department:				
Receiving clerks	$0.840	40	$0.840	40
Wax wrapping-machine operators	.800	40	.800	40
Receivers	.790	40	.790	40
Floormen and coopers, dog food packing	.750	40	.750	40
Utility floormen	.685	40	.685	40
Working supervisors	.645	40	.645	40
Carton formers	.600	40	.600	40
Wax wrapping-machine feeders	.590	40	.590	40
Sponge packers and caddy stitchers	.580	40	.580	40
Bundlers and labelers, dog food packers, handlers of broken and rejected goods	.570	40	.570	40
Shipping department:				
Light shippers	.875	40	.875	40
Car checkers	.840	40	.840	40
Head car loaders	.815	40	.815	40
Shippers, assemblers, car assemblers	.790	40	.790	40
Car loaders	.775	40	.775	40
Stock clerks	.755	40	.755	40
Stockmen	.705	40	.705	40
Buffalo, N. Y.				
Bread and cake—Hand and semimachine shops:				
Day work:				
Oven hands and mixers	1.105	40	.955	44
Bench hands	1.060	40	.909	44
Helpers	.840	40	.682	44
Bread and cake—Machine shops:				
Agreement A:				
Foremen	1.150	40	1.100	40
Oven hands and mixers	1.105	40	1.050	40
Bench hands	1.060	40	1.000	40
Scalers and machine operators	.990	40	.925	40
Ingredient men	.950	40	.875	40
Oven dumpers	.880	40	.800	40
Helpers and pan greasers, packers and checkers, flour dumpers and blenders	.840	40	.750	40
Bread and pan stackers	.810	40	.725	40
Icers and wrappers, women	.675	40	.575	40
Agreement B:				
Bread department:				
Foremen	1.173	40	1.113	40
Mixers	1.060	40	1.000	40
Traveling ovenmen	1.035	40	.950	40
Assemblymen	1.010	40	.950	40
Dividermen, bench hands	.990	40	.930	40
Machine and molder men	.960	40	.900	40
Oven feeders and dumpers, oven helpers (male)	.875	40	.800	40
Checkers	.870	40	.800	40
Bench helpers, male	.860	40	.800	40
Wrapping-machine operators	.860	40	.825	40
Wrapping and slicing helpers, flour handlers, utilitymen, packers, coolermen	.835	40	.775	40
Pan greasers	.810	40	.750	40
Cake department:				
Foremen	1.173	40	1.065	40
Mixers	1.060	40	.990	40
Assemblymen, traveling ovenmen	1.035	40	.940	40
Scalers	.980	40	.920	40
Fried-cake machinemen	.925	40	.865	40
Wrapping-machine operators	.885	40	.815	40
Oven helpers, machine	.875	40	.790	40
Foreladies	.855	40	.795	40
Pan greasers	.810	40	.740	40
Pie-machine boys (after 6 months)	.750	40	.690	40
Cake decorators, women	.650	40	.590	40
Icers, packers, wrappers, pie-machine operators, women	.630	40	.570	40
Agreement C:				
Bread department:				
Working foremen	1.173	40	1.113	40
Mixers	1.060	40	1.000	40
Ovenmen	1.035	40	.950	40
Assemblymen	1.010	40	.950	40
Dividermen, bench hands	.990	40	.930	40
Machine and moldermen	.960	40	.900	40

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Buffalo, N. Y.—Continued				
Bread and cake—Machine shops—Continued				
Agreement C—Continued				
Bread—Continued				
Mixers' helpers	$0.910	40	$0.850	40
Assembly helpers	.885	40	.825	40
Oven feeders and dumpers	.875	40	.800	40
Checkers	.870	40	.800	40
Wrapping-machine operators	.860	40	.825	40
Bench helpers	.860	40	.800	40
Wrapping-machine helpers, coolermen, flour handlers, packers	.835	40	.775	40
Pan greasers and helpers	.810	40	.750	40
Cake department:				
Mixers	1.035	40	.950	40
Icing makers	1.010	40	.900	40
Ovenmen	.990	40	.890	40
Depositors, scaling machine operators	.970	40	.900	40
Depositors' helpers	.830	40	.750	40
Foreladies	.820	40	.725	40
Pan greasers	.810	40	.725	40
Icing, packing, wrapping	.620	40	.535	40
Rollette department:				
Mixers	.985	40	.900	40
Mixers' helpers	.830	40	.750	40
Jam cooker	.830	40	.750	40
Foreladies	.820	40	....	....
Pan greasers	.810	40	.725	40
Wrappers, rollers and boxers, female	.620	40	.535	40
Agreement D:				
Mixers and ovenmen	1.050	40	1.050	40
Cake decorators	1.030	40	1.030	40
Assemblymen, fried-cake machine operators	.980	40	.980	40
Dividermen	.960	40	.960	40
Bench hands	.960	40	.960	40
Moldermen	.930	40	.930	40
Receiving department helpers	.900	40	.900	40
Mixers' helpers, doughnut fryers, icing-machine operators	.880	40	.880	40
Packers	.880	40	.880	40
Wrapping-machine operators	.860	40	.860	40
Bench helpers, cooky-machine operators, oven helpers, flour sifters and blenders	.830	40	.830	40
Bakeshop helpers, flour sifters, blenders' helpers	.780	40	.780	40
Fried-cake coolers, coolermen	.730	40	.730	40
Icing-wrappers and packers, women	.600	40	.600	40
Agreement E:				
Male workers	.950	40	....	....
Female workers	.750	40	....	....
Pie and pastry:				
Doughnuts:				
Machine operators	.840	40	.750	40
Packers and wrappers (women)	.675	40	.575	40
Polish and Hebrew shops:				
First hands	1.300	40	1.050	40
Second hands	1.200	40	.950	40
Crackers and cookies:				
Agreement A:				
Mixing department:				
Head mixers	1.045	40	1.020	40
Sponge mixers	.965	40	.895	40
Sponge helpers	.905	40	.835	40
Flour dumpers	.815	40	.775	40
Baking department:				
Machine captains	1.035	40	.935	40
Peelers	.995	40	.895	40
Bakers, traveling-and reel-ovens	.965	40	.865	40
Cuttermen	.945	40	.845	40
Sponge rollermen	.935	40	.835	40
Sponge drawmen	.895	40	.795	40
Oven firemen	.865	40	.765	40
Pan feeders and greasers	.815	40	.715	40
Stackers	.715	40	.715	40
Icing department:				
Head mixers	.965	40	.925	40
Machine set-up men	.895	40	.795	40
Machinemen, mixers' helpers	.815	40	.815	40

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Buffalo, N. Y.—Continued				
Crackers and cookies—Continued				
Agreement A—Continued				
Icing department—Continued				
Working supervisors (women)	$0.755	40	$0.655	40
Machine operators	.675	40	.575	40
Packers, feeders, handlers (women)	.665	40	.565	40
Warehouse and assembly department:				
Division heads	.885	40	.815	40
Assemblymen	.865	40	.795	40
Packing department:				
Checkers and truckers	.815	40	.715	40
Supervisors (working)	.765	40	.665	40
Sponge packers	.715	40	.615	40
Hand bundlers, carton formers, machine	.675	40	.575	40
Repack girls	.665	40	.665	40
Sweet packers, scalers and weighers, filling-machine operators, "Q" formers and stitchers, hand-carton formers, machine operators	.665	40	.565	40
Agreement B:				
Mixing department:				
Head mixers	1.045	40	.945	40
Sponge mixers	.965	40	.865	40
Sweet mixers	.935	40	.835	40
Mixers' helpers	.905	40	.805	40
Flour dumpers	.815	40	.715	40
Baking department:				
Machine captains	1.035	40	.935	40
Peelers	.995	40	.895	40
Reel-oven bakers	.965	40	.865	40
Cuttermen	.945	40	.845	40
Sponge rollermen	.935	40	.835	40
Traveling-oven unloaders, sponge drawmen, reel-oven take-out men	.895	40	.795	40
Traveling-oven loaders	.845	40	.745	40
Pan feeders and greasers, general help	.815	40	.715	40
Towermen	.725	40	.624	40
Stackers, female	.715	40	.615	40
Scrap girls	.665	40	.565	40
Icing and cello bag department:				
Head mixers	.965	40	.865	40
Machine set-up men	.895	40	.795	40
Paper cutters, icing mixers' helpers	.875	40	.775	40
Machinemen	.845	40	.745	40
Checkers and truckers, general help (men)	.815	40	.715	40
Working supervisors (women)	.755	40	.665	40
Packers and feeders (women)	.665	40	.565	40
General help (women)	.625	40	.525	40
Packing department:				
Checkers and truckers (men)	.815	40	.715	40
Working supervisors	.765	40	.665	40
Sponge packers	.715	40	.615	40
Hand bundlers and carton formers (machine table)	.675	40	.575	40
Sweet packers, carton formers (hand), "Q" formers, cover stitchers, repack girls, breakage girls	.665	40	.565	40
General help (male)	.625	40	.525	40
Butte, Mont.				
Hand shops:				
Bread and cake:				
Foremen	1.432	44	1.270	44
Journeymen	1.295	44	1.133	44
Wrappers, female	.682	44	.542	44
Machine shops:				
Bread and cake:				
Foremen, dough mixers	1.500	42	1.297	42
Ovenmen	1.452	42	1.261	42
Bench hands	1.375	42	1.167	42
Wrappers, male	1.023	44	.900	44
Wrappers, female	.682	44	.542	44

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Charleston, W. Va.				
Bread and cake—Machine shops:				
Agreement A:				
Bread:				
Mixers No. 1	$1.150	48	....	....
Mixers No. 2, dividers, wrapping-machine operators	1.000	48	....	....
Proof box operators	.950	48	....	....
Bakers' helpers, first class	.900	48	....	....
Molders	.800	48	....	....
Bakers' helpers, second class	.750	48	....	....
Agreement B:				
Bread:				
Dough mixers	1.100	48	....	....
Sponge mixers	1.000	48	....	....
Divider operators, ovenmen, shipping clerks	.900	48	....	....
Wrapping-machine operators	.850	48	....	....
Dough panners, feeders	.750	48	....	....
Greasers	.700	48	....	....
Agreement C:				
Bread:				
Mixers No. 1	1.150	48	....	....
Mixers No. 2, dividermen, wrapping-machine operators, shipping clerks	1.000	48	....	....
Proof box operators	.950	48	....	....
Bakers' helpers, first class	.900	48	....	....
Molders	.800	48	....	....
Bakers' helpers; second class, bread panners, and rackers, dividers, female	.759	48	....	....
Cake:				
Oven helpers, No. 1	.900	48	....	....
Oven helpers No. 2	.800	48	....	....
Bakers' helpers No. 1, cake icers No. 1	.700	48	....	....
Bakers' helpers No. 2, cake icers No. 2	.600	48	....	....
Cake wrappers	.500	48	....	....
Charlotte, N. C.				
Bread and cake—Machine shops:				
Agreement A:				
Bread:				
Foremen	1.000	40	.950	40
Mixers	.850	40	.800	40
Head ovenmen	.850	40	.800	40
Ovenmen	.750	40	.700	40
Helpers:				
First 3 months	.550	40	.550	40
After 3 months	.600	40	.550	40
Machinemen	.775	40	.725	40
Wrapping-machine operators	.750	40	.700	40
Hand wrappers and machine helpers:				
First 3 months	.550	40	.500	40
After 3 months	.600	40	.550	40
Cake:				
Foremen	1.000	40	.950	40
Mixers	.850	40	.800	40
Oven loaders and dumpers	.650	40	.600	40
Helpers:				
First 3 months	.550	40	.500	40
After 3 months	.600	40	.550	40
Machinemen	.750	40	.700	40
Foreladies	.700	40	.650	40
Icers, wrappers and box makers:				
First 2 months	.500	40	.450	40
3 to 4 months	.550	40	.500	40
After 4 months	.600	40	.550	40
Experienced icers	.650	40	.600	40
Shipping department:				
Shipping clerks	.850	40	.800	40
Checkers and packers	.650	40	.600	40
Freight handlers and stock helpers	.700	40	.650	40

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Charlotte, N. C.—Continued				
Bread and cake—Machine shops—Continued				
Agreement B:				
Mixers, oven operators, doughnut-machine operators	$0.950	40	....	....
Dividers, roll-machine operators, depositor operators, wrapping-machine operators	.900	40	....	....
Scalers, molder operators, stockmen	.850	40	....	....
Oven loaders and dumpers	.750	40	....	....
Production employees, cake icers (hand)	.700	40	....	....
General bakery helpers	.650	40	....	....
Shipping department:				
Shipping and receiving clerks	.800	40	....	....
Selectors	.750	40	....	....
Chicago, Ill.				
Bread and cake—Hand shops:				
Retail—Bread:				
First hands	1.310	48	1.020	48
Second hands	1.262	48	.979	48
Retail—Bread and cake:				
First hands or spongers, ovenmen	1.309	48	1.041	48
Second hands	1.261	48	.941	48
Third hands	.961	48	.841	48
Wholesale—Bread:				
First hands, mixers, ovenmen, spongers	1.180	40	1.075	40
Second hands, bench or machine hands, molders or dividers	1.130	40	1.025	40
Bread and cake—Machine shops:				
Bread only:				
Working foremen	1.205	40	1.125	40
Ingredient scalers, mixers	1.100	40	1.020	40
Ovenmen, dividermen	1.050	40	.970	40
Dough dumpers, soft-roll scaling-machinemen, traveling-oven dumpers and feeders, molders, bench hands	1.000	40	.920	40
Bake-shop helpers:				
First 60 days	.780	40	.600	40
60–90 days	.780	40	.700	40
After 90 days	.890	40	.810	40
Sorters:	.780	40	.700	40
Cake only:				
Agreement A:				
Working foremen	1.240	40	1.125	40
Mixers	1.120	40	1.020	40
Scalers, cake and yeast oven feeders and dumpers, cooky-machine operators	1.070	40	.970	40
Bench hands	1.070	40	.920	40
Helpers:				
First 60 days	.810	40	.600	40
60–70 days	.810	40	.700	40
After 90 days	.900	40	.810	40
Women employees:				
Foreladies	.820	40	.750	40
Icers	.750	40	.650	40
Dough handlers	.750	40	.600	40
Machine feeders	.720	40	.600	40
General helpers:				
First year	.650	40	.500	40
After 1 year	.720	40	.550	40
Agreement B:				
Cake mixers, icing mixers, ovenmen, first scalers, doughnut mixers, head cookers	1.120	40	.910	40
Ingredientmen	1.120	40	.850	40
Mixers' helpers, oven helpers, second scalers and all other shop helpers	.960	40	.770	40
Dumpers and truckers	.850	40	.770	40
Women employees:				
First month	.500	40	.480	40
2 to 9 months	.700	40	....	..
9 to 12 months	.750	40	....	....
After 1 year	.770	40	.550	40

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 194	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Chicago, Ill.—Continued				
Pie and pastry:				
Pie shops:				
Ingredientmen, ovenmen, cooks, dough mixers	$1.020	40	$0.850	40
Dough breakers, fruit mixers, servicemen, helpers	.820	40	.650	40
Pie-machine operators	.740	40	.620	40
Toppers, wrappers, cream pie fillers, cake icers, fruit cleaners, women helpers, plate washers, sorters, inspectors:				
Rate A	.500	40	......	......
Rate B	.670	40	.550	40
Doughnut shops:				
Doughnut and chocolate enrobing-machine operators	1.025	40	......	......
Mixers	.975	40	......	......
Foreladies	.750	40	......	......
Women helpers:				
First month	.550	40	......	......
2–12 months	.650	40	......	......
After 1 year and wrappers	.700	40	......	......
Wrappers	.700	40	......	......
Hebrew shops:				
Foremen or first hands	1.562	48	1.417	48
Second hands	1.500	48	1.354	48
Third hands	1.271	48	1.125	48
Bohemian shops—Bread:				
Small shops, hand:				
First hands	1.250	48	1.042	48
Second hands	1.188	48	.979	48
Large shops, machine:				
First hands	1.500	40	1.250	40
Seconds hands	1.425	40	1.175	40
Italian shops:				
Hand shops:				
First-class bakeries:				
Without unemployment insurance	1.058	48	.938	48
With unemployment insurance	1.037	48	.917	48
Second-class bakeries:				
Without unemployment insurance	.995	48	.875	48
With unemployment insurance	.965	48	.845	48
Machine shops:				
First-class bakeries, with insurance	1.220	40	1.100	40
Second-class bakeries, with insurance	1.145	40	1.025	40
Polish shops:				
Retail shops:				
Day work:				
Foremen, spongers	1.375	48	1.125	48
Second hands	1.250	48	1.000	48
Wholesale shops:				
Day work:				
Foremen, spongers	1.481	48	1.229	48
Second hands	1.356	48	1.104	48
Machine shops:				
Day work:				
Foremen, spongers	1.300	40	1.100	48
Second hands	1.200	40	1.000	48
South-side shops:				
Foremen, spongers	1.375	48	1.188	48
Second hands	1.250	48	1.063	48
Crackers and cookies:				
Agreement A:				
Men employees:				
First mixers	1.050	40	......	......
Second mixers	.900	40	......	......
Other men helpers:				
First 2 months	.700	40	......	......
3–12 months	.750	40	......	......
1–2 years	.800	40	......	......
Over 2 years	.820	40	......	......
Women employees:				
First 2 months	.600	40	......	......
3–12 months	.650	40	......	......
1–2 years	.700	40	......	......
Over 2 years	.750	40	......	......
Foreladies	.800	40	......	......

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Chicago, Ill.—Continued				
Crackers and cookies—Continued				
Agreement B:				
Sponge-mixing department:				
Mixers	$1.080	40	$0.970	40
Mixers' helpers	1.030	40	.920	40
General helpers	.810	40	.625	40
Sponge-baking department:				
Machine captains	1.170	40	1.060	40
Peelers-in	1.130	40	1.020	40
Rollermen	1.080	40	.970	40
Draw boys	.935	40	.825	40
Stackers	.835	40	.725	40
Sweet-mixing department:				
Mixers	1.080	40	.970	40
Mixers' helpers	1.030	40	.920	40
Sweet-baking department:				
Ovenmen	1.010	40	.900	40
Machinemen	.960	40	.850	40
Ovenmen's helpers	.935	40	.825	40
Pan feeders and greasers	.760	40	.650	40
Icing department:				
Machinemen	.960	40	.850	40
Mixers	.910	40	.800	40
Packers	.670	40	.560	40
Machine feeders	.670	40	.510	40
Packing and wrapping department:				
Machinemen	.930	40	.820	40
Fiber-case stitchers and sealers, male	.910	40	.800	40
Sponge packers	.730	40	.620	40
Sweet packers	.690	40	.580	40
Fillers, cellophane	.675	40	.565	40
Glassine packers; carton formers, women; packers, cellophane; sample-room girls; fiber-case scalers, (women)	.650	40	.540	40
Agreement C:				
Sponge-mixing department:				
Mixers	1.070	40	.970	40
Raw-material sealers	1.050	40	.950	40
Mixers' helpers	.950	40	.850	40
Flour dumpers	.850	40	.750	40
Sponge-baking department:				
Machine captains	1.150	40	1.050	40
Dough feeders and rollermen	1.075	40	.975	40
Ovenmen	1.000	40	.900	40
Dough cutters	.950	40	.850	40
Scrap boys	.825	40	.725	40
Sweet-baking department:				
Machine captains	1.150	40	1.050	40
Machine sheeters, ovenmen	1.000	40	.900	40
Dough feeders	.875	40	.775	40
Icing department:				
Machinemen	.950	40	.850	40
Head mixers	.850	40	.750	40
Packers	.710	40	.610	40
Head sample girls	.685	40	.585	40
Stitchers (female), cellophane packers, stickers, sample helpers, trolley packers	.640	40	.540	40
Packing department:				
Stacking-machine captains:				
First 3 months	.725	40	.625	40
After 6 months	1.050	40	.950	40
Wrapping-machine operators	.900	40	.800	40
Sealers, male	.800	40	.700	40
General helpers	.750	40	.650	40
Carton formers	.720	40	.560	40
Bundlers, sponge packers	.720	40	.620	40
Sweet packers	.680	40	.580	40
Women carton and caddy stitchers	.640	40	.540	40
Receiving department:				
Floor unloaders	.920	40	.820	40
Order fillers and stockmen	.880	40	.780	40
Receiving clerks	.875	40	.775	40
Paper cutters and sugar grinders	.825	40	.725	40

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Chicago, Ill.—Continued				
Crackers and cookies—Continued				
Agreement C—Continued				
Shipping department:				
Head shipping clerks	$1.100	40	$1.000	40
Men-in-charge, commission department	1.000	40	.900	40
Men-in-charge, wholesale department	.950	40	.850	40
Order fillers	.850	40	....	....
Stockmen	.800	40	.700	40
Agreement D:				
Sponge and sweet mixing department:				
Mixers, sponge	1.055	40	....	....
Mixers, sweet	1.055	40	....	....
Mixers' helpers, sponge and sweet	1.005	40	....	....
General helpers, sponge and sweet	.870	40	....	....
Sponge and sweet baking department:				
Machinemen	1.145	40	....	....
Machinemen, sweet	1.105	40	....	....
Peelers, sponge	1.105	40	....	....
Rollermen	1.055	40	....	....
Ovenmen, sweet	.985	40	....	....
Head ovenmen, sweet	.940	40	....	....
Oven relievers	.935	40	....	....
Oven helpers, sweet and sponge	.910	40	....	....
Stackers, sponge	.820	40	....	....
Pan feeders and greasers, sweet	.820	40	....	....
General helpers	.710	40	....	....
Icing department:				
Assistant foremen	1.155	40	....	....
Machinemen	.985	40	....	....
Mixers	.935	40	....	....
Packers	.685	40	....	....
Cello baggers and makers	.625	40	....	....
Machine feeders	.615	40	....	....
Machine girls	.595	40	....	....
Sponge and sweet packing department:				
Floor boys	.755	40	....	....
Packers, sponge	.705	40	....	....
Packers, sweet	.685	40	....	....
Cello baggers	.625	40	....	....
Floor girls	.595	40	....	....
Wrapping and bundling department:				
Machinemen	.920	40	....	....
Bundlers	.705	40	....	....
Feeders	.615	40	....	....
Carton and caddy forming:				
Female employees	.635	40	....	....
Cincinnati, Ohio				
Bread and cake—Hand shops:				
Foremen, first hands	1.340	42	1.190	42
Bakers	1.221	42	1.071	42
Bread and cake—Machine shops:				
Agreement A:				
Foremen and first hands	1.235	40	1.065	40
Ovenmen, mixers, doughnut mixers	1.153	40	.983	40
Icing mixers	1.153	40	.920	40
Ingredient scalers, bench or machine hands	1.090	40	.920	40
Machine-wrapping operators	.990	40	.840	40
Stockroom receiving clerks	.950	40	.800	40
Head shippers	.950	40	....	....
Pan greasers, machine	.910	40	....	....
Pan washing-machine operators, stockroom helpers, packers and shippers	.810	40	.660	40
Foreladies	.780	40	.630	40
Chutemen and machine helpers, bread wrapping-machine helpers	.770	40	.620	40
Icers, icing-machine operators, doughnut helpers, cake wrapping-machine helpers, female utility helpers	.700	40	.580	40
Agreement B:				
Foremen and first bakers	1.111	40	.769	40
Ovenmen, mixers	1.029	40	....	....
Bench hands	.966	40	.615	40
Crackers and cookies:				
Head mixers, cutting-machine operators	1.100	40	.950	40
Reel-oven operators	1.050	40	.900	40

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Cincinnati, Ohio—Continued				
Crackers and cookies—Continued				
Machine set-up captains, peelers	$1.020	40	$0.870	40
Assistant cutting-machine operators, marshmallow depositor operators, receiving clerks, truck shipping clerks, assistant reel-oven operators, inspectors, checker captains	.960	40	.810	40
Assistant mixers, order checkers, spray-machine operators	.895	40	.770	40
Small power truck operators, repairmen, marshmallow beaters, order fillers, flour dumpers, warehouse storekeepers	.855	40	.730	40
Sirup mixers, enrober helpers, grinding mill operators, slotting-machine operators, order chasers, car packers, cheese and fig grinders, spray-machine cleaners, shortening weighers	.815	40	.690	40
Women employees:				
Captains	.800	40	.700	40
Inspectors, box tapers, oven tenders, packers, ingredient weighers, machine operators (class A)	.750	40	.650	40
Machine operators (class B), breakers, (stackers) variable scalers, dump fillers, bundlers, magazine feeders, machine feeders, stock clerks, nesting makers	.700	40	.600	40
Carton weighers, general helpers, supply girls, carton handlers and assemblers, machine helpers and machine operators (class C)	.650	40	.550	40
Cleveland, Ohio				
Bread and cake—Hand shops:				
First hands	1.250	48	1.145	48
Second hands	1.190	48	1.083	48
Third hands	1.045	48	.958	48
Women, all classes	.650	48	.625	48
Bread and cake—Machine shops:				
Ovenmen, mixers, ingredientmen, cake decorators	1.120	40	.950	40
Bench or machine hands	1.070	40	.900	40
Mixers' helpers, oven feeders, helpers and dumpers, wrapping and slicer adjusters, doughnut-machine operators	1.000	40	.850	40
Open kettle fryers	1.000	40	.800	40
Bake-shop helpers, shipping-room helpers	.900	40	.800	40
Bread wrappers and slicers	.900	40	.850	40
Pies and pastry:				
Dough mixers, ovenmen	1.120	40	.950	40
Fruit cookers	1.050	40	.950	40
Dough cutters	.950	40	.800	40
Bake-shop helpers	.900	40	.800	40
Machine girls	.720	40	.640	40
Wrapper girls	.650	40	.600	40
Hebrew bakeries:				
First hands	1.622	45	1.400	45
Second hands	1.511	45	1.289	45
Cake bakers	1.355	45	1.133	45
Cake bakers' helpers	1.088	45	.866	45
Bohemian shops:				
First hands	1.250	48	.979	48
Second hands	1.188	48	.917	48
Crackers and cookies:				
Mixers, ovenmen, peelers, cracker ovenmen	1.020	40	.930	40
Machinemen	.970	40	.930	40
Rollers	.900	40	.830	40
Cake-oven helpers, mixers' helpers	.900	40	.780	40
Bake-shop helpers	.850	40	.780	40
All women helpers	.600	40	.580	40
Columbus, Ohio				
Bread and cake—Machine shops:				
Agreement A:				
Working foremen	1.250	40	1.063	40
Mixers	1.080	40	.900	40
Oven feeders	1.000	40	.820	40
Checkers, bench and machinemen	.980	40	.800	40
Wrappers (set-up)	.980	40	.700	40
Stockmen	.900	40	.720	40
Helpers, pan greasers, etc.	.880	40	.670	40
Flour blenders	.880	10	.650	40
Wrapping helpers	.880	40	...	

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Columbus, Ohio—Continued				
Bread and cake—Machine shops—Continued				
Agreement B:				
Foremen:				
Bread department	$1.250	40	$1.100	40
Wrapping department	1.200	40	1.050	40
Mixers	1.080	40	.875	40
Ovenmen	1.080	40	.850	40
Oven feeders and dumpers	1.000	40	.700	40
Divider and molder operators and bun-machine operators	.980	40	.800	40
Machine operators, set-up	.980	40	.750	40
Benchmen	.980	40	.700	40
Wrapping-machine helpers, packers	.880	40	.700	40
Oven helpers	.880	40	.675	40
Bake-shop helpers	.880	40	.650	40
Extra helpers	.880	40	.625	40
Agreement C:				
Mixers, ovenmen	1.080	40	.900	40
Oven feeders and dumpers	1.000	40	.800	40
Bench and machine operators	.980	40	.800	40
Checkers	.980	40	.750	40
Bake-shop helpers, bread rackers, packers	.880	40	.700	40
Flour blenders	.880	40	.700	40
Women wrappers	.780	40	.650	40
Agreement D:				
Bread department:				
Mixers, oven operators	1.070	40	.900	40
Mixers' helpers, oven loaders and unloaders	.970	40	.820	40
Divider operators and molder operators	.970	40	.800	40
Pan rack washers	.820	40	....	....
Roll department:				
Mixers, oven operators	1.070	40	.900	40
Machinemen and ingredient scalers	.970	40	.850	40
Wrapping-machine operators, set-up	.970	40	....	......
Branch loaders and shippers, ingredient scalers	.920	40	.750	40
Roll panners	.870	40	.700	40
Hand icers and wrappers, pan washers and greasers	.870	40	.700	40
Cake department:				
Mixers	1.070	40	.900	40
Ovenmen	1.070	40	.850	40
Decorators	.970	40	.850	40
Machinemen, depositors	.970	40	.800	40
Cooky-machine operators	.870	40	.750	40
Machine helpers	.820	40	....	......
Hand icers and wrappers, pan washers and greasers	.770	40	....	....
Shipping department:				
Wrapping-machine operators, set-up	.970	40	.800	40
Wrapping-machine helpers, packers and shippers	.870	40	....	....
Order fillers	.770	40	....	....
Warehouse department:				
Stock-room and receiving clerks	.870	40	......	....
Freight handlers and flour dumpers	.850	40	......	....
Agreement E:				
Mixers, ovenmen	1.080	40	.845	40
Oven helpers, feeders and dumpers	1.000	40	.795	40
Dividers, molders, head wrappers	.980	40	.795	40
Mixers' helpers	.980	40	.745	40
Wrapping-machine helpers	.880	40	.700	40
Molders' helpers, pan greasers, bread rackers	.880	40	.670	40
Flour blenders	.880	40	.630	40
Agreement F:				
Mixers	.955	40	.925	40
Oven operators	.930	40	.875	40
Dividers tray oven-feeders and dumpers, doughnut-machine operators, icing mixers	.880	40	.860	40
Bench hands, tunnel-oven feeders and dumpers, shippers, molders and depositors	.830	40	.810	40
Order workers	.780	40	.760	40
Helpers, panners, pan setters, pan greasers, blenders, packers	.730	40	.720	40
Pie and pastry:				
Oven ingredient scalers and coopers	.770	40	.650	40
Roller fillers, toppers, trimmers	.770	40	....	
Crackers and cookies:				
Head mixers	.955	40	.925	40
Ovenmen, pan pullers	.930	40	.875	40
Machine operators, dough mixers	.880	40	.860	40

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Columbus, Ohio—Continued				
rackers and cookies—Continued				
Receiving clerks, machine feeders, band-oven tenders	$0.830	40	$0.810	40
Dough-break roll feeders, mixers' helpers	.780	40	.760	40
Ingredient scalers, stockmen	.730	40	.720	40
Ingredient scalers, (women), packers, feeders, dumpers, cleaners	.680	40	.650	40
Men helpers, first 30 days	.680	40	.650	40
Pull and catch pans, men helpers, first 30 days	.630	40	.630	40
Scrap pickers, packers, tray and carton sealers, box formers, machine tenders, wrappers	.580	40	.580	40
Stitchers, packers, magazine feeders	.550	40	.530	40
Women helpers, first 30 days	.500	40	.480	40
Dallas, Texas				
ead and cake—Machine shops:				
Agreement A:				
Working foremen	1.200	40	1.040	40
Mixers	1.100	40	.940	40
Cake depositors, molders, dividers, twisters, benchmen, wrapping-or slicing-machine operators	1.000	40	.830	40
Foreladies	.800	40	.650	40
Packers, helpers	.750	40	.610	40
Beginners:				
First 6 months	.550	40	.500	40
7–12 months	.600	40	.550	40
After 1 year	.700	40	.600	40
Agreement B:				
Bread department:				
Foremen	1.150	45	1.100	45
Mixers	1.050	45	.920	45
Machine operators	.920	45	.880	45
Slicing operators	.920	45	.810	45
Slicing-machine feeders, helpers	.660	45	.630	45
Helpers (first 6 months)	.630	45	.630	45
Cake department:				
Foremen	1.060	45	1.020	45
Bench, oven and machine operators	.890	45	.850	45
Foreladies	.700	45	.700	45
Cake decorators, wrapping-machine operators	.650	45	.650	45
Helpers	.630	45	.600	45
Icers:				
First 3 months	.500	45	.500	45
After 3 months	.550	45	.550	45
Agreement C:				
Bread department:				
Foremen	1.200	40	1.040	40
Mixers, spongers, ovenmen	1.100	40	.940	40
Dispensing checkers, benchmen, molders, twisters, pan-rackers, dividers, oven dumpers or loaders, slicing and wrapping-machine operators	1.000	40	.830	40
Dispensing and stock-room workers, helpers	.750	40	.640	40
Cake department:				
Foremen	1.200	40	1.040	40
Batter and icing mixers	1.100	40	.940	40
Ovenmen	1.080	40	.920	40
Bench hands, ingredient scalers	1.000	40	.830	40
Shipping clerks	1.000	40	.825	40
Foreladies	.800	40	.650	40
Pan greasers, cake dumpers, helpers (first 6 months)	.750	40	.610	40
Women helpers:				
First 3 months	.550	40	.500	40
4–6 months	.600	40	.550	40
After 1 year	.700	40	.600	40
Agreement D:				
Working foremen	1.200	40	1.040	40
Mixers	1.100	40	.940	40
Ovenmen	1.080	40	.920	40
Benchmen, twisters, dividers, oven dumpers or loaders, head checkers, second bakers	1.000	40	.830	40
Agreement E:				
Mixers	1.100	40	.940	40
Ovenmen	1.080	40	.920	40
Ingredient scalers, second ovenmen, shipping-room clerk	1.000	40	.830	40
Miscellaneous male employees	.750	40	.700	40

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Dallas, Texas—Continued				
Bread and cake—Machine shops—Continued				
Agreement E—Continued				
Finishers and wrappers, women:				
First 6 months	$0.550	40	$0.500	40
7–12 months	.600	40	.550	40
After 1 year	.700	40	.600	40
Davenport, Iowa (See Rock Island (Ill.) District)				
Dayton, Ohio				
Bread and cake—Semimachine shops:				
Agreement A:				
Mixers, ovenmen	1.115	40	.945	44
Oven feeders and dumpers, molders, machinemen, dividers	1.065	40	.895	44
Benchmen	1.065	40	.870	44
Doughnut-machine operators	1.025	40	.855	44
Mixers' helpers	1.015	40	.845	44
Set-up men	1.000	40	.830	44
Wrapping-machine helpers, other helpers	.900	40	.750	44
Agreement B:				
Mixers, ovenmen	1.115	40	.830	44
Benchmen	1.065	40	.780	44
Doughnut-machine operators	1.025	40	.740	44
Mixers' helpers	1.015	40	.730	44
Head wrappers	1.000	40	.680	44
Pan greasers and setters	.950	40	.640	44
Wrappers and packers	.900	40	.620	44
Women icers, packers, wrappers	.730	40	.580	44
Bread and cake—Machine shops:				
Mixers, ovenmen	1.115	40	.945	40
Oven feeders and dumpers, molders, dividers	1.065	40	.895	40
Benchmen	1.065	40	.870	40
Doughnut-machine operators	1.025	40	.855	40
Mixers' helpers	1.015	40	.845	40
Set-up men	1.000	40	.830	40
Head shippers	1.000	40	......	......
Flour blenders	.995	40	.815	40
Wrapping-machine helpers, other helpers, packers, rackers	.900	40	.750	40
Scalers, wheel girls	.800	40	.725	40
Women icers, packers, wrappers	.730	40	.580	40
Crackers and cookies:				
Machine captains	.960	40	.790	40
Mixers	.940	40	.790	40
Handlers, shippers	.890	40	.740	40
Packers, wrappers	.760	40	.670	40
Denver, Colo.				
Bread and cake—Hand shops:				
Foremen	1.260	48	1.140	48
Dough mixers, ovenmen	1.170	48	1.010	48
Bench hands	1.120	48	.950	48
Bread and cake—Machine shops:				
Foremen	1.260	40	1.110	40
Dough mixers, spongers, ovenmen	1.170	40	1.010	40
Bench hands	1.120	40	.950	40
Hebrew shops:				
Foremen	1.260	40	1.140	40
Ovenmen	1.170	40	1.010	40
Bench hands	1.120	40	.950	40
Crackers and cookies:				
Agreement A:				
Machine captains	.975	40	.925	40
Head sponge and sweet mixers, peelers	.925	40	.875	40
Bakers	.895	40	.845	40
Mixers, rollermen, drawmen	.875	40	.825	40
Mixers' helpers, stackers	.780	40	.730	40
General helpers, male:				
First 3 months	.635	40	.585	40
4–6 months	.665	40	.615	40

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Denver, Colo.—Continued				
Crackers and cookies—Continued				
Agreement A—Continued				
General helpers, male—Continued				
7-9 months	$0.695	40	$0.645	40
10-12 months	.725	40	.675	40
13-15 months	.755	40	.705	40
After 15 months	.780	40	.730	40
Packing and icing department:				
Icing mixers	.875	40	.825	40
Wrapping machine set-up men	.825	40	.775	40
Floormen	.730	40	.680	40
Women employees:				
Sponge packers	.625	40	.575	40
Bundlers, machine operators, "O" formers and stitchers, sweet icing packers, graham packers	.600	40	.550	40
General helpers:				
First 3 months	.500	40	.450	40
4-6 months	.530	40	.480	40
7-9 months	.560	40	.510	40
10-12 months	.590	40	.540	40
After 1 year	.600	40	.550	40
Agreement B:				
Baking department:				
Machinemen, sponge	1.090	40	.975	40
Machinemen, sweet	1.070	40	.975	40
Peelers, ovenmen, sponge reliefmen	1.040	40	.925	40
Sponge and sweet head mixers, ovenmen, sweet sponge reliefmen	1.020	40	.925	40
Dough mixers, rollermen	.970	40	.875	40
Dough feeders	.910	40	.815	40
Mixers' helpers	.880	40	.780	40
Sponge ovenmen's helpers	.870	40	.770	40
Pan greasers	.840	40	.745	40
Icing room:				
Machinemen; jelly, cream, and icing mixers	.970	40	.875	40
Jelly, cream, and icing mixers' helpers, marshmallow men	.840	40	.745	40
Packing department:				
Wrapping and labeling-machinemen	.990	40	.890	40
Paper-cutting machine operators	.910	40	.815	40
Wrapping and labeling-machine helpers	.840	40	.745	40
Supply department:				
Lardmen	.910	40	.815	40
Stock clerks	.880	40	.780	40
General helpers, women:				
First month	.550	40	.500	40
2-3 months	.600	40	.500	40
4-6 months	.620	40	.525	40
7-9 months	.650	40	.550	40
10-12 months	.680	40	.575	40
After 1 year	.700	40	.600	40
General helpers, men:				
First month	.650	40	.600	40
2-3 months	.700	40	.625	40
4-6 months	.720	40	.650	40
7-9 months	.740	40	.675	40
10-12 months	.770	40	.700	40
After 1 year	.820	40	.725	40
Des Moines, Iowa				
read and cake—Hand shops:				
First hands	1.042	48	.938	48
Second hands	.938	48	.833	48
Third hands	.844	48	.740	48
read and cake—Machine shops:				
Agreement A:				
Working foremen	1.250	40	1.000	40
Dough mixers, ovenmen, pan setters, pan dumpers	1.150	40	.900	40
Benchmen, machinemen, shipping clerks	1.050	40	.800	40
Helpers:				
First year	.780	40	.600	40
After 1 year	.900	40	.650	40

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TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Des Moines, Iowa—Continued				
Bread and cake—Machine shops—Continued				
Agreement B:				
Working foremen	$1.240	40	$1.015	40
Mixers, scalers, ovenmen	1.140	40	.915	40
Benchmen:				
First 6 months	1.040	40	.815	40
Second 6 months	1.090	40	.865	40
After 1 year	1.140	40	.915	40
Shipping clerks, carton assemblers	1.040	40	.800	40
Helpers:				
First 6 months	.775	40	.550	40
Second 6 months	.825	40	.600	40
After 1 year	.875	40	.650	40
Women employees:				
Foreladies	.925	40	.700	40
Cake wrappers, packers, carton makers, icers, packers of doughnuts and bread on conveyor line:				
First 6 months	.745	40	.550	40
7–12 months	.770	40	.575	40
After 1 year	.805	40	.610	40
Crackers and cookies:				
Mixing and baking department:				
Head mixers	1.115	40	1.015	40
Machinemen	1.055	40	.955	40
Mixers' helpers	1.020	40	.920	40
Reliefmen, peelers	1.005	40	.905	40
Bakers	.985	40	.885	40
Drawmen	.950	40	.850	40
Rollermen	.925	40	.825	40
Stackers	.880	40	.780	40
Pan passers, floormen	.870	40	.770	40
Packing department:				
Machinemen	.850	40	.750	40
Floormen	.800	40	.700	40
Sponge packers, stock boys	.725	40	.625	40
Machine feeders, sample room attendants, bundlers, carton formers	.675	40	.575	40
Women helpers:				
First 30 days	.600	40	.500	40
After 30 days	.650	40	.550	40
Shipping and receiving department:				
Order clerks	.950	40	.850	40
Helpers	.850	40	.750	40
Detroit, Mich.				
Bread and cake—Machine shops:				
Agreement A:				
Mixers	1.050	40	1.000	40
Dividermen, benchmen, bun panners, ovenmen	1.020	40	.970	40
Mixers' helpers	.995	40	.945	40
Oven feeders, dumpers, dividers, twisters, bread rackers, stockmen, flour blenders, shipping clerks	.970	40	.920	40
Head wrappers	.950	40	.900	40
Shipping clerks' helpers, bread wrappers, pan cleaners, setters, rackers and greasers, laborers	.920	40	.870	40
Cake wrappers, dumpers, packers, panners and icers	.770	40	.720	40
Agreement B:				
Mixers, ovenmen	1.130	40	1.030	40
Blenders, scalers, dividers, molders, mixers' helpers, benchmen, oven feeders, dumpers	1.030	40	.930	40
Molders' helpers, pan rackers and setters, greasers, checkers, wrapping-room set-up men	.980	40	.880	40
Bread wrappers, packers	.930	40	.830	40
Stockroom men	.880	40	.780	40
Women employees:				
Bun panners	.780	40	.680	40
Wrappers	.750	40	.650	40
Agreement C:				
Bread and roll mixers	1.190	40	1.030	40
Ovenmen, cake mixers	1.170	40	1.030	40
Icing and filling cookers	1.170	40	.980	40
Doughnut fryers	1.140	40	.950	40
Ingredient scalers, receiving stockmen	1.140	40	.980	40

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Detroit, Mich.—Continued				
ead and cake—Machine shops—Continued				
Agreement C—Continued				
Pie crust mixers	$1.110	40	$0.930	40
Bread-wrapping machine operators	1.090	40	.950	40
Bakers:				
All around benchmen	1.090	40	.980	40
Expert benchmen	1.140	40	1.030	40
Divider operators, cake depositors	1.090	40	.950	40
Bread oven loaders, stockmen	1.090	40	.930	40
Shipping room servicemen	1.070	40	.930	40
Machine operators, not otherwise specified	1.040	40	.930	40
Bread panners	1.020	40	.930	40
Pan conditioners and general bakery workers, bread rackers, bakers' helpers	.990	40	.880	40
Decorators, finishing	.870	40	.780	40
Bread packers, women	.830	40	.680	40
Panners, order helpers:				
Starting	.630	40	.580	40
After 1 month	.680	40	.630	40
After 3 months	.730	40	.680	40
After 6 months	.830	40	.750	40
Agreement D:				
Bread department:				
Oven leaders, baker leaders, specialty baker leaders	1.305	40	1.135	40
Bread and roll mixers	1.290	40	1.120	40
Bakers	1.255	40	1.085	40
Scalers, leaders	1.220	40	1.060	40
Ovenmen No. 1	1.255	40	1.040	40
Scalers, blenders, molders	1.170	40	1.010	40
Ovenmen No. 2	1.200	40	.990	40
Bench helpers	1.095	40	.940	40
General utilitymen	1.035	40	.885	40
Panners, women	.835	40	.700	40
Cake and sweet-goods department:				
Decorators	1.315	40	1.140	40
Bakers, leaders	1.305	40	1.135	40
Mixers	1.290	40	1.120	40
Icing leaders	1.255	40	1.090	40
Bakers	1.255	40	1.085	40
Icers, benchmen	1.205	40	1.040	40
Depositors	1.170	40	1.010	40
Icers' helpers, mixers' helpers, depositors' helpers	1.095	40	.940	40
Women employees:				
Decorators, leaders	.920	40	.780	40
Icers, leaders	.885	40	.750	40
Finishing, general-utility	.865	40	.730	40
Muffin girls, decorators' helpers	.870	40	.730	40
Icers, helpers	.835	40	.700	40
Agreement E:				
Dough mixers, oven operators	1.200	40	1.030	40
Icing mixers	1.200	40	.930	40
Ingredient scalers, depositor operators, doughnut-machine operators	1.100	40	.930	40
Checkers	1.050	40	.870	40
Packers	1.000	40	.870	40
Miscellaneous helpers, men:				
Starting rate	.890	40	.760	40
After 6 months	.940	40	.810	40
Women helpers:				
Starting rate	.730	40	.550	40
After 6 months	.780	40	.650	40
Agreement F:				
Bread department:				
Mixers, oven operators	1.130	40	1.030	40
Blenders, scalers, dividers, molders, mixers' helpers, benchmen, oven feeders, dumpers	1.030	40	.930	40
Molders' helpers, pan rackers, greasers, wrapping room set-up men, checkers	.980	40	.880	40
Bread rackers, machine wrappers, packers	.930	40	.830	40
Stockroom men	.880	40	.780	40
Women employees:				
Bun panners	.780	40	.680	40
Wrappers	.750	40	.650	40
Cake and sweet-goods department:				
Dough mixers, ovenmen, icing mixers	1.200	40	1.030	40
Depositor operators	1.100	40	1.030	40

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Detroit, Mich.—Continued				
Bread and cake—Machine shops—Continued				
Agreement F—Continued				
Cake and sweet-goods department—Continued				
Mixers' helpers, oven helpers and dumpers, depositors' helpers, wrapping-machine set-up men	$1.050	40	$0.880	40
Icing-machine operators	1.050	40	.850	40
Packers	1.000	40	.870	40
Pan greasers	.980	40	.880	40
Cake cutters	.980	40	.850	40
Stockmen	.950	40	.810	40
Miscellaneous helpers	.940	40	.810	40
Icers, wrappers and other women helpers	.780	40	.650	40
Agreement G:				
Cake only:				
Cake and icing mixers, oven operators	1.200	40	.980	40
Depositors	1.100	40	.980	40
Biscuit icing mixer	1.100	40	.930	40
Ingredient scalers, doughnut-machine operators,	1.100	40	.860	40
Wrapping-machine set-up men	1.050	40	.860	40
Checkers	1.050	40	....	....
Helpers, men	.940	40	.810	40
Bake-shop helpers	.780	40	.650	40
Agreement H:				
Mixers, oven operators	1.130	40	1.030	40
Blenders, scalers, dividers, molders, mixers helpers, benchmen, oven feeders, dumpers	1.030	40	.930	40
Molders, helpers, pan rackers, greasers, wrapping-room set-up men, checkers	.980	40	.880	40
Machine wrappers, packers	.930	40	.830	40
Stockroom men	.880	40	.780	40
Women employees:				
Bun panners	.780	40	.680	40
Bun wrappers	.750	40	.650	40
Agreement I:				
Mixers, oven operators	1.130	40	1.020	40
Benchmen, sweet goods	1.080	40	.980	40
Moldermen, dividermen, doughnut-machine operators	1.030	40	.930	40
Oven feeders	1.030	40	.920	40
Wrapping-machine set-up men, pan greasers	.980	40	.880	40
Bread rackers	.930	40	.830	40
Stockroom men	.880	40	.780	40
Icers, wrappers, sweet goods	.750	40	.650	40
Agreement J:				
Mixers, ovenmen	1.130	40	1.030	40
Blenders, scalers, dividers, molders, mixers' helpers, benchmen, oven feeders, dumpers	1.030	40	.930	40
Checkers, molders' helpers, pan rackers, greasers, wrapping-room set-up men	.980	40	.880	40
Bread rackers, machine wrappers	.930	40	.830	40
Stockroom men	.880	40	.780	40
Agreement K:				
Mixers, oven operators	1.130	40	1.030	40
Blenders, scalers, dividers, molders, mixers' helpers, benchmen, oven feeders, dumpers	1.030	40	.930	40
Molders' helpers, pan rackers, greasers, wrapping room set-up men, checkers	.980	40	.880	40
Bread rackers, machine wrappers	.930	40	.830	40
Bun wrappers	.750	40	.650	40
Agreement L:				
Dough mixers	1.130	40	1.030	40
Oven operators, benchmen	1.080	40	.980	40
Flour blenders, scalers, icing mixers and cookers, depositors, dividers	1.030	40	.930	40
Pan greasers	.980	40	.880	40
Dumpers	.780	40	.680	40
Rackers, icers and wrappers, women	.750	40	.650	40
Agreement M:				
Bread department:				
Mixers, ovenmen	1.130	40	1.030	40
Benchmen	1.080	40	.980	40
Flour blenders, ingredientmen, mixers' helpers, divider and moldermen, oven feeders and dumpers	1.030	40	.930	40

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Detroit, Mich.—Continued				
Bread and cake—Machine shops—Continued				
Agreement M—Continued				
Bread department—Continued				
Pan rackers, greasers, wrapping-machine set-up men	$0.980	40	$0.880	40
Bread wrappers	.930	40	.830	40
Cake and sweet goods department:				
Ovenmen	1.080	40	.980	40
Icing mixers, cookers, scalers, depositors, doughnut-machine operators	1.030	40	.930	40
Pan greasers, checkers	.980	40	.880	40
Packers, miscellaneous	.930	40	.830	40
Decorators	.850	40	.750	40
Oven helpers and dumpers	.780	40	.680	40
Icers, wrappers	.750	40	.650	40
Cake wrappers	.750	40	.650	40
Pie and pastry:				
Agreement A:				
Cookers, piemen	1.200	40	.930	40
Mixers	1.100	40	.930	40
Pie peelers	1.050	40	.880	40
General miscellaneous helpers	.940	40	.780	40
Shop helpers, men	.890	40	.730	40
Women helpers:				
First 6 months	.730	40	.630	40
After 6 months	.780	40	.660	40
Agreement B:				
Pie bakers, sweet goods dough mixers	1.200	40	.980	40
Icing mixers	1.100	40	.930	40
Pie dough mixers	1.100	40	.860	40
Wrapping-machine set-up men	1.050	40	.860	40
Pie peelers	1.050	40	.930	40
Checkers	1.050	40	....	....
Receiving and stockroom men	.950	40	.860	40
Men helpers	.940	40	.810	40
Women helpers:				
First 3 months	.730	40	.550	40
4–6 months	.730	40	.600	40
After 6 months	.780	40	.650	40
Hebrew shops:				
First hands (1 oven), cake bakers	1.630	45	1.511	45
First hands (2 ovens)	1.667	45	1.556	45
Second hands	1.574	45	1.444	45
Polish shops:				
First hands handling 2 ovens or mixing dough	1.550	40	1.363	40
First hands, (1 oven)	1.500	40	1.313	40
Second hands	1.330	40	1.146	40
Partial dough mixers	1.405	40	1.221	40
Crackers and cookies:				
Agreement A:				
Baking department:				
Machine captains	1.130	40	1.030	40
Peelers	1.100	40	1.000	40
Sponge or sweet mixers	1.070	40	.970	40
Sponge bakers	1.030	40	.930	40
Sponge rollermen, sweet-oven men, oven firemen	1.020	40	.920	40
Sponge drawmen, assemblymen	1.000	40	.900	40
Flour dumpers	.950	40	.850	40
Ritz mixers	.940	40	.840	40
Ritz rollermen, stackers, pan cleaners and feeders, mixers' helpers	.900	40	.800	40
Icing department:				
Working assistant foremen	1.150	40	1.050	40
Head mixers	1.100	40	1.000	40
Machine operators	.750	40	.650	40
Icing packers	.730	40	.630	40
Other helpers	.720	40	.620	40
Packing department:				
Working supervisors	1.000	40	.900	40
Foreladies	.930	40	.830	40
Machine set-up men	.900	40	.800	40
Floormen, assistant foreladies	.850	40	.750	40
Working supervisors, women	.800	40	.700	40
Sponge packers	.760	40	.660	40
Head carton formers, machine operators	.750	40	.650	40

Table 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Detroit, Mich.—Continued				
Crackers and cookies—Continued				
Agreement A—Continued				
Packing department—Continued				
Sweet packers, hand carton formers, "Q" formers and stitchers, weighers and sealers, hand bundlers, cripple-packers, filling-machine operators, weighers, staplers, weight clerks, sample room girls	$0.740	40	$0.640	40
Agreement B:				
Mixers	1.100	40	1.000	40
Women employees:				
First 6 months	.600	40	.550	40
7–12 months	.650	40	.600	40
After 1 year	.700	40	.650	40
Agreement C:				
Mixers	1.290	40	1.120	40
Bakers	1.255	40	1.085	40
Depositors	1.170	40	1.010	40
Women employees:				
Packers, leaders	.880	40	.750	40
Packers	.835	40	.700	40
General utility women	.815	40	.680	40
Agreement D:				
Men employees:				
Mixers, after 1 year	.970	40	....	....
Other male employees, after 6 months	.700	40	....	....
Women employees:				
After 6 months	.630	40	.580	40
After 1 year	.700	40	.630	40
Duluth, Minn.				
Bread and cake—Hand shops:				
Agreement A:				
Foremen	1.150	48	1.014	48
Mixers, ovenmen	1.045	48	.909	48
Helpers (after 600 days)	.873	48	.736	48
Agreement B:				
Foremen	1.082	48	.945	48
Mixers, ovenmen	.977	48	.841	48
Bench hands	.932	48	.795	48
Helpers:				
First 150 days	.650	48	.514	48
Second 150 days	.695	48	.559	48
After 300 days	.768	48	.632	48
After 600 days	.805	48	.668	48
Bread and cake—Machine shops:				
Foremen	1.205	40	1.055	40
Dough mixers, ovenmen	1.090	40	.940	40
Bench hands, doughnut-machine operators	1.040	40	.890	40
Machinemen (dividers, molders), traveling-oven loaders	.975	40	.825	40
Wrapping-machine operators	.975	40	.793	40
Stockmen, receiving clerks	.940	40	.790	40
Bread panners, twisters	.910	40	.760	40
Shipping clerks (30–90 days), helpers after 300 days	.860	40	.750	40
Foreladies	.810	40	.660	40
Helpers:				
First 150 days	.730	40	.630	40
151–300 days	.780	40	.710	40
After 300 days	.860	40	.750	40
Hand wrappers and packers:				
First 100 days	.680	40	.530	40
After 100 days	.740	40	.590	40
Dishwashers	.698	40	.548	40
Shipping department:				
Foremen	1.150	40	.940	40
Shipping clerks (when only 1 in a plant)	1.000	40	.850	40
Shipping clerks:				
First 30 days	.780	40	.630	40
31–90 days	.860	40	.710	40
After 90 days	.910	40	.760	40
Pie and pastry:				
Bakers	1.000	40	.750	40
Women employees:				
First 150 days	.550	40	.400	40
After 150 days	.625	40	.475	40

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Duluth, Minn.—Continued				
Crackers and cookies:				
Men employees:				
Foremen	$1.188	40	$1.038	40
Inexperienced	.938	40	.788	40
Experienced	.988	40	.838	40
Women employees:				
Foreladies	.738	40	.588	40
Inexperienced	.638	40	.488	40
Experienced	.663	40	.513	40
El Paso, Texas				
Bread and cake—Machine shops:				
Agreement A:				
Dough mixers	.950	40	.900	40
Ovenmen	.880	40	.780	40
Dividers, scalers, machine bread wrappers	.800	40	.740	40
Oven helpers, first class	.760	40	.700	40
Molders	.660	40	.620	40
Checkers	.660	40	.570	40
Oven helpers, second class	.640	40	.620	40
Molders' helpers	.620	40	.570	40
Wrapping-machine helpers	.600	40	.570	40
Cake wrappers and hench work	.600	40	.520	40
Pan greasers	.600	40	.520	40
Box makers	.600	40	.500	40
Agreement B:				
Dough mixers	1.080	40	....	....
Ovenmen	1.010	40	....	....
Dividers	.930	40	....	....
Ovenmen's helpers	.890	40	....	....
Molders	.790	40	....	....
Bread rackers	.780	40	....	....
Bread racker's helpers	.730	40	....	....
Wrapping department:				
Wrapping-machine operators	.930	40	....	....
Wrappers, hand	.730	40	....	....
Machine wrappers' helpers	.730	40	....	....
Shipping department:				
Route checkers	1.010	40	....	....
Shipping checkers	1.010	40	....	....
Shipping helpers	.730	40	....	....
Grand Rapids, Mich.				
Bread and cake—Machine shops:				
Foremen, mixers, dividermen, head ovenmen	1.100	40	.840	40
Oven dumpers, and loaders	1.000	40	.780	40
Benchmen, machine wrappers, molders	.950	40	.750	40
Pan rackers	.900	40	.670	40
Ingredientmen	.850	40	.640	40
Bread rackers, hand wrappers, mixers' helpers, pan greasers, general helpers	.850	40	.620	40
Houston, Texas				
Bread and cake—Hand shops:				
Foremen	.978	46	.938	48
Dough mixers and ovenmen	.826	46	.792	48
Benchmen	.783	46	.750	48
Bread—Semimachine shops:				
Foremen	1.125	40	1.023	44
Dough mixers, ovenmen or spongers	.950	40	.864	44
Benchmen, machinemen	.900	40	.818	44
Counters, checkers	.875	40	.795	44
Oven dumpers and loaders	.825	40	.750	44
Wrappers	.775	40	.705	44
Pan and bread rackers	.763	40	.693	44
Weigh-up men	.700	40	.636	44

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Houston, Texas—Continued				
Bread and cake—Machine shops:				
Foremen	$1.125	40	$1.071	42
Dough mixers and ovenmen	.950	40	.905	42
Benchmen and machinemen	.900	40	.857	42
Counters, checkers	.875	40	.833	42
Oven dumpers or loaders	.825	40	.786	42
Wrappers	.775	40	.738	42
Pan and bread rackers	.763	40	.726	42
Weigh-up men	.700	40	.667	42
Indianapolis, Ind.				
Bread—Hand shops:				
Foremen and first hands	1.120	44	.850	44
Second hands	1.070	44	.800	44
Helpers	.810	44	.700	44
Bread and cake—Machine shops:				
Agreement A:				
Foremen and first hands	1.120	44	.850	44
Second hands	1.070	44	.800	44
Helpers	.810	44	.700	44
Agreement B:				
Bread department:				
Dough mixers, oven operators	1.120	40	.930	40
Ovenmen (rolls)	1.070	40	.930	40
Machine and bench hands	1.070	40	.880	40
Foreladies	1.000	40	.780	40
Helpers	.810	40	.750	40
Icers and wrappers	.775	40	.620	40
Crew supervisors, order fillers	.940	40	.750	40
Service helpers:				
Men	.810	40	.650	40
Women	.810	40	.600	40
Stockroom helpers	.810	40	.700	40
Cake department:				
Mixers	1.120	40	.930	40
Bench and machine hands	1.070	40	.880	40
Oven operators	1.070	40	.930	40
Foreladies	1.000	40	.780	40
Helpers	.810	40	.750	40
Cake icers	.775	40	.620	40
Agreement C:				
Bread department:				
Mixers	.940	40	.940	40
Oven feeders and dumpers, bench and machine hands, head wrappers and slicers	.890	40	.890	40
Assistant head checkers	.840	40	.840	40
Wrappers and sackers	.740	40	.740	40
Bake-shop helpers	.740	40	.740	40
Flour dumpers	.690	40	.690	40
Cake department:				
Head mixers	1.040	40	1.040	40
Mixers	.940	40	.940	40
Bench hands, oven hands	.890	40	.890	40
Doughnut-machine operators	.790	40	.790	40
Pan boys and helpers	.740	40	.740	40
Cake wrappers and icers	.615	40	.615	40
Agreement D:				
Bread department:				
Dough mixers	1.120	40	.930	40
Oven operators, bread shipping supervisors	1.070	40	.930	40
Machine and bench hands	1.070	40	.880	40
Crew supervisors	1.000	40	.750	40
Bread machine wrapper	.940	40	.900	40
Bread checkers	.940	40	.830	40
Order fillers	.940	40	.750	40
Helpers	.810	40	.750	40
Stockroom helpers	.810	40	.700	40
Cleaners and panroom helpers	.810	40	.650	40
Cake department:				
Cake depositor operators	1.070	40	.900	40
Foreladies, cake decorators	.940	40	.780	40
Cake wrappers	.940	40	.880	40
Cake helpers	.810	40	.750	40
Cake icers	.775	40	.620	40

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued.*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Indianapolis, Ind.—Continued				
Bread and cake—Machine shops—Continued				
Agreement E:				
Mixers	$1.120	40	$0.930	40
Oven operators	1.070	40	.930	40
Machine and bench hands, stockroom supervisors	1.070	40	.880	40
Bread shipping supervisors	1.070	40	.930	40
Crew supervisors	1.000	40	.750	40
Cleaners and panroom helpers	.810	40	.650	40
Stockroom helpers	.810	40	.700	40
Agreement F:				
Dough mixers	1.120	40	.930	40
Oven operators	1.070	40	.930	40
Machine and bench hands	1.070	40	.880	40
Bread checkers	.940	40	.830	40
Helpers and order fillers	.810	40	.750	40
Bun wrappers, cleaners and panroom helpers	.810	40	.650	40
Stockroom helpers	.810	40	.700	40
Agreement G:				
Dough mixers	1.120	40	.930	40
Oven operators	1.070	40	.930	40
Machine bench hands	1.070	40	.880	40
Crew supervisors	1.000	40	.750	40
Bread checkers	.940	40	.830	40
Helpers, order fillers	.810	40	.750	40
Bun slicers, cleaners and panroom helpers	.810	40	.650	40
Bun wrappers, bread carton fillers	.810	40	.650	40
Stockroom helpers	.810	40	.700	40
Agreement H:				
Bread department:				
Scalers	1.050	40	.930	40
Mixers, ovenmen, dividermen	1.000	40	.880	40
Molder-machinemen	.970	40	.850	40
All other helpers	.875	40	.755	40
Shipping-room employees	.845	40	.725	40
Cake department:				
Ingredient scalers, mixers, ovenmen, depositormen, wrapping-machine operators, icing mixers	.970	40	.850	40
Depositors' helpers	.895	40	.775	40
Dumpers	.890	40	.770	40
Helpers, shipping-room employees	.845	40	.725	40
Women employees:				
First 4 months	.620	40	.500	40
5–8 months	.660	40	.540	40
9–12 months	.700	40	.580	40
After 1 year	.740	40	.620	40
Pie and pastry:				
Ingredient scalers, machine operators, pie filling cookers	1.070	40	.850	40
Pie-oven operators	1.070	40	.800	40
Foreladies	1.000	40	.780	40
Rollers, fillers, toppers, trimmers	.810	40	.620	40
Jacksonville, Fla.				
Bread and cake—Machine shops:				
Oven operators, mixers, doughnut-machine operators	.950	40	....	....
Dividers, depositors, benchmen wrapping-machine operators	.900	40	....	....
Checkers, oven molders, roll-machine operators	.850	40	....	....
Benchmen (second class) ingredient scalers, icers, and decorators, stock clerks	.800	40	....	....
Oven loaders and dumpers, shipping selectors	.750	40	....	....
Cake icers, roll panners, flour dumpers, rackers, pan greasers, twisters, molders' helpers	.700	40	....	....
Bakers' helpers, doughnut packers, cake cutters and packagers	.650	40	....	....
Kansas City, Mo.				
Bread and cake—Machine shops:				
Foremen	1.413	40	1.222	40
Ovenmen, drawers, mixers, spongers	1.297	40	1.211	40
Bench hands	1.214	40	1.050	40
Foreladies	.875	40	.675	40
Wrappers, ingredientmen, icing makers, head checkers	.850	40	.650	40
Men helpers	.750	40	.575	40
Women helpers	.675	40	.500	40

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Kansas City, Mo.—Continued				
Crackers and cookies:				
Agreement A:				
Head mixers	$1.250	40	$1.100	40
Head icing-room men	1.110	40	.980	40
Head machinemen	1.100	40	.970	40
Ovenmen	.990	40	.875	40
Rollermen	.940	40	.830	40
Mixers' helpers	.895	40	.790	40
Sandwich-machine operators, wrapping-machine operators	.790	40	.700	40
Cracker packers	.745	40	.660	40
Women, sweet-work wrappers and bundlers	.700	40	.620	40
Cooky packers, icing-machine operators	.665	40	.590	40
Agreement B:				
Machine captains, head mixers	1.040	40	.965	40
Mixers	1.000	40	.925	40
Peelers	.960	40	.885	40
Icing mixers, paper stop men	.940	40	.865	40
Bakers	.920	40	.845	40
Rollermen	.905	40	.830	40
Drawers, sponge and sweet	.890	40	.815	40
Cone bakers, machine operators	.890	40	.855	40
Mixers' helpers, receiving clerks	.870	40	.795	40
Cone mixers	.840	40	.795	40
Flour dumpers	.840	40	.785	40
Dough feeders	.840	40	.765	40
Sack binders, car loaders, machine set-up men	.820	40	.735	40
Working supervisors, stackers	.790	40	.715	40
Graham-pan feeders	.770	40	.760	40
Pan cleaners, pan dumpers	.770	40	.695	40
Conveyormen	.740	40	.695	40
Cone packers	.740	40	.665	40
Sponge packers	.715	40	.640	40
Packers, sealers, weighers, sweet packers, women icing-machine operators	.695	40	.620	40
Women helpers	.670	40	.595	40
Little Rock, Ark.				
Bread and cake—Machine shops:				
Agreement A:				
Bread department:				
Foremen	1.110	40	.960	40
Mixers, ovenmen, head checkers	1.010	40	.860	40
Dividers	.950	40	.800	40
Molders, benchmen, machine operators	.900	40	.750	40
Wrapping-machine operators, stockroom clerks, assistant checkers	.850	40	.700	40
Helpers:				
First 6 months	.650	40	.500	40
7–12 months	.700	40	.550	40
After 12 months	.750	40	.600	40
Ingredient scalers, cake	.850	40	.700	40
Agreement B:				
Bread department:				
Foremen	1.110	40	.960	40
Mixers, ovenmen, head checkers	1.010	40	.860	40
Dividers	.950	40	.800	40
Molders, benchmen, machine operators	.900	40	.750	40
Wrapping-machine operators, stockroom clerks, assistant checkers	.850	40	.700	40
Assistant wrapping-machine operators	.800	40	.650	40
Helpers:				
First 6 months	.650	40	.500	40
7–12 months	.700	40	.550	40
After 12 months	.750	40	.600	40
Agreement C:				
Bread department:				
Foremen	1.110	40	.960	40
Mixers, ovenmen, head checkers	1.010	40	.860	40
Dividers	.950	40	.800	40
Benchmen, molders	.900	40	.750	40
Stock clerks, assistant checkers, wrapping-machine operators	.850	40	.700	40

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Little Rock, Ark.—Continued				
Bread and cake—Machine shops—Continued				
Helpers:				
First 6 months	$0.650	40	$0.500	40
7–12 months	.700	40	.550	40
After 12 months	.750	40	.600	40
Cake:				
Foremen	1.010	40	.820	40
Mixers	.920	40	.770	40
Ovenmen	.880	40	.730	40
Scalers, ingredientmen	.850	40	.700	40
Foreladies	.780	40	.600	40
Icers, wrappers, pan girls, packers, checkers and boxers:				
First month	.550	40	.400	40
2–3 months	.600	40	.450	40
After 3 months	.650	40	.500	40
Los Angeles, Calif.				
Bread and cake—Hand and semimachine shops:				
Agreement A:				
Working foremen	1.225	48	1.225	48
Mixers, ovenmen	1.150	48	1.150	48
Benchmen	1.050	48	1.050	48
Helpers	.900	48	.900	48
Agreement B:				
Foremen	1.225	44	1.125	48
Mixers, ovenmen under a foreman	1.150	44	1.050	48
Benchmen	1.050	44	.950	48
Helpers:				
First year	.900	44	.800	48
Second year	1.000	44	.900	48
Machine operators, hand wrappers, checkers, shipping clerks	.950	44	.850	48
Helpers, shipping-room cleaners	.825	44	.725	48
Agreement C:				
Foremen	1.575	40	1.225	44
Ovenmen, dough mixers	1.475	40	1.150	44
Benchmen	1.345	40	1.050	44
Bread—Machine shops:				
Foremen	1.575	40	1.225	40
Dough mixers, ovenmen, doughnut men	1.475	40	1.150	40
Shipping foremen	1.375	40	1.050	40
Machine and bench hands	1.345	40	1.050	40
Twisters, molders, dough mixers' helpers, panners, oven dumpers	1.345	40	1.000	40
Oven feeders, ingredientmen	1.345	40	.950	40
Machinemen, shipping clerks, receiving clerks	1.225	40	.950	40
Machine and bench hand helpers, hand wrappers, flour dumpers, bread rackers	1.075	40	.900	40
Pan washers, greasers	1.075	40	.775	40
Conveyormen, bun slicers, packers	1.025	40	.825	40
Cake—Machine shops:				
Foremen	1.575	40	1.225	40
Ovenmen, mixers, icing mixers	1.475	40	1.150	40
Shipping-room foremen	1.375	40	1.000	40
Bench hands	1.345	40	1.050	40
Machine operators, depositors	1.235	40	1.050	40
Ingredient scalers	1.235	40	.950	40
Receiving clerks	1.225	40	.950	40
Checkers	1.150	40	.900	40
Oven helpers	1.075	40	.855	40
Auxiliary workers	1.050	40	.800	40
Packers and helpers	1.000	40	.775	40
Pan washers, unskilled help	.885	40	.725	40
Women employees:				
Foreladies	1.055	40	.850	40
Machine wrappers	.855	40	.700	40
Icers	.855	40	.675	40
Experienced help	.805	40	.650	40
Inexperienced help	.675	40	.550	40
Pie and pastry:				
Foremen	1.225	40	1.075	40
Head ovenmen	1.150	40	.968	40
Head cream cooks, fruit cooks	1.150	40	.914	40

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Los Angeles, Calif.—Continued				
Pie and pastry—Continued				
Cake mixers, dough mixers	$1.150	40	$0.817	40
Head checkers	1.050	40	.751	40
Second ovenmen	1.000	40	.817	40
Second cream cooks	1.000	40	.755	40
Scalers	1.000	40	.698	40
Rollermen	1.000	40	.677	40
Toppers	.900	40	.719	40
Topping baggers	.900	40	.677	40
Foreladies	.850	40	.590	40
Helpers	.800	40	.645	40
Order fillers	.800	40	.589	40
Packers and wrappers	.750	40	.588	40
Wrapping-machine operators, female	.750	40	.540	40
Wrappers	.750	40	.520	40
Beginners	.750	40	.500	40
Pan washers	.725	40	.589	40
Hebrew bread:				
First hands	1.810	45	1.610	45
Second hands	1.657	45	1.457	45
Crackers and cookies:				
Hand and semimachine shops:				
Foremen	1.170	40	1.050	40
Assistant foremen, traveling-oven feeders and take-out men	1.120	40	1.000	40
Machinemen, mixers	1.070	40	.950	40
Mixers' helpers	.970	40	.850	40
Reel-ovenmen	.920	40	.800	40
Cooky-machine operators	.845	40	.725	40
Machine feeders, and take-out men	.820	40	.700	40
Miscellaneous machine help	.770	0	.650	40
Floor ladies	.740	0	.640	40
Miscellaneous women help:				
1–3 months	.600	40	.500	40
After 4 months	.630	40	.530	40
Machine shops:				
Agreement A:				
Head mixers, machinemen	1.263	40	1.093	40
Peelers, ovenmen, reliefmen	1.213	40	1.043	40
Rollermen	1.148	40	.978	40
Sponge oven mixers	1.115	40	.943	40
Wrapping-machine men, icing mixers, wafer mixers	1.100	40	.930	40
Sweet-oven helpers, sweet-dough feeders, pangreasers, feeders	1.050	40	.880	40
Packing department supervisors	1.030	40	.860	40
Stackers, receivers, shippers	1.000	40	.830	40
Oven and dough feeders' helpers	.975	40	.805	40
General helpers	.913	40	.745	40
Women employees:				
Supervisors	.860	40	.660	40
Spongers, stackers, packers	.775	40	.625	40
Icing and sugar wafer girls, sugar-wafer oven girls and spreaders, weighers, carton and caddy formers, wrappers, bundlers, cellobag machine operators, sample and relief girls	.775	40	....	....
Sweet packers	.738	40	.588	40
Agreement B:				
Machinemen, head dough mixers	1.263	40	1.003	40
Ovenmen, reliefmen	1.213	40	.953	40
Rollermen	1.148	40	.888	40
Mixers' helpers	1.115	40	.888	40
Sheeters	1.070	40	.920	40
Sponge-machine feeders	1.070	40	.725	40
Agreement C:				
Head mixers, machinemen	1.263	40	1.003	40
Peelers, ovenmen, reliefmen	1.213	40	.953	40
Rollermen	1.148	40	.888	40
Mixers' helpers, sponge-oven helpers	1.115	40	.888	40
Sweet dough feeders, pan greasers and feeders	1.050	40	.800	40
Traveling-oven feeders	1.050	40	.725	40

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946 Rate per hour	July 1, 1946 Hours per week	July 1, 1945 Rate per hour	July 1, 1945 Hours per week
Louisville, Ky.				
Bread and cake—Machine shops:				
Agreement A:				
First mixers	$1.025	40	....	....
Ovenmen, dumpers, feeders, first slicers, wrapping-machine operators, first hands cake crew, divider operators, molders, roll benchmen, utilitymen	.975	40	....	....
Cake second mixers, head packers and checkers	.950	40	....	....
Cake benchmen	.925	40	....	....
Stockmen, packers and checkers	.900	40	....	....
Bread panners, twisters, setters	.850	40	....	....
Pan-room men, rackers, feeders, men helpers	.805	40	....	....
Foreladies	.750	40	....	....
Women icers, wrappers and finishers	.700	40	....	....
Agreement B:				
Mixers	1.030	40	....	....
Dividers, reliefmen	.970	40	....	....
Mixers' helpers, molders, oven feeders and dumpers, wrapping-machine operators	.950	40	....	....
Pan spotters, machine pan-greasers, bread rackers	.870	40	....	....
Wrapping-machine helpers, general helpers	.850	40	....	....
Packers, order fillers	.770	40	....	....
Flour blenders	.700	40	....	....
Agreement C:				
Mixers	1.025	40	....	....
Dividers, molders, depositors, oven feeders and dumpers, doughnut-machine operators, wrapping-machine operators	.975	40	....	....
Stockkeepers	.900	40	....	....
Shippers, order fillers	.875	40	....	....
General helpers	.800	40	....	....
Agreement D:				
Head mixers	1.080	40	$0.905	40
Mixers, ovenmen	1.060	40	.890	40
Machinemen, head checkers, head wrappers and slicers (machine)	1.000	40	.830	40
Dumpers	.970	40	.800	40
Wrapping and slicing machine men	.890	40	.720	40
Pan rackers, greasers	.890	40	.555	40
Mixers' helpers	.890	40	....	....
Flour blenders, general help	.850	40	.720	40
Bread rackers	.850	40	.555	40
Agreement E:				
Dough mixers	1.112	40	.938	40
Batchmen, proof-box oven operators	1.100	40	.925	40
Utilitymen	1.075	40	.900	40
Head packers and checkers	1.025	40	.850	40
Dividers	1.000	40	.825	40
Ovenmen	.975	40	.775	40
Roll-machine helpers, panners, bread wrapping-machine operators, molders, reliefmen	.950	40	.775	40
Pan greasers	.950	40	.700	40
Pan rackers	.950	40	.675	40
Flour blenders, wrapping-machine operators, rolls	.900	40	.725	40
Wrapping-machine operators' helpers, bread	.875	40	.725	40
Packers' helpers	.875	40	.700	40
Wrapping-machine helpers and bread rackers	.850	40	.700	40
Bakery helpers	.850	40	.675	40
Mixers' helpers	.850	40	....	....
Crackers and cookies:				
Mixing department:				
Dough mixers	.990	40	.920	40
Sponge setters	.830	40	.760	40
Mixers' helpers	.750	40	.680	40
Unskilled labor	.700	40	.650	40
Baking department:				
Peelers, ovenmen	.935	40	.865	40
Machinemen, ovenmen's helpers	.830	40	.760	40
Semiskilled labor	.750	40	.550	40
Unskilled labor	.700	40	.550	40
Icing department:				
Enrobermen	.850	40	.780	40
Sirup makers	.800	40	.730	40
Filler makers	.750	40	.680	40
Marshmallow-machine operators, sandwich-machine operators, marshmallow makers	.680	40	....	....
Packers, feeders, marshmallow makers' helpers	.630	40	....	....

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*‡

City and classification	July 1, 1 46		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Madison, Wis.				
Bread and cake—Hand shops:				
Foremen	$1.270	48	....	....
Mixers, ovenmen	1.160	48	....	....
Bench hands	1.100	48	....	....
Women icers	.650	48	....	....
Helpers	.583	48	....	....
Bread and cake—Machine shops:				
Agreement A:				
Foremen	1.443	40	....	....
Ovenmen, dough and sponge mixers	1.113	40	....	....
Machinemen	1.084	40	....	....
Bench hands	1.051	40	....	....
Helpers	.903	40	....	....
Checkers, packers, stockroom employees	.869	40	....	....
Slicing-and wrapping-machine operators	.840	40	....	....
Women wrappers, slicers	.581	40	....	....
Agreement B:				
Mixers	1.100	40	....	....
Molders, dividers, doughnut-machine operators, oven feeders, dumpers, shipping clerks	1.050	40	....	....
Slicing-machine operators	1.000	40	....	....
Shippers, order fillers, packers	.950	40	....	....
Helpers	.850	40	....	....
Manchester, N. H.				
Bread and pastry—Hand shops:				
Foremen, mixers	.938	48	$0.938	48
Second hands	.875	48	.813	48
Bench hands	.833	48	.729	48
Memphis, Tenn.				
Bread only—Combination hand and machine shops:				
Foremen	1.368	44	....	....
Ovenmen	1.050	44	.888	44
Mixers and spongers	1.050	44	.933	44
Dividermen	.933	44	.805	44
Machinemen	.875	44	.747	44
Helpers:				
First 3 months	.633	44	.550	44
After 3 months	.748	44	.650	44
Bread and cake—Semimachine shops:				
Mixers, spongers	1.143	44	1.043	44
Ovenmen (bread)	1.050	44	.888	44
Dividermen	.963	44	.863	44
Bench hands	.963	44	.862	44
Ovenmen (cake)	.950	44	.850	44
Machinemen	.875	44	.747	44
Helpers:				
First 3 months	.633	44	.550	44
After 3 months	.748	44	.650	44
Bread and cake—Machine shops:				
Bread only:				
Foremen	1.345	40	1.208	40
Mixers, spongers, ovenmen	1.090	40	.950	40
Ingredient scalers	1.090	40	.925	40
Dividermen	.990	40	.850	40
Machinemen, pan dumpers, wrapping-machine operators	.940	40	.800	40
Checkers	.915	40	.781	40
Bread rackers	.840	40	....	....
Wrappers' and packers' helpers	.750	40	.650	40
Helpers:				
First 3 months	.650	40	.550	40
4–9 months	.700	40	.600	40
After 9 months	.750	40	.650	40
Flour dumpers	.625	40	.525	40
Cake only:				
Agreement A:				
Foremen	1.195	40	....	....
Mixers, dough and icing	1.050	40	.925	40
Ovenmen	1.000	40	.800	40
Ingredient scalers	.900	40	.725	40

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Memphis, Tenn.—Continued				
Bread and cake—Machine shops—Continued				
Cake only—Continued				
Agreement A—Continued				
Checkers	$0.870	40	$0.725	40
Scaling-machine operators	.850	40	.725	40
Foreladies	.840	40	.725	40
Head icers	.790	40	.650	40
Scaling-machine helpers	.750	40	.650	40
Helpers, men:				
First 3 months	.650	40	.550	40
4–9 months	.700	40	.600	40
After 9 months	.750	40	.650	40
Wrapping-machine operators	.740	40	.600	40
Helpers, women:				
First 3 months	.570	40	.470	40
4–9 months	.620	40	.520	40
After 9 months	.675	40	.575	40
Agreement B:				
Mixers, dough and icing	1.050	40	....	....
Ovenmen	1.000	40	....	....
Ingredient scalers	.900	40	....	....
Checkers	.870	40	....	....
Scaling-machine operators	.850	40	....	....
Foreladies	.840	40	....	....
Head icers	.790	40	....	....
Scaling-machine helpers	.750	40	....	....
Helpers, men:				
First 3 months	.650	40	....	....
4–9 months	.700	40	....	....
After 9 months	.750	40	....	....
Wrapping machine operators	.740	40	....	....
Helpers, women:				
First 3 months	.570	40	....	....
4–9 months	.620	40	....	....
After 9 months	.675	40	....	....
Agreement C:				
Cake mixers	1.050	40	.925	40
Icing mixers	1.050	40	.780	40
Ovenmen	1.000	40	.875	40
Ingredient scalers	.900	40	.730	40
Shipping clerks	.870	40	.650	40
Scaling-machine operators	.850	40	.680	40
Scaling-machine helpers	.750	40	.650	40
Helpers, men:				
First 3 months	.650	40	.550	40
4–9 months	.700	40	.600	40
After 9 months	.750	40	.650	40
Helpers, women:				
First 3 months	.570	40	.480	40
4–9 months	.620	40	.520	40
After 9 months	.675	40	.560	40
rackers and cookies:				
Sweet—Baking department:				
Head mixers	1.095	40	1.020	40
Machine captains	1.035	40	.960	40
Bakers	.925	40	.850	40
Rollermen	.925	40	.850	40
Ovenmen	.850	40	.775	40
Pan cleaners and feeders	.795	40	.720	40
Icing department:				
Mixers	.945	40	.870	40
Machine operators	.845	40	.770	40
Women employees:				
Supervisors	.765	40	.690	40
Helpers	.645	40	.570	40
Sponge—Baking department:				
Head mixers	1.095	40	1.020	40
Machine captains	1.035	40	.960	40
Mixers	.995	40	.920	40
Assistant foremen	.975	40	.900	40
Bakers	.965	40	.890	40
Peelers	.965	40	.890	40
Rollermen	.925	40	.850	40
Drawmen	.895	40	.820	40
Assemblymen	.845	40	.770	40
Mixers' assistants and helpers	.825	40	.750	40

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Memphis, Tenn.—Continued.				
Crackers and cookies—Continued				
Sponge—Baking department—Continued				
Women employees:				
Foreladies	$0.765	40	$0.690	40
Sponge packers	.665	40	.590	40
Cone department:				
Bakers	.895	40	.820	40
Mixers	.845	40	.770	40
Assistant mixers and hakers	.775	40	.700	40
Packers	.725	40	.650	40
Milwaukee, Wis.				
Bread and cake—Machine shops:				
Agreement A:				
Mixers	1.050	40	.980	40
Ovenmen	1.050	40	.900	40
Doughnut-machine operators	1.050	40	.950	40
Depositor operators	.950	40	.800	40
Dividermen	.950	40	.900	40
Moldermen	.900	40	.875	40
Bench hands, wrapping-machine operators	.900	40	.800	40
Shipping-room workers	.850	40	.750	40
Miscellaneous helpers	.800	40	.700	40
Women miscellaneous helpers	.650	40	.550	40
Agreement B:				
Working foremen	1.350	40	1.140	40
Mixers	1.100	40	.940	40
Dividermen, doughnut-machine operators	1.050	40	.890	40
Ovenmen, molders	1.000	40	.853	40
Wrapping-machine operators	.950	40	.790	40
Shipping-room workers	.900	40	.750	40
Miscellaneous helpers	.900	40	.730	40
Women miscellaneous helpers	.700	40	.565	40
Agreement C:				
Working foremen	1.050	40	.925	40
Mixers	1.000	40	.900	40
Ovenmen	1.000	40	.875	40
Dividermen	.950	40	.850	40
Moldermen, bench hands	.950	40	.825	40
Stockroom workers	.875	40	.750	40
Miscellaneous helpers	.825	40	.700	40
Junior helpers	.650	40	....	....
Women miscellaneous helpers	.550	40	.550	40
Agreement D:				
Working foremen	1.100	40	1.000	40
Mixers	1.000	40	.890	40
Ovenmen	1.000	40	.910	40
Dividermen	.950	40	.830	40
Bench hands, doughnut-machine operators	.950	40	.825	40
Moldermen, wrapping-machine operators	.950	40	.800	40
Stockroom workers	.950	40	.800	40
Miscellaneous helpers	.825	40	.750	40
Women miscellaneous helpers	.550	40	.550	40
Agreement E:				
Foremen	1.050	40	1.050	40
Mixers, ovenmen	1.000	40	.875	40
Dividermen, henchmen, doughnut-machine operators	.950	40	.825	40
Moldermen	.950	40	.775	40
Miscellaneous helpers	.825	40	.700	40
Women miscellaneous helpers	.550	40	.500	40
Agreement F:				
Mixers, ovenmen	1.000	40	.800	40
Dividermen, molders, benchmen	.950	40	.750	40
Doughnut-machine operators	.950	40	.800	40
Miscellaneous helpers	.650	40	.650	40
Agreement G:				
Mixers, hread; ovenmen	1.000	40	.900	40
Mixers, cake	1.000	40	.875	40
Bench hands, doughnut-machine operators	.950	40	.820	40
Dividermen, wrapping-machine operators	.950	40	.800	40
Stockroom and shipping-room workers	.875	40	.750	40
Miscellaneous helpers	.825	40	.700	40
Women miscellaneous helpers	.650	40	.550	40

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Milwaukee, Wis.—Continued				
Bread and cake—Machine shops—Continued				
Agreement H:				
Mixers, bread	$1.000	40	$0.900	40
Mixers, cake	1.000	40	.825	40
Ovenmen	1.000	40	.800	40
Depositor operators	.950	40	.800	40
Bench hands	.950	40	.770	40
Wrapping-machine operators	.950	40	.750	40
Shipping-room workers	.875	40	.750	40
Women helpers	.550	40	.550	40
Bread only—Machine shops:				
Mixers	1.000	40	.920	40
Ovenmen	1.000	40	.875	40
Dividermen	.950	40	.830	40
Moldermen	.950	40	.770	40
Wrapping-machine operators	.950	40	.750	40
Stockroom workers	.875	40	.720	40
Miscellaneous helpers	.825	40	.700	40
Cake only—Machine shops:				
Foremen	1.100	40	.980	40
Mixers, ovenmen	1.000	40	.900	40
Depositor operators	.950	40	.800	40
Miscellaneous helpers	.825	40	.600	40
Women miscellaneous helpers	.550	40	.500	40
Crackers and cookies:				
Agreement A:				
Sponge department:				
Ovenmen	.970	40	.870	40
Mixers (peelers-in), rollermen (peelers-out)	.950	40	.850	40
Mixers' helpers	.820	40	.720	40
Packers	.640	40	.570	40
Sweet department:				
Mixers	.950	40	.850	40
Machinemen, ovenmen	.900	40	.800	40
Mixers' helpers	.820	40	.720	40
Ovenmen's helpers	.750	40	.650	40
Pan feeders, greasers, general helpers	.670	40	.570	40
Packers	.610	40	.540	40
Icing room:				
Machinemen	.800	40	.700	40
Packers	.610	40	.540	40
Feeders and sackers	.560	40	.480	40
Packing department:				
Floormen	.800	40	.700	40
Floormen's helpers	.695	40	.595	40
Scalers	.610	40	.540	40
Women employees	.560	40	.480	40
Wrapping and cellophane department:				
Women employees:				
Machine girls, packers	.610	40	.540	40
Bundlers, carton-caddy, cases	.590	40	.520	40
Feeders	.560	40	.480	40
General helpers	.550	40	.430	40
Agreement B:				
Machine captains	1.020	40	.970	40
Head sweet mixers	.950	40	.900	40
Peelers	.940	40	.890	40
Head sponge mixers	.920	40	.870	40
Mixers' helpers, bakers, rollermen, icing mixers	.900	40	.850	40
Drawmen	.880	40	.830	40
Ovenmen, assembly clerks	.850	40	.800	40
Pan cleaners, assemblymen	.800	40	.750	40
Stackers, conveyormen	.750	40	.700	40
Women employees:				
Working supervisors	.650	40	.600	40
Sponge packers, machine operators	.630	40	.580	40
Sweet packers, bundlers, formers, stitchers, supply girls	.600	40	.550	40
ebrew shops—Bread and cake:				
Cake bakers, bread workers	1.110	45	1.037	45
Dough mixers	1.040	45	.932	45

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Minneapolis, Minn.				
Bread and cake—Hand shops:				
Foremen	$1.133	45	$0.970	45
Mixers, ovenmen	1.022	45	.824	45
Bench hands	1.022	45	.802	45
Wrapping-machine operators	.800	45	....	....
Bread and cake—Machine shops:				
Foremen	1.275	40	1.095	40
Sponge and dough mixers, oven operators and ovenmen	1.125	40	.945	40
Icing and batter mixers, cake ovenmen	1.100	40	.900	40
Dividers, molders, bench hands, bun-machine operators	1.075	40	.895	40
Traveling-oven feeders and dumpers, dough-room men, slicing and wrapping-machine operators	1.015	40	.835	40
Cake ingredient scalers, doughnut-machine operators, depositors, drop-machine operators, fruit cookers, kettle fryers	1.000	40	.800	40
Foreladies, twisters, dough panners, oven and bench helpers	.925	40	.745	40
Icing-machine operators	.900	40	....	....
Helpers:				
First 8 weeks	.825	40	.625	40
After 8 weeks	.900	40	.720	40
Women employees:				
Finishers, wrappers, packers:				
First 8 weeks	.680	40	.500	40
After 8 weeks	.740	40	.560	40
Hebrew bakeries—Hand shops:				
Foremen, all-round cakemen	1.189	45	.997	45
Bench hands, machinemen	1.011	45	.819	45
Hebrew bakeries—Machine shops:				
Foremen, all-round cakemen	1.338	40	1.121	40
General cakemen, mixers, ovenmen	1.188	40	.971	40
Bench hands, machinemen	1.138	40	.921	40
Helpers:				
First 6 months	.738	40	....	......
7–12 months	.788	40	....	......
After 1 year	.838	40	....	......
1 to 1½ years	.888	40	....	......
After 2 years	.938	40	....	......
Crackers and cookies:				
Agreement A:				
Baking department:				
Sponge mixers	.895	40	.845	40
Senior sweet mixers	.880	40	.830	40
Sweet mixers	.855	40	.805	40
Assembly sweet mixers	.815	40	.765	40
Sirup mixers	.795	40	.745	40
Assistant assembly sweet mixers	.775	40	.725	40
Sponge department:				
Ovenmen	.970	40	.920	40
Peelers	.950	40	.900	40
Rollermen, using paste	.885	40	.835	40
Lead ovenmen	.830	40	.780	40
Take-out men	.800	40	.750	40
Stackers	.775	40	.725	40
Sweet department:				
Oven firemen	.895	40	.845	40
Ovenmen	.855	40	.805	40
Ovenmen's helpers and relief	.800	40	.750	40
Panmen, hand	.775	40	.725	40
Icing department:				
Mixers, machinemen	.855	40	.805	40
Machinemen's helpers	.775	40	.725	40
Floormen	.715	40	.665	40
Checker girls	.685	40	.585	40
Packers (chill room)	.655	40	.585	40
Packers	.635	40	.585	40
Enrober operators	.605	40	.505	40
Weighers and baggers (chill room)	.575	40	.505	40
Miscellaneous girls	.555	40	.505	40
Packing department:				
Wrapping-machine men	.830	40	.780	40
Case sealers	.765	40	.715	40
Floormen	.715	40	.665	40
Sponge packers, checkers and relief, women	.685	40	.615	40
Graham packers	.665	40	.615	40
Sweet packers	.635	40	.585	40
Carton formers, caddy stitchers, women	.595	40	.545	40
Bundlers, junior caddy stitchers women	.555	40	.505	40

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Minneapolis, Minn.—Continued				
Crackers and cookies—Continued				
Agreement B:				
Baking department:				
Machine captains	$0.975	40	$0.900	40
Sponge and sweet mixers	.945	40	.870	40
Peelers	.925	40	.850	40
Rollermen, sweet bakers	.875	40	.800	40
Drawmen, oven firemen	.855	40	.780	40
Sweet-ovenmen	.825	40	.750	40
Sweet mixers' helpers	.800	40	.725	40
Flour dumpers, stackers, pan cleaners and feeders	.775	40	.700	40
Dough feeders, conveyormen	.755	40	.680	40
Icing department:				
Mixers	.855	40	.780	40
Floormen	.725	40	.650	40
Women employees:				
Working supervisors	.725	40	.650	40
Other help, after 1 year	.615	40	.540	40
Packing department:				
Machine set-up men	.755	40	.680	40
Floormen, foreladies	.725	40	.650	40
Sponge packers, after 1 year	.665	40	.590	40
Sweet packers, after 1 year	.635	40	.560	40
Sample room packers, bundlers, machine operators, scalers and weighers, closers, carton formers, stitchers	.615	40	.540	40
Cellophane-bag girls	.585	40	.510	40
Moline, Ill.				
See Rock Island (Ill.) District				
Nashville, Tenn.				
Bread and cake:				
Mixers, ovenmen	.888	40	.780	40
Bench and machinemen	.780	40	.680	40
Wrapping-machine operators	.750	40	.650	40
Oven helpers and dumpers, checkers	.700	40	.600	40
Wrapping-machine operators' helpers	.650	40	.550	40
Helpers:				
First 3 months	.600	40	.500	40
After 3 months	.650	40	.550	40
Loaders and packers	.600	40	.500	40
Roll wrappers, women:				
First 3 months	.520	40	.420	40
3–6 months	.550	40	.450	40
After 6 months	.570	40	.470	40
Crackers and cookies:				
Machinemen	.750	40	.750	40
Sponge mixers, ovenmen, peelers-in	.725	40	.725	40
Shipping clerks	.720	40	.720	40
Sweet mixers	.695	40	.695	40
Rollermen, peelers-out, panmen	.675	40	.675	40
Enrobermen	.670	40	.670	40
Pan catchers and greasers	.650	40	.650	40
Mixers' helpers, sealers	.620	40	.620	40
Newark, N. J.				
Bread and cake—Hand shops:				
Foremen, oven workers, dough mixers	1.313	48	1.000	48
Bench workers, second class	1.188	48	.896	48
Third class workers	1.042	48	.771	48
Bread and cake—Machine shops:				
Ovenmen, mixers, molders:				
Rate A	1.200	40	1.200	40
Rate B	.980	40	.980	40
Benchmen, molders, dividers	1.085	40	1.085	40
Peelers, scalers, oven hands	.980	40	.980	40
Icing mixers, cake:				
Rate A	.970	40	.970	40
Rate B	.840	40	.840	40

Table 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Newark, N. J.—Continued				
Bread and cake—Machine shops—Continued				
Icing makers	$0.900	40	$0.900	40
Icing makers' helpers	.840	40	.840	40
Dough scalers, checkers	.880	40	.880	40
Flour dumpers, sifters	.835	40	.835	40
Machine helpers, pan greasers	.840	40	.840	40
Slicers, wrappers, packers, scalers' helpers	.815	40	.815	40
Women icers and hand wrappers	.595	40	.595	40
Hebrew shops:				
Foremen, ovenmen	1.750	48	1.661	48
Second hands, mixers	1.625	48	1.533	48
Bread carriers, helpers	1.000	48	.889	48
New Haven, Conn.				
Bread and cake–Hand shops:				
Foremen	1.111	44	1.008	48
Assistant foremen, mixers, ovenmen	1.068	44	.963	48
Benchmen	1.018	44	.917	48
Bread and cake—Machine shops:				
Bread department:				
Mixers	1.125	40	1.000	40
Dividers, ovenmen	1.000	40	.875	40
Assistant mixers	.975	40	.850	40
Receiving clerks	.975	40	.820	40
Blenders, bakemen	.970	40	.845	40
Head packers	.955	40	.830	40
Molders	.950	40	.825	40
Wrappers	.945	40	.820	40
Packers	.885	40	.830	40
Pan greasers	.885	40	.785	40
Pan rackers	.885	40	.760	40
Cake department:				
Foremen	1.095	40	.970	40
Dough mixers	1.045	40	.920	40
Ovenmen	1.025	40	.900	40
Head shippers	.995	40	.870	40
Depositors, receivers, stock clerks	.945	40	.820	40
Ingredient scalers	.925	40	.800	40
Icing mixers	.895	40	.770	40
Depositors' helpers	.870	40	.745	40
Dumpers	.845	40	.720	40
Pan greasers, utilitymen, shippers' helpers:				
First 6 months	.770	40	.645	40
7–12 months	.795	40	.670	40
After 1 year	.815	40	.690	40
Women employees:				
Head icers, head wrappers	.705	40	.580	40
Icers	.675	40	.550	40
Wrappers	.655	40	.530	40
Hebrew shops:				
Foremen, ovenmen	1.563	48	1.354	48
Second hands	1.479	48	1.271	48
New Orleans, La.				
Bread and cake—Machine shops:				
Bread shops:				
Foremen	1.150	40	1.100	42
Ovenmen, mixers, reliefmen	.950	40	.850	42
Benchmen, wrapping-machine operators, molders, dividers, cake depositors	.850	40	.800	42
Ingredientmen	.800	40	.750	42
Mixers' helpers, flour blenders, panners	.750	40	....	....
Pan greasers, wrapping-machine helpers	.650	40	....	....
Bakers' helpers, crumb packers, rackers	.600	40	....	....
Cake shops:				
Cake wrapping-machine operators	.850	40	.650	42
Ingredient scalers	.800	40	.750	42
Foreladies	.750	40	.700	4
Cake helpers	.600	40	.570	4
Icers, wrappers, packers	.600	40	.550	4
Pan greasers	.600	40	.400	4

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
New York, N. Y.				
Bread and cake—Hand shops:				
Agreement A:				
First hands, oven workers	$1.400	40	$1.175	40
Second hands	1.300	40	1.075	40
Helpers	1.100	40	.875	40
Shippers and packers (men)	.900	40	.575	40
Shippers and packers (women)	.750	40	.475	40
Agreement B:				
First hands, ovenmen, mixers	1.413	40	1.175	40
Second hands	1.313	40	1.075	40
Helpers	1.050	40	.813	40
Packers	.963	40	.725	40
Agreement C:				
Foremen	1.563	48	1.500	48
Bench and second hands	1.438	48	1.375	48
Third hands	1.313	48	1.250	48
Agreement D:				
First hands	1.473	40	1.100	40
Second hands	1.369	40	.950	40
Helpers	1.214	40	.850	40
Miscellaneous	1.162	40	.775	40
Agreement E:				
First hands, ovenmen	1.867	45	1.407	45
Second hands	1.733	45	1.273	45
Third hands	1.333	45	1.140	45
Agreement F:				
First hands	1.469	40	1.188	40
Second hands	1.406	40	1.125	40
Helpers	1.156	40	.875	40
ake and pastry—Hand shops:				
First hands	1.500	48	1.260	48
Second hands	1.250	48	.975	48
rankfurter rolls—Hand shops:				
Mixers	1.375	40	1.043	46
Ovenmen	1.350	40	.978	46
Bench hands and packers	1.150	40	.848	46
etail—Hand shops:				
First hands	1.756	48	1.631	48
Second hands	1.631	48	1.506	48
Third hands	1.256	48	1.131	48
estaurants—Hand shops:				
First hands	1.875	48	1.750	48
Second hands	1.750	48	1.500	48
Third hands	1.375	48	1.130	48
afeteria —Hand shops:				
First hands	1.750	48	1.625	48
Second hands	1.625	48	1.500	48
Third hands	1.375	48	1.250	48
Helpers	.906	48	.781	48
read and cake—Semimachine shops:				
Foremen	1.575	40	1.425	40
Ovenmen, mixers	1.425	40	1.275	40
Bench hands	1.325	40	1.175	40
Helpers	1.175	40	1.025	40
Packers	.980	40	.850	40
read and cake—Machine shops:				
Agreement A:				
Tray-oven operators	1.110	40	.960	40
Mixers	1.100	40	.950	40
Confectioners, dough-break operators, dividermen	1.070	40	.920	40
Tray-oven helpers	1.060	40	.910	40
Ring twisters, oven operators, steam-box operators, icing makers, roll-in operators, mixers' helpers	1.050	40	.900	40
Kitchen operators	1.040	40	.890	40
Ring makers, depositors	1.030	40	.880	40
Icing-machine operators	1.020	40	.870	40
Benchmen, finishers, scalers, blenders, cooky bakers	1.010	40	.860	40
Benchmen's helpers, finishers' helpers	.970	40	.820	40
Packers, pan greasers	.900	40	.750	40
Women employees:				
Pie workers	.850	40	.700	40
General workers	.720	40	.570	40
Agreement B:				
Mixers, ovenmen	1.200	40	1.050	40
Dividermen	1.110	40	.960	40
Benchmen	1.100	40	.950	40

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
New York, N. Y.—Continued				
Bread and cake—Machine shops—Continued				
Agreement B—Continued				
Mixers' helpers, ingredient scalers, molders	$1.050	40	$0.900	40
Oven feeders and dumpers	1.020	40	.870	40
Flour dumpers	1.000	40	.850	40
Head wrappers or slicers, checkers	.970	40	.820	40
General helpers	.960	40	.810	40
Packers	.930	40	.780	40
Agreement C:				
Ovenmen	1.170	40	1.020	40
Dough mixers	1.120	40	.970	40
Icing makers	1.000	40	.850	40
Cookers	.980	40	.830	40
Checkers and shippers	.970	40	.820	40
Dough scalers	.960	40	.810	40
Ingredient cookers	.953	40	.803	40
General helpers	.890	40	.740	40
Women employees	.700	40	.550	40
Agreement D:				
Bread:				
Ovenmen	1.220	40	1.050	40
Mixers	1.130	40	.960	40
Stockmen	1.120	40	.950	40
Dividers, molders, oven helpers, panners	1.040	40	.870	40
Bread-shop helpers, benchmen, mixers' helpers	1.020	40	.850	40
Cake:				
Ovenmen	1.085	40	1.015	40
Stockmen and mixers	1.020	40	.950	40
Oven helpers	.940	40	.870	40
Icing mixers, icers, decorators	.930	40	.860	40
Benchmen	.920	40	.850	40
Doughnut men, decorators' helpers	.870	40	.800	40
Pan greasers	.820	40	.750	40
Pan washers, women icers	.770	40	.700	40
Wrappers, fruit-room workers	.620	40	.550	40
Agreement E:				
Bread only:				
Oven tenders	1.240	40	1.070	40
Dividermen, mixers	1.130	40	.960	40
Panners, rackers, twisters, oven helpers, blenders	1.080	40	.910	40
Checkers	1.060	40	.890	40
Floormen, flour handlers	1.030	40	.860	40
Bread wrappers, shipping clerks	1.010	40	.840	40
Agreement F:				
Bread department:				
Mixers, ovenmen	1.200	40	1.050	40
Dividermen	1.110	40	.960	40
Benchmen	1.100	40	.950	40
Ingredient scalers, mixers' helpers, molders	1.050	40	.900	40
Oven loaders or dumpers, pull-men helpers	1.020	40	.870	40
Flour dumpers	1.000	40	.850	40
Head packers and checkers, wrappers	.970	40	.820	40
Pan greasers, general helpers	.960	40	.810	40
Cake department:				
Ovenmen	1.170	40	1.020	40
Mixers	1.120	40	.970	40
Benchmen	1.065	40	.915	40
Fryers	1.063	40	.913	40
Ingredient scalers	.980	40	.830	40
Depositors, pan greasers, general helpers	.960	40	.810	40
Women helpers	.700	40	.550	40
Agreement G:				
Mixers, peel-oven men, relief mixers	1.200	40	1.050	40
Dividers	1.110	40	.960	40
Benchmen	1.100	40	.950	40
Molders, mixers' helpers, ingredient scalers	1.050	40	.900	40
Oven dumpers	1.021	40	.871	40
Oven loaders	1.020	40	.870	40
Flour dumpers	1.000	40	.850	40
Head slicers and wrappers, packers and checkers	.970	40	.820	40
General helpers	.960	40	.810	40
Slicers and wrappers	.940	40	.790	40
Agreement H:				
Ovenmen	1.220	40	1.020	40
Mixers	1.170	40	.970	40
Benchmen	1.125	40	.925	40

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
New York, N. Y.—Continued				
Bread and cake—Machine shops—Continued				
Agreement H—Continued				
Icing makers	$1.050	40	$0.850	40
Cookers	1.040	40	.840	40
Checkers	1.030	40	.830	40
Sweet yeast men	1.025	40	.825	40
Packers, floormen	.980	40	.780	40
Helpers	.940	40	.740	40
Women icers and wrappers	.750	40	.550	40
Agreement I:				
Mixers, ovenmen	1.200	40	1.050	40
Dividers	1.110	40	.960	40
Benchmen	1.100	40	.950	40
Mixers' helpers, molders	1.050	40	.900	40
Oven dumpers, oven loaders	1.020	40	.870	40
Flour dumpers	1.000	40	.850	40
Checkers, head wrappers and packers	.970	40	.820	40
Oven and bakery helpers, pan greasers	.960	40	.810	40
Machine cleaners	.940	40	.790	40
Wrapping-machine operators	.930	40	.780	40
Agreement J:				
Bread department:				
Mixers, ovenmen	1.200	40	1.050	40
Dividers	1.110	40	.960	40
Benchmen	1.100	40	.950	40
Soft-roll dividers, scalers	1.065	40	.915	40
Mixers' helpers, molders	1.050	40	.900	40
Oven feeders, oven dumpers	1.020	40	.870	40
Soft-roll molder operators	1.015	40	.865	40
Flour dumpers	1.000	40	.850	40
Checkers, head slicers, bread wrappers	.970	40	.820	40
Helpers, pan greasers, rack pushers	.960	40	.810	40
Wrappers	.940	40	.790	40
Cake department.				
Ovenmen	1.170	40	1.020	40
Mixers	1.120	40	.970	40
Icing makers	1.000	40	850	40
Mixers' helpers	.990	40	.840	40
Ingredient scalers	.980	40	.830	40
Ovenmen's helpers	.975	40	.825	40
Depositors, dough scalers	.960	40	.810	40
Scalers' helpers, cake dumpers	.940	40	.790	40
Icing helpers, traymen, helpers	.890	40	.740	40
Women wrappers and packers	.700	40	.550	40
Agreement K:				
Protein bread:				
Head ovenmen	1.250	40	1.100	40
Mixers, ovenmen	1.200	40	1.050	40
Dividermen (bread)	1.150	40	1.000	40
Dividermen and platemen (English muffins)	1.125	40	.975	40
Molder operators	1.075	40	.925	40
Mixers' helpers, ingredient scalers	1.050	40	.900	40
Roundermen (English muffins)	1.025	40	.875	40
Wrappers	1.000	40	.850	40
Receiving clerks	.983	40	.833	40
Flour handlers	.975	40	.825	40
General helpers	.960	40	.810	40
Box carriers, packers, shippers	.950	40	.800	40
Agreement L:				
Cake only:				
Foremen	1.500	40	1.250	40
Ovenmen, mixers	1.350	40	1.100	40
Bench hands	1.200	40	1.000	40
Helpers	1.100	40	.900	40
Agreement M:				
Mixers, benchmen, ovenmen	1.250	40	1.100	40
Helpers; packers, first class	.950	40	.800	40
Packers, second class	.850	40	.700	40
Pie and pastry:				
Agreement A:				
Ovenmen, mixers	.992	40	.992	40
Bench hands	.872	40	.872	40
Second bench hands	.863	40	.863	40
Bench hand rim makers	.858	40	.858	40
Dough lumpers, bench hand egg washers	.820	40	.820	40

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
New York, N. Y.—Continued				
Pie and pastry—Continued				
Agreement B:				
Men workers	$0.850	40	$0.633	40
Women workers	.750	40	.552	40
Agreement C:				
Foremen	1.350	40	.909	40
Ovenmen	1.100	40	.909	40
Meringue fillers, fruit mixers	.995	40	.705	40
Bench hands	.900	40	.682	40
Helpers	.875	40	.523	40
Agreement D:				
Foremen	1.475	40	1.250	40
First hands	1.300	40	1.125	40
Second hands or mixers	1.175	40	1.000	40
Third hands	1.075	40	.875	40
Helpers	.900	40	.750	40
Doughnuts only—Machine shops:				
Agreement A:				
Machine operators	1.050	40	.840	40
Mixers, shippers, helpers	.900	40	.700	40
Packers, belt attendants	.750	40	.700	40
Box makers, beginning packers	.700	40	.625	40
Agreement B:				
Assistant foremen	1.273	40	1.123	40
Mixers	1.217	40	1.067	40
Cruller fryers	1.185	40	1.035	40
Cooks, relief mixers	1.173	40	1.023	40
Benchmen	1.124	40	.974	40
Machine operators, ingredient scalers	1.058	40	.908	40
Helpers, checkers	1.047	40	.897	40
Packers, sugarers	.976	40	.826	40
Agreement C:				
Machine operators	1.050	40	.840	40
Foremen	1.150	40	1.050	40
Foreladies	.930	40	.785	40
Helpers	.900	40	.700	40
Assistant foreladies	.880	40	.675	40
Packers	.750	40	.620	40
Crackers and cookies:				
Bakers	1.400	40	....	....
Bakers' helpers; packers, women	.800	40	....	....
Hebrew—Machine shops:				
Agreement A:				
First hands	1.929	42	1.864	42
Second hands	1.786	42	1.721	42
Helpers	1.357	42	1.293	42
Agreement B:				
First hands	1.867	45	1.740	45
Second hands	1.733	45	1.607	45
Helpers	1.333	45	1.207	45
Hebrew—Hand shops:				
Agreement A:				
Foremen, first hands	1.969	48	1.844	48
Swingmen jobbers	1.906	48	1.781	48
Second hands, third hands	1.844	48	1.719	48
Agreement B:				
First hands, ovenmen	1.867	45	1.718	45
Second hands	1.733	45	1.607	45
Third hands	1.333	45	1.207	45
Agreement C:				
First hands, ovenmen	1.750	48	1.631	48
Second hands	1.625	48	1.506	48
Third hands (helpers)	1.250	48	1.131	48
Agreement D:				
Ovenmen, mixers	1.563	48	1.302	48
Bench hands	1.438	48	1.260	48
Third hands	1.313	48	1.010	48
Helpers	1.146	48	.927	48
Agreement E:				
Foremen, first hands	1.744	40	1.463	40
Mixers, ovenmen	1.681	40	1.400	40
Second hands	1.581	40	1.300	40
Helpers in traveling-oven shops	1.419	40	1.138	40
Third hands (helpers)	1.356	40	1.075	40

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
New York, N. Y.—Continued				
Bohemian shops:				
Large shops:				
First hands	$1.530	35	$1.380	35
Scalers	1.480	35	1.330	35
Second hands	1.435	35	1.285	35
Helpers, wrappers, packers, slicers	.900	40	.780	40
Small shops:				
First hands	1.530	35	1.380	35
Second hands	1.435	35	1.210	35
rench shops:				
Bread:				
Agreement A:				
Day work:				
First hands	1.444	40	1.310	40
Bench hands	1.319	40	1.177	40
Night work:				
Ovenmen, mixers	1.464	37½	1.360	37½
Bench hands	1.370	37½	1.227	37½
Agreement B:				
Day work:				
Foremen	1.356	45	1.156	45
Second hands	1.311	45	1.111	45
Third hands	1.267	45	1.067	45
Night work:				
Foremen	1.452	42	1.238	42
Second hands	1.405	42	1.190	42
Third hands	1.357	42	1.143	42
Agreement C:				
Night work:				
Foremen	1.404	40	1.150	40
Benchmen	1.244	40	1.000	40
Mixers, ovenmen	1.354	40	1.100	40
Bakery helpers	1.079	40	.850	40
Pan cleaners, packers	.863	40	.625	40
Packers' helpers	.763	40	....	....
alian shops:				
First hands	1.354	48	1.021	48
Second hands	1.146	48	.979	48
olish shops:				
First hands	1.744	40	1.288	40
Mixers, ovenmen	1.681	40	1.288	40
Second hands	1.581	40	1.188	40
Helpers	1.356	40	.988	40
andinavian shops:				
Foremen:				
Night	1.550	48	1.250	48
Day	1.500	48	1.250	48
Bench hands:				
Night	1.467	48	1.042	48
Day	1.417	48	1.042	48
Second hands	1.458	48	1.146	48
Helpers	1.146	48	.833	48
Norfolk, Va.				
ead and cake—Machine shops:				
Mixers, scalers	1.050	40	.925	40
Oven supervisors	.950	40	.850	40
Truck loaders	.875	40	.800	40
Wrapping-machine setters	.850	40	.750	40
Molder operators, divider operators	.800	40	.650	40
Flour blenders	.780	40	.630	40
Oven feed and delivery	.775	40	.650	40
Mixers' helpers	.750	40	.650	40
Wrapping-machine feeders	.750	40	.600	40
Bakery helpers:				
First 60 days	.650	40	.550	40
After 60 days	.700	40	.600	40
Roll baggers:				
First 60 days	.520	40	.500	40
After 60 days	.570	40	.500	40

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Oklahoma City, Okla.				
Bread and cake—Machine shops:				
Day work:				
Foremen	$1.300	40	$1.075	40
Ovenmen, mixers, icing mixers	1.150	40	.925	40
Bench and machinemen	1.050	40	.825	40
Cake depositors	1.050	40	....	....
Scalers	1.025	40	.800	40
Foremen (wrapping department)	.925	40	....	....
Checkers (bread or cake)	.875	40	....	....
Wrapping-machine operators	.825	40	.650	40
Night work:				
Foremen	1.425	40	1.200	40
Dough mixers, ovenmen, icing mixers	1.225	40	1.000	40
Bench and machinemen	1.125	40	.900	40
Cake depositors	1.125	40	....	....
Scalers	1.100	40	.875	40
Foremen (wrapping department)	.975	40	....	....
Checkers (bread and cake)	.925	40	....	....
Wrapping-machine operators	.875	40	.675	40
Peoria, Ill.				
Bread and cake—Hand shops:				
Foremen	1.000	48	1.000	48
Ovenmen, mixers	.833	48	.833	48
Benchmen	.771	48	....	....
Bread and cake—Machine shops:				
Foremen	1.375	40	1.188	40
Ovenmen, spongers	1.250	40	1.063	40
Benchmen, machine operators	1.175	40	.988	40
Helpers:				
First 30 days	.800	42	.650	42
After 30 days	.850	42	.700	42
Wrappers, men:				
First 30 days	.750	42	.600	42
After 30 days	.800	42	.650	42
Wrappers, women:				
First 30 days	.700	42	.550	42
After 30 days	.750	42	.600	42
Crackers and cookies:				
Baking department:				
Mixers, first class	.970	40	.860	40
Dough rollers, peelers, ovenmen, machinemen; first class	.950	40	.850	40
Sirup men; mixers, second class	.820	40	.730	40
Dough rollers, peelers, ovenmen, machinemen; second class	.800	40	.700	40
Mixers' helpers	.720	40	.610	40
Dough-roller helpers, machinemen's helpers, ovenmen helpers	.720	40	.600	40
Cake and sandwich department:				
Packers	.650	40	.535	40
Captains	.720	40	.600	40
Pan dumpers, mixers	.720	40	.610	40
Feeders	.670	40	.555	40
Beaters	.770	40	.660	40
Machine operators, first class	.870	40	.760	40
Machine operators, second class	.820	40	.710	40
Cracker department:				
Wrapping-machine operators, first class	.800	40	.650	40
Wrapping-machine operators, second class	.720	40	.610	40
Packers	.700	40	.585	40
Bundlers	.670	40	.555	40
General helpers, beginners:				
Men	.650	40	.550	40
Women	.550	40	.460	40
Philadelphia, Pa.				
Bread and cake—Machine shops:				
Agreement A:				
Head ovenmen	1.200	40	1.075	40
Cake decorators, peel-ovenmen	1.125	40	1.000	40
Dough and icing mixers	1.100	40	.975	40
Bench and machinemen, steam-box tenders, ingredient scalers	1.060	40	.935	40

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Philadelphia, Pa.—Continued				
Bread and cake—Machine shops—Continued				
Traveling-oven feeders and delivery men	$1.035	40	$0.910	40
Bread coolers, mixers' helpers, dough punchers	1.010	40	.885	40
Route and pastry packers, bread wrappers and packers	.975	40	.850	40
Flour pilers, dumpers, baking helpers, stock-room helpers, pan greasers	.925	40	.800	40
Female wrappers and icers	.710	40	.583	40
Agreement B:				
Tray- and traveling-oven supervisors, oil-oven-men, reel-and rotary-ovenmen	1.000	40	1.000	40
Mixers and icing makers	1.000	40	.950	40
Tray- and traveling-oven feeders, delivery men	.950	40	.910	40
Tenders, depositor operators, ingredient scalers	.910	40	.910	40
Mixers' helpers	.875	40	.850	40
Flour blenders, wrapping-machine operators, route packers	.850	40	.825	40
Reel-oven helpers, machine trucking pilers, handlers, roll baggers, wrappers, pan greasers	.775	40	.775	40
Wrappers and icers, women	.560	40	.560	40
Agreement C:				
Shippers, receivers	1.195	40	1.025	40
Traveling- and tray-oven operators	1.170	40	1.000	40
Mixers, inventory stockmen	1.120	40	.950	40
Benchmen, divider operators, moldermen, greasing-machine operators, icing- and depositor-machine operators, roll dividers, ingredient scalers, decorators, oven feeders and delivery men	1.080	40	.910	40
Mixers' helpers	1.020	40	.850	40
Pan-washing-machine operators, wrapping-machine operators, bread selectors, flour blenders, assemblers, National wrapping machine (cake and sweet goods)	.995	40	.825	40
General baking helpers, rackers, cutters, carton makers	.945	40	.775	40
Women employees:				
Working supervisors	.970	40	.800	40
All other girls	.730	40	.560	40
ake—Machine shops:				
Working foremen	1.150	40	.985	40
Dough mixers, ovenmen, ingredient scalers	1.050	40	.885	40
Benchmen	.950	40	.785	40
Depositor operators, icing and cutting-machine operators, shippers, stock clerks	.930	40	.765	40
Wrapping-machine operators	.930	40	.665	40
Pan greasers' helpers	.800	40	.635	40
Floorladies	.700	40	.555	40
Wrappers and icers, women	.660	40	.515	40
ie and pastry:				
Agreement A:				
First hands	1.100	40	1.000	40
Second hands	1.000	40	.910	40
Third hands	.820	40	.775	40
Women helpers:				
Machine operators	.720	40	.600	40
Wrappers	.590	40	.560	40
Agreement B:				
Working foremen	1.194	40	1.156	40
First hands	1.150	40	1.000	40
Second hands	1.060	40	.910	40
Packers	.975	40	.845	40
Third hands	.925	40	.775	40
Agreement C:				
Working foremen	1.050	40	.975	40
Head order packers, ovenmen, cooks, dough and custard mixers	.950	40	.875	40
Floorladies	.865	40	.790	40
Washing-machine men, order packers, cook helpers, ovenmen's helpers, ingredient scalers	.850	40	.775	40
Toppers, fillers, pie makers, shell makers	.800	40	.725	40
Dish washers, helpers, wrappers, utility men and cleaners	.725	40	.675	40
Pie wrappers, crown makers	.610	40	.560	40
ackers and cookies:				
Agreement A:				
Sponge and sweet baking:				
Head mixers, sponge	1.070	40	.995	40
Sweet and sponge mixers, machine captains	1.045	40	.970	40
Peelers	1.020	40	.945	40
Bakers (reel or travel)	.995	40	.920	40

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Philadelphia, Pa.—Continued				
Crackers and cookies—Continued				
Agreement A—Continued				
Rollermen	$0.950	40	$0.875	40
Drawmen	.930	40	.855	40
Sweet mixers' helpers	.920	40	.845	40
Ovenmen, gas	.910	40	.835	40
Oven firemen	.900	40	.825	40
Pan cleaners, feeder (fast)	.870	40	.795	40
Stackers	.850	40	.775	40
Pan cleaners, feeders (slow) pan men, spray-machine operators	.840	40	.765	40
Packing and icing department:				
Tally clerk	.950	40	.875	40
Supplymen	.920	40	.845	40
Mixing icing helpers	.870	40	.795	40
Paste makers	.870	40	.755	40
Stockmen	.850	40	.775	40
Icing department tallymen	.820	40	.745	40
Scalers and weighers	.810	40	.735	40
Floormen	.800	40	.725	40
Women employees:				
Working supervisors	.770	40	.695	40
General packing, machine operators	.680	40	.605	40
Carton formers, other packers	650	40	.575	40
Agreement B:				
Mixing department:				
Supervisors	1.120	40	1.045	40
Dough mixers	1.045	40	.970	40
Dough mixers' helpers, assemblers	.920	40	.845	40
Mixing room helpers	.845	40	.770	40
Bake house:				
Machinemen	1.045	40	.970	40
Ovenmen	.995	40	.920	40
Dough rollers	.950	40	.875	40
Reliefmen	.935	40	.860	40
Helpers	.845	40	.770	40
Stockroom packing materials:				
Stockmen	1.015	40	.940	40
Paper-cutting-machine operators	.895	40	.820	40
Packing material helpers	.845	40	.770	40
Icing, wrapping and packing department:				
Receivers, loaders	.950	40	.875	40
Machine set-up men, supervisors	.945	40	.870	40
Set-up men	.895	40	.820	40
Dumpers	.890	40	.820	40
Warehousemen's helpers, wrapping department helpers	.845	40	.770	40
Working supervisors	.775	40	.700	40
Packers, bundlers, weighers, stitchers, inspectors, hand carton formers, machine operators, sugarers, stackers, baggers and crimpers of lady fingers	.690	40	.615	40
General helpers (male);				
Starting rate	.670	40	.620	40
After 200 hours	.720	40	.660	40
After 400 hours	.770	40	.700	40
Icing room and feeding magazine, miscellaneous, wrapping departments	.625	40	.550	40
General helpers (female):				
Starting rate	.550	40	.500	40
After 200 hours	.580	40	.530	40
Agreement C:				
Machine captains	1.025	40	.950	40
Sponge and sweet dough mixers	1.015	40	.920	40
Peelers	1.010	40	.900	40
Ovenmen	.975	40	.900	40
Rollermen	.940	40	.850	40
Icing mixers	.925	40	.800	40
Drawmen	.910	40	.795	4
Mixers' helpers	.905	40	.800	4
Pan men (out)	.890	40	.765	4
Supply men	.875	40	.800	4
Sandwich depositor operators	.855	40	.780	4
Stockroom men	.850	40	.700	4
Stackers, pan men (in)	.840	40	.745	4
Pan cleaners, feeders, general helpers	.825	40	.700	4

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Philadelphia, Pa.—Continued				
Crackers and cookies—Continued				
Agreement C—Continued				
Women employees:				
Set-up supervisors, wrapping-machine operators	$0.860	40	$0.755	40
Working supervisors	.755	40	.630	40
Packers, sponge	.680	40	.585	40
Packers and bundlers	.655	40	.560	40
Hebrew shops—Bread:				
Foremen, ovenhands	1.640	48	1.390	48
Second hand, dough mixers	1.581	48	1.332	48
Third hand, helpers	1.484	48	1.234	48
Fourth hands	1.094	48	.844	48
Hebrew shops—Cake:				
First hands, foremen	1.640	48	....	....
Second hands	1.581	48	....	....
Third hands	1.484	48	....	....
Fourth hands, helpers	1.094	48	....	....
Phoenix, Ariz.				
Bread and cake—Hand shops:				
Foremen	1.273	44	.979	48
Mixers, ovenmen	1.182	44	.938	48
Machine and bench hands	1.091	44	.854	48
Distribution foremen	1.045	44	....	....
Checkers, shipping clerks	.864	44	....	....
Pan washers	.682	44	....	....
Wrappers:				
First 3 months	.568	44	....	....
Second 6 months	.682	44	....	....
After 6 months	.773	44	....	....
Flour dumpers	.773	44	....	....
Pittsburgh, Pa.				
read and cake—Machine shops:				
Mixers, ovenmen, ingredient scalers	1.170	40	1.000	40
Molders, dividers, benchmen, machine hands	1.120	40	.950	40
Traveling-oven feeders, dumpers	1.070	40	.900	40
Mixers' helpers, bake-shop helpers	1.010	40	.840	40
Checkers	.960	40	.790	40
Wrapping-machine setters	.950	40	.780	40
Stock handlers, order assemblers	.930	40	.760	40
Packers	.890	40	.720	40
Miscellaneous helpers	.880	40	.710	40
Women helpers	.750	40	.580	40
ebrew bake shops:				
Bread department:				
Ovenmen, first hands	1.563	48	1.459	48
Mixers, second hands	1.500	48	1.396	48
Third hands, bench hands	1.417	48	1.313	48
Cake department:				
First hands	1.500	48	1.396	48
Second hands	1.417	48	1.313	48
Unskilled help:				
Shippers, bread wrappers	.833	48	.729	48
Cake bakers' helpers	.822	48	.718	48
Stock handlers	.760	48	.656	48
Pan greasers	.729	48	.625	48
Wrappers, women	.583	48	.479	48
Women dumpers, cake wrappers and packers	.563	48	.458	48
Portland, Oreg.				
ead and cake—Hand shops:				
Foremen	1.455	40	1.265	40
Ovenmen, mixers	1.389	40	1.208	40
Bench hands	1.257	40	1.093	40
Head checkers	1.119	40	.973	40
Assistant checkers	.972	40	.845	40
Packers, hand wrappers	.939	40	.816	40
Helpers:				
First year	.805	40	.700	40
Third year	.991	40	.861	40

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Portland, Oreg.—Continued				
Bread and cake—Machine shops:				
Foremen	$1.537	36	$1.336	36
Ovenmen, mixers	1.463	36	1.272	36
Bench hands, machinemen	1.390	36	1.208	36
Head checkers, wrappers, stock clerks, receiving clerks, head shipping clerks	1.332	36	1.158	36
Wrappers, machine operators	1.239	36	1.078	36
Flour blenders	1.166	36	1.013	36
Shipping clerks, assistant checkers	1.147	36	.997	36
Machine operators' helpers	1.037	36	.901	36
Pan greasers (helpers first year)	.879	36	.764	36
Women employees:				
Foreladies (in charge of 4 or more girls)	.920	40	.796	40
Cake decorators	.870	40	.744	40
Icers	.762	40	.649	40
Other helpers (after 1 year)	.705	40	.591	40
Crackers and cookies:				
Agreement A:				
Machinemen	1.038	40	1.038	40
Mixers	1.000	40	1.000	40
Peelers, ovenmen	.975	40	.975	40
Receiving clerks	.930	40	.930	40
Rollermen	.890	40	.890	40
Scalemen, wrappers	.868	40	.868	40
Mixers' helpers	.830	40	.830	40
Rollermen's helpers, dough feeders, assemblymen	.780	40	.780	40
Stackers	.760	40	.760	40
Other helpers	.755	40	.755	40
Women employees:				
Packers	.575	40	.575	40
Icers and other helpers	.555	40	.555	40
Agreement B:				
Shipping clerks	1.000	40	1.000	40
Mixers	.980	40	.980	40
Peelers	.950	40	.950	40
Ovenmen	.920	40	.920	40
Rollermen	.880	40	.880	40
Mixers' helpers	.840	40	.840	40
Stackers	.780	40	.780	40
Other helpers	.750	40	.750	40
Women employees:				
Packers	.580	40	.580	40
Other helpers	.560	40	.560	40
Providence, R. I.				
Bread and cake—Hand shops:				
Working foremen, mixers, ovenmen	1.125	40	1.000	40
General helpers	.925	40	.800	40
Bread and cake—Machine shops:				
Agreement A:				
Mixers	1.075	40	1.000	40
Dividers	1.025	40	.950	40
Molders	.975	40	.900	40
Traveling ovenmen	.975	40	.875	40
Doughnut mixers, baking mechanics, bread wrappers, machine adjusters	.950	40	.875	40
Doughnut wrappers, utilitymen, helpers, packers	.850	40	.750	40
Agreement B:				
Mixers, head ovenmen	1.150	40	1.025	40
Head benchmen, roll-oven men	1.050	40	.925	40
Molders	1.000	40	.875	40
Utilitymen	.975	40	.850	40
Mixers' helpers, ingredient scalers	.950	40	.825	40
Benchmen and bread wrappers	.930	40	.805	40
Roll-oven helpers	.920	40	.795	40
Flour dumpers	.905	40	.780	40
Ovenmen, checkers, molders	.900	40	.775	40
Wrappers	.855	40	.730	40
Packers	.850	40	.725	40
Agreement C:				
Mixers	1.150	40	1.025	40
Dividers	1.050	40	.925	40
Molders	1.000	40	.875	40
Ingredient scalers, mixers' helpers	.950	40	.825	40
Flour dumpers	.905	40	.780	40

Table 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Providence, R. I.—Continued				
Bread and cake—Machine shops—Continued				
Agreement C—Continued				
Ovenmen's helpers, molders' helpers, checkers	$0.900	40	$0.775	40
Wrappers	.855	40	.730	40
Packers	.850	40	.725	40
Pan greasers	.810	40	.685	40
Agreement D;				
Foremen	1.500	40	......	......
Mixer scalers	1.150	40	1.025	40
Mixers	1.100	40	.975	40
Ovenmen	1.050	40	.925	40
Dividers, first benchmen	.975	40	.850	40
Molders	.925	40	.800	40
Checkers, wrapping-machine operators	.845	40	.720	40
Benchmen, oven helpers, general helpers	.825	40	.700	40
Agreement E:				
Mixers	1.160	40	.1035	40
Ovenmen	1.075	40	.950	40
Scalers, icing mixers, icing-and-cutting machine operators, fryers, fried-cake mixers	.965	40	.840	40
Stock clerks, floormen, cake and fried cake helpers	.855	40	.730	40
Pan greasers, pan washers, pan papering, cake and fried-cake helpers (first 2 months)	.775	40	.650	40
Women helpers:				
First 2 months	.645	40	.520	40
After 2 months	.715	40	.590	40
Agreement F:				
Head mixers and scalers	1.250	40	1.125	40
Ovenmen	1.075	40	.950	40
Dividers	1.050	40	.925	40
Head wrapping-machine operators	1.025	40	.900	40
Molders	1.000	40	.875	40
First benchmen	.975	40	.850	40
Mixers' helpers	.950	40	.825	40
Ovenmen's helpers, benchmen, roll-oven men	.925	40	.800	40
Molders' helpers, checkers, benchmen helpers	.900	40	.775	40
Wrapping-machine operators	.855	40	.730	40
Packers	.850	40	.725	40
Pan greasers	.805	40	.680	40
ie and pastry:				
Night bakers	.890	40	.790	40
Cooks	.860	40	.760	40
Bakers	.820	40	.720	40
Receiving clerks	.800	40	.700	40
Filling mixers	.780	40	.675	40
Doughbreakers' helpers	.770	40	.670	40
Washers, cleaners, miscellaneous workers	.730	40	.630	40
Women employees:				
Beginners	.550	40	.440	40
After 3 months	.590	40	.510	40
After 9 months	.630	40	.530	40
ebrew shops:				
Foremen	1.458	48	1.146	48
Second hands	1.354	48	1.042	48
Reading, Pa.				
read and cake—Machine shops:				
Agreement A:				
Mixers	1.075	40	.950	40
Oven feed bread; ovenmen, cake and sweets; all round bakers	1.050	40	.900	40
Dividers, molders	1.000	40	.900	40
Batter scalers, oven delivery men, bench hands, bread-wrapping-machine operators	1.000	40	.850	40
Ingredient scalers and mixers' helpers	.975	40	.850	40
Icing mixers, women	.900	40	.850	40
Cake packers, (women), bread rackers, blenders	.900	40	.800	40
Pan rackers, loaf stackers	.850	40	.800	40
Sweet-bun icers, semiautomatic wrappers, (men) pan greasers and washers, (women)	.850	40	.725	40
Cake decorators, women	.800	40	.700	40
Cake icers, women	.730	40	.650	40
Cake and sweet wrappers, women	.690	40	.650	40

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Reading, Pa.—Continued				
Bread and cake—Machine shops—Continued				
Agreement B:				
Foremen, packing room	$1.175	40	$1.125	40
Foremen, bread	1.075	40	1.000	40
Foremen, cake	1.075	40	......	......
Mixers, oven supervisors	1.050	40	.950	40
Second mixers	1.025	40	.900	40
Ingredient scalers	1.025	40	.950	40
Stockmen	1.025	40	.925	40
Divider operators, benchmen, molders	1.000	40	.850	40
Ovenmen, wrapping-machine operators	.975	40	.850	40
Flour packers	.950	40	.850	40
Helpers:				
Stockmen	.925	40	.825	40
Bread and cake	.850	40	.725	40
Ovenmen	.850	40	.750	40
Women	.640	40	.580	40
Richmond, Va.				
Bread and cake—Machine shops:				
Agreement A:				
Mixers	1.080	40	.930	40
Dividers	1.000	40	.850	40
Molders, cake mixers, wrapping-machine operators	.950	40	.800	40
Oven feeders and dumpers	.930	40	.780	40
Oven tenders	.900	40	.750	40
General helpers	.750	40	.750	40
Icers and wrappers	.700	40	.550	40
Agreement B:				
Cake mixers, icing mixers, doughnut-machine operators	.950	40	.800	40
Ovenmen	.900	40	.750	40
Depositors	.850	40	.700	40
Ingredient scalers	.800	40	.650	40
Foreladies, helpers, men	.750	40	.600	40
Hand icers and wrappers, helpers, women	.700	40	.550	40
Sweet goods department:				
Dough mixers	1.080	40	.930	40
Ovenmen	.930	40	.780	40
Agreement C:				
Bread department:				
Mixers	1.080	40	.930	40
Dividers, ovenmen	1.000	40	.850	40
Molders, roll-machine men, wrapping-machine operators	.950	40	.800	40
Oven feeders and dumpers	.930	40	.780	40
General helpers	.750	40	.600	40
Cake department:				
Mixers	.950	40	.800	40
Ovenmen	.900	40	.750	40
Depositors	.850	40	.700	40
Scalers	.800	40	.650	40
Helpers, men	.750	40	.600	40
Cake wrappers, icers, women	.700	40	.550	40
Agreement D:				
Bread department:				
Working and shipping foremen	1.190	40	1.090	4
Mixers	1.050	40	.890	4
Dividers, mixers' helpers	.920	40	.840	4
Wrapping-machine operators	.920	40	.790	4
Molders, oven feeders, dumpers	.870	40	.790	4
Molders' helpers, wrapping-machine operators' helpers, bread packers	.800	40	.740	4
General helpers	.750	40	.550	4
Flour blenders	.700	40	.630	4
Cake and doughnuts:				
Foremen	1.190	40	1.090	4
Mixers	1.050	40	.890	4
Oven tenders	.920	40	.865	4
Doughnut-machine operators	.920	40	.840	4
Foreladies	.850	40	.750	4
Wrapping-machine operators	.750	40	.650	4
Scalers	.700	40	.600	4
Helpers, women; wrapping-machine operators	.650	40	.550	4

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Richmond, Va.—Continued				
3read and cake—Machine shops—Continued				
Agreement E:				
Bread and rolls:				
Mixers	$1.080	40	$0.930	40
Dividers, ovenmen	1.000	40	.850	40
Roll-machine operators, dough mixers' helpers, molders, wrapping-machine operators	.950	40	.800	40
Oven feeders and dumpers	.930	40	.780	40
Wrapper feeders	.850	40	.700	40
General helpers	.750	40	.600	40
Cake and doughnuts:				
Doughnut-machine operators, mixers, icing mixers	.950	40	.800	40
Ovenmen	.900	40	.750	40
Cake depositor operators	.850	40	.700	40
Scalers	.800	40	.650	40
General helpers, machine wrappers, foreladies, icing-machine operators	.750	40	.600	40
Icers, wrappers, (women)	.700	40	.550	40
Rochester, N. Y.				
read and cake—Hand shops:				
First hands	1.170	44	1.023	44
Second hands, ovenmen, mixers	1.090	44	.943	44
Third hands, bench hands	1.060	44	.909	44
read and cake—Machine shops:				
Agreement A:				
First hands	1.275	40	1.167	40
Second hands	1.190	40	1.077	40
Third hands, bench hands	1.150	40	1.038	40
Feeders and dumpers	1.150	40	1.077	40
Decorators	.850	40	.650	44
Icers, cooky-machine assistants	.750	40	.625	44
Helpers, wrap and finishing	.750	40	.585	44
Women employees:				
Foreladies	.850	40	.650	44
General helpers, wrappers	.700	40	.540	44
Agreement B:				
Mixers	1.030	40	1.000	40
Dividermen	.980	40	.950	40
Moldermen, benchmen, ovenmen, assemblymen, hatchmen, oven dumpers, and feeders	.930	40	.900	40
Flour blenders, mixers' helpers	.880	40	.850	40
Wrapping-machine operators	.830	40	.800	40
Flour handlers	.805	40	.775	40
Pan greasers, oven, bench, and machine helpers, bread rackers, checkers and packers	.780	40	.750	40
Wrapping and slicing helpers	.755	40	.725	40
hrew shops:				
Ovenmen, mixers	1.667	48	1.406	48
First cake bakers	1.667	48	1.250	48
Bench hands	1.531	48	1.302	48
Second cake bakers	1.531	48	1.146	48
ackers and cookies:				
Shop foremen	.930	40	.900	40
Batch scalers, dough mixers, machine operators, oven feeders, oven dumpers	.880	40	.850	40
Rack pullers, cooky dumpers, pan cleaners, carton packers and helpers	.730	40	.700	40
Women employees:				
Foreladies	.650	40	.620	40
Wrappers and packers	.580	40	.550	40
Rock Island (Ill.) District (Includes Davenport, Iowa, and Moline, Ill.)				
ad—Hand shops:				
Foremen	1.125	48	.900	48
First bakers	1.020	48	.800	48
Second bakers	.970	48	.750	48
Helpers	.750	48	.542	48
ad and cake—Machine shops:				
Wrapping-machine operators	.950	40	....	....
Pan rackers, roll panners	.850	40	....	....

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Rock Island, Ill.—Continued				
Bread and cake—Machine shops—Continued				
Helpers, icing-machine operators	$0.750	40	....	....
Rackers	.700	40	....	....
Cake dumpers, pan greasers	.700	40	....	....
Bread and rolls—Machine shops:				
Checkers, shipping clerks	.900	40	$0.735	40
Hand wrappers and icers, women:				
1–6 months	.550	40	.550	40
After 6 months	.600	40	.485	40
Pie and pastry:				
Working foremen	1.200	40	1.010	40
Scalers	.900	40	.860	40
St. Louis, Mo.				
Bread—Machine shops:				
Foremen	1.468	40	1.318	40
Spongers, oven hands	1.358	40	1.208	40
First bench hands, scalers	1.275	40	1.125	40
Bench and machine hands	1.248	40	1.098	40
Bread counters	1.083	40	.933	40
Helpers, pan greasers	1.055	40	.905	40
Ingredient scalers	.938	40	.788	40
Wrapping-and slicing-machine operators	.863	40	.713	40
Packers:				
Expereinced	.950	40	.800	40
Inexperienced	.875	40	.725	40
Beltmen (first 6 months)	.788	40	.638	40
Miscellaneous helpers:				
Experienced	.825	40	.675	40
Inexperienced	.750	40	.600	40
Foreladies	.775	40	.625	40
Women helpers:				
Experienced	.725	40	.575	40
Inexperienced	.650	40	.500	40
Cake—Machine shops:				
Foremen	1.468	40	1.318	40
Ovenmen, mixers	1.358	40	1.208	40
Machine hands	1.248	40	1.098	40
Helpers	1.055	40	.905	40
Icing mixers, ingredient scalers	1.024	40	.874	40
Miscellaneous helpers:				
Experienced	.825	40	.675	40
Inexperienced	.750	40	.600	40
Foreladies	.775	40	.625	40
Women helpers:				
Experienced	.725	40	.575	40
Inexperienced	.650	40	.500	40
Crackers and cookies:				
Agreement A:				
Oven operators	1.075	40	1.025	40
Cracker-dough mixers, sweet-dough mixers, graham-dough mixers, dough-machine set-up and operators, sponge mixers	1.050	40	1.000	40
Dough-break-machine feeders, marshmallow-machine set-up and operators, icing-machine set-up and operators	1.025	40	.975	40
Mixers' helpers (sweet and graham dough), icing mixers, marshmallow mixers	.950	40	.900	40
Head stock keepers	.925	40	.875	40
Dough-break roll feeders	.900	40	.850	40
Wrapping-machine set-up men	.850	40	.800	40
Jam mixers, sirup mixers, vanilla sugar mixers' scrap grinders, machine relief	.825	40	.775	40
Scrap (women), carton-forming-machine operators	.775	40	.725	40
Miscellaneous help, packers, off-wrapping-machine, wire-tie-machine operators, sack cleaners, stock keepers, carton peelers	.700	40	.650	40
Scalers	.650	40	.600	40
Women helpers:				
Experienced	.600	40	.550	40
Inexperienced	.550	40	.500	40

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
St. Louis, Mo.—Continued				
Crackers and cookies—Continued				
Agreement B:				
Sponge mixing department:				
Head mixers	$1.035	40	$0.960	40
Sponge and dough mixers	.925	40	.830	40
Mixers' helpers	.825	40	.750	40
Sweet mixing department:				
Head mixers	1.035	40	.930	40
Mixers	.925	40	.850	40
Mixers' helpers	.825	40	.750	40
Baking department:				
Machinemen	1.025	40	.930	40
Peelers	.985	40	.910	40
Rollermen, ovenmen	.925	40	.850	40
Oven take-out men	.885	40	.790	40
Sheeters and laminators	.835	40	.760	40
Reliefmen (sweet)	.835	40	.740	40
Cost and raw material checkers	.805	40	.730	40
Stockers, men	.795	40	.700	40
General help, semiskilled	.755	40	.680	40
Stockers, women	.695	40	.620	40
Sponge and sweet—Packing department:				
Supplymen	.795	40	.720	40
General help, semiskilled, men	.755	40	.680	40
Working supervisors, women	.740	40	.690	40
Checkers	.700	40	.640	40
Cello-bag machine operators	.700	40	.560	40
Weighers	.630	40	.560	40
General help, semiskilled, women	.590	40	.540	40
Icing department:				
Mixers, machinemen	.925	40	.850	40
Marshmallow and icing mixers	.850	40	.760	40
Supplymen	.795	40	.720	40
Women employees:				
Machine operators	.775	40	.720	40
Checkers	.700	40	.640	40
Machine feeders	.650	40	.570	40
Trolley girls	.590	40	.540	40
General help, semiskilled, men	.755	40	.680	40
General help, semiskilled, women	.590	40	.500	40
Carton and caddy forming and wrapping department:				
Machinemen (set-up and adjusters)	.955	40	.880	40
Machine operators, men	.875	40	.800	40
Machine operators, women	.770	40	.720	40
General help, semiskilled, women	.590	40	.540	40
Receiving and warehouse department:				
Working supervisors, male	.905	40	.830	40
Receivers	.805	40	.730	40
Receivers' helpers, loaders	.775	40	.700	40
Shipping department:				
Working supervisors	.905	40	.830	40
Checkers	.805	40	.730	40
Assemblers and loaders	.775	40	.700	40
Women employees:				
Foreladies	.740	40	.690	40
Checkers	.730	40	.660	40
Assemblers and loaders	.680	40	.630	40
Agreement C:				
Baking and mixing department:				
Head mixers, machine captains	.945	40	.920	40
Peelers	.895	40	.870	40
Bakers, sponge mixers, assemblymen	.865	40	.840	40
Rollermen	.845	40	.820	40
Ovenmen, drawmen	.795	40	.775	40
Mixers, helpers, stackers, general help	.745	40	.730	40
Packing department:				
Floormen	.745	40	.685	40
Women employees:				
Working supervisors	.745	40	.685	40
Packers, sponge	.645	40	.595	40
Tally clerks	.625	40	.580	40
Packers (sweet) bundlers, machine operators, weighers and closers, "Q" formers and stitchers, general help, carton formers	.595	40	.550	40
Icing department:				
Mixers	.775	40	.755	40
Mixers' helpers	.745	40	.730	40

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
St. Louis, Mo.—Continued				
Crackers and cookies—Continued				
Agreement C—Continued				
Icing department—Continued				
Working supervisors, women	$0.645	40	$0.595	40
Machine operators, and other women helpers	.595	40	.550	40
Hebrew—Hand shops:				
Foremen, bakers, ovenmen	1.354	48	1.250	48
Second hands	1.146	48	1.042	48
Miscellaneous helpers	.542	48	.438	48
St. Paul, Minn.				
Bread and cake—Hand shops:				
Foremen, supervising six or more workers	1.178	45	1.031	45
Foremen, supervising five or more workers; first hands	1.067	45	.933	45
Ovenmen, mixers	1.000	45	.865	45
Bench hands	1.000	45	.844	45
Bread and cake—Machine shops:				
Foremen	1.275	40	1.125	40
Sponge and dough mixers, ovenmen and oven operators	1.125	40	.975	40
Bench hands, dividers, molders, bun-machine operators	1.075	40	.925	40
Oven feeders and dumpers, slicing- and wrapping-machine operators	1.015	40	.865	40
Doughnut-machine operators	1.000	40	.850	40
Oven helpers, bench helpers, twisters and panners	.925	40	.775	40
Helpers, men:				
First 8 weeks	.825	40	.675	40
After 8 weeks	.900	40	.750	40
Women employees:				
Foreladies	.925	40	.775	40
Finishers, packers, and wrappers:				
First 8 weeks	.680	40	.530	40
After 8 weeks	.740	40	.590	40
Bread and cake—Semimachine shops:				
Foremen, supervising up to five workers	1.129	42½	....	....
Ovenmen, dough mixers, bench hands	1.059	42½	....	....
Wrapping-machine operators	.847	42½	....	....
Hand workers, women, after 6 months	.729	42½	....	....
Helpers, men, first year	.659	42½	....	....
Cake—Machine shops:				
Foremen	1.275	40	1.125	40
Mixers, ovenmen	1.100	40	.950	40
Ingredient sealers, fruit cookers, kettle fryers	1.000	40	.850	40
Helpers, men:				
First 8 weeks	.825	40	.675	40
After 8 weeks	.900	40	.750	40
Women employees:				
Foreladies	.925	40	.775	40
Wrapping-machine operators	.900	40	.750	40
Wrappers, packers, finishers:				
First 8 weeks	.680	40	.530	40
After 8 weeks	.740	40	.590	40
Crackers and cookies:				
Head sweet-dough mixers	1.130	40	.980	40
Peelers, reliefmen, sponge ovenmen	1.100	40	.955	40
Foremen	1.080	40	....	....
Head sponge dough mixers	1.060	40	.910	40
Assistant sponge dough mixers	1.020	40	.870	40
Rollermen	1.000	40	.850	40
Marshmallow mixers, sweet-ovenmen	.980	40	.830	40
Draw boys	.970	40	.820	40
Pan greasers	.940	40	.790	40
Unclassified helpers, men:				
Starting rate	.780	40	.660	40
After 3 months	.830	40	.700	40
After 6 months	.890	40	.740	40
Women employees:				
Floorladies	.770	40	....	....
Cracker packers	.750	40	.630	40
Assistant floorladies	.740	40	....	....
Cooky packers	.730	40	.610	40
Wrappers	.720	40	.600	40
Unclassified helpers:				
Starting rate	.600	40	.500	40
After 3 months	.650	40	.540	40
After 6 months	.700	40	.580	40

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Salt Lake City, Utah				
Bread and cake—Hand shops:				
Foremen	$1.160	48	$1.010	48
Ovenmen, mixers	1.020	48	.860	48
Bench hands	1.000	48	.860	48
Shipping clerks, head wrappers	.860	48	....	....
Helpers:				
First year	.650	48	....	....
Second year	.730	48	.610	48
Third year	.830	48	....	....
Bread and cake—Machine shops:				
Foremen	1.290	40	1.070	40
Mixers, ovenmen	1.150	40	.950	40
Ingredient scalers	1.090	40	.890	40
Machinemen, benchmen	1.040	40	.840	40
Shipping clerks, head wrappers	.970	40	.770	40
Checkers	.920	40	.720	40
Rackers, pan greasers, all second year helpers	.870	40	.670	40
Foreladies	.820	40	.620	40
Helpers, first year	.770	40	.570	40
Wrapping-machine operators, women	.750	40	.500	40
Icers, wrappers, packers, labelers, sweet-roll panners, women	.700	40	.550	40
Crackers and cookies:				
Assistant foremen	.850	40	.800	40
Panners (out)	.825	40	.775	40
Panners (in)	.800	40	.750	40
Sponge mixers	.775	40	.725	40
Cracker edgers	.675	40	.625	40
Sponge packers	.650	40	.600	40
Weighers	.585	40	.535	40
Paper shredders, case makers	.580	40	.530	40
Sweet packers	.550	40	.500	40
Cello-nest cutters, cello-machine operators	.525	40	.475	40
Feeders, machine girls	.500	40	.450	40
San Antonio, Texas				
rackers and cookies:				
Foremen	1.125	40	1.025	40
Shipping foremen	1.025	40	.925	40
Dough and sponge mixers, ovenmen, shipping clerks	.900	40	.800	40
Machinemen, dividers, ingredient scalers, loaders, dumpers and bench hands, wrapping-machine operators	.800	40	.700	40
Helpers:				
First 3 months	.625	40	.550	40
3–6 months	.675	40	.600	40
6–9 months	.725	40	.650	40
Experienced	.800	40	.725	40
San Francisco, Calif.				
read and cake—Hand shops:				
Dairy, lunches, restaurants, cafeterias:				
Foremen	1.422	40	1.131	40
Bench hands	1.333	40	1.063	40
Other hand shops:				
Foremen	1.460	42	1.250	42
Ovenmen, mixers	1.390	42	1.250	42
Bench hands	1.310	42	1.190	42
ead and cake—Machine shops:				
Foremen	1.570	38	1.380	38
Mixers, ovenmen	1.510	38	1.320	38
Bench hands	1.420	38	1.230	38
Flour blenders	1.330	38	1.140	38
Helpers (after 1 year)	1.130	38	.980	38
Women employees:				
Bakers' helpers	1.420	38	1.230	38
Ornamental Icers	1.040	40	.850	40
Foreladies	.980	40	.875	40
Icers (after 3 months)	.890	40	.785	40
Wrappers, packers, other helpers	.780	40	.675	40

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946 Rate per hour	July 1, 1946 Hours per week	July 1, 1945 Rate per hour	July 1, 1945 Hours per week
San Francisco, Calif.—Continued				
Pie and pastry:				
Foremen	$1.570	42	$1.380	42
Ovenmen, mixers	1.510	42	1.320	42
Journeymen pie makers	1.420	42	1.230	42
Helpers (after first year)	1.130	42	.980	42
French and Italian—Hand shops:				
Foremen, ovenmen, mixers	1.420	40	1.123	42
Bench hands	1.300	40	1.024	42
French and Italian—Machine shops:				
Foremen, ovenmen, mixers	1.570	40	1.180	40
Bench hands	1.420	40	1.070	40
Crackers and cookies:				
Agreement A:				
Machinemen, ovenmen, mixers	1.405	40	1.228	40
Cellophane or wax wrapping-machine operators	1.200	40	1.010	40
Mixers' helpers	1.190	40	1.000	40
Icers	1.170	40	.980	40
Head shipping clerks	1.165	40	1.000	40
Shippers and receivers	1.130	40	.950	40
Benchmen	1.030	40	.900	40
Floorladies	.880	40	.770	40
Icing girls, sweet packers, weighers, wrappers, relief girls, women cello-machine operators	.780	40	.675	40
Agreement B:				
Machinemen, head mixers	1.405	40	1.225	40
Peelers, ovenmen, reliefmen	1.350	40	1.170	40
Rollermen	1.270	40	1.090	40
Sponge-oven drawmen, mixers' helpers	1.235	40	1.055	40
Icers	1.220	40	1.040	40
Wrapping-machine set-up men	1.190	40	1.010	40
Icing helpers	1.160	40	....	....
Sweet-dough feeders, pan greasers, pan feeders	1.155	40	.975	40
Assemblymen, shippers, receivers	1.130	40	.950	40
Traveling-oven feeders	1.080	40	.900	40
Flour dumpers	1.050	40	....	....
Wrapping-machine helpers	1.040	40	....	....
Women workers:				
Supervisors, part-time sponge and sweet workers	.880	40	.775	40
Sponge packers, wrappers, bundlers, weighers, carton formers	.780	40	.675	40
Can renovators, icing and sugar-wafer workers, sweet packers	.760	40	.655	40
Scranton, Pa.				
Bread and cake—Hand shops:				
Agreement A:				
Ovenmen, dough mixers, second hands	.937	48	.854	48
Bench hands	.833	48	.750	48
Assistant bench hands	.708	48	.625	48
Helpers	.604	48	.521	48
Agreement B:				
Mixers, ovenmen, first hands	.927	48	.844	48
Bench hands, oven helpers	.812	48	.729	48
Shippers	.625	48	.542	48
Wrappers, utilitymen	.583	48	.500	48
Helpers	.500	48	.417	48
Bread and cake—Machine shops:				
Agreement A:				
Bread and roll department:				
Shipping clerks	1.215	40	1.040	40
Mixers, molders	1.115	40	.940	40
Dividers	1.055	40	.880	40
Third mixers	1.045	40	.870	40
Oven and proof-box men	.990	40	.815	40
Flour blenders, mixers' helpers, molding-machine helpers	.975	40	.800	40
Assistant shipping clerks	.950	40	.775	40
Pan setters	.935	40	.785	40
Traveling-oven feeders and receivers	.925	40	.750	40
Bench hands	.888	40	.713	40
Wrappers, pan greasers	.875	40	.725	40
Packers	.863	40	.713	40
Hand wrappers	.850	40	.700	40
General helpers	.788	40	.638	40

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Scranton, Pa.—Continued				
Bread and cake—Machine shops—Continued				
Agreement A—Continued				
Cake department:				
General utilitymen	$0.995	40	$0.820	40
Mixers, ovenmen	.883	40	.708	40
Depositor operators, pan greasers	.808	40	.658	40
Helpers	.770	40	.595	40
Women employees:				
Machine operators	.683	40	.533	40
Icers and helpers, other jobs	.670	40	.520	40
Agreement B:				
Bread department:				
Mixers, sponge-dough scalers	1.150	40	1.025	40
Traveling-ovenmen, shipping clerks	1.100	40	.975	40
Mixers' assistants	1.025	40	.900	40
Bread rackers	1.000	40	.875	40
Dividers, molder operators, reliefmen	.950	40	.825	40
Receiving clerks, flour blenders	.925	40	.800	40
Assistant shipping clerks	.900	40	.775	40
Wrapping-machine operators, molders' helpers	.875	40	.750	40
Pan greasers	.810	40	.715	40
Cake department:				
Working foremen, receiving clerks	1.075	40	.950	40
Mixers and scalers	.900	40	.775	40
Shipping clerks	.900	40	.725	40
Ovenmen, depositors	.850	40	.725	40
Icing mixers	.840	40	.715	40
Oven helpers, depositors' helpers, wrapping-machine operators	.810	40	.685	40
Dumpers, stockmen	.760	40	.635	40
Pan greasers	.735	40	.610	40
Packers, shipping-room helpers	.705	40	.580	40
Box sorters	.680	40	.555	40
Women employees:				
Wrapping-machine operators, icers	.638	40	.543	40
Wrappers and icers (first 6 months)	.545	40	.450	40
Wrappers, icers (after 6 months), box makers	.625	40	.530	40
Variety department:				
Traveling-oven feeders and dumpers	1.000	40	.825	40
Shippers, sponge and dough mixers	.950	40	.825	40
Dough mixers and scalers	.900	40	.775	40
Wrapping-machine operators	.840	40	.715	40
Junior shipping clerks	.825	40	.700	40
Assistant dough rollers and bench hand assistants, machine packers and operators	.815	40	.690	40
Pan greasers and rackers, variety and bun packers	.650	40	.555	40
Agreement C:				
Reliefmen	1.050	40	.975	40
Receiving clerks	1.025	40	.950	40
Mixers	.975	40	.900	40
Oven operators	.975	40	.875	40
Doughnut-machine operators	.975	40	.775	40
Divider and molder operators	.925	40	.850	40
Scalers	.925	40	.775	40
Wrapping-machine operators, women	.925	40	.800	40
Stockmen, cake depositors	.900	40	.825	40
Tray-ovenmen, industrial pan washers	.875	40	.800	40
Pan rackers, flour blenders, benchmen, proof-boxmen, depositors' helpers	.850	40	.775	40
Loaders	.850	40	.725	40
Benchmen, small rolls	.850	40	.750	40
Mixers' helpers, oven dumpers and feeders	.825	40	.750	40
Cake dumpers	.800	40	.775	40
Oven bread rackers, pan greasers	.800	40	.750	40
Bread packers and truckers, selectors, carton makers	.800	40	.725	40
Industrial pan washers' helpers, men	.775	40	.700	40
General baking helpers	.700	40	.700	40
Women employees:				
Working foreladies	.750	40	.700	40
Pan greasers, cake cutters, machine wrappers, depositors	.630	40	.580	40
Bread rackers	.630	40	.550	40
Doughnut-machine helpers, selectors, bread and roll girls, bench helpers, floor girls, icers, cake shop girls, hand wrappers	.580	40	.530	40

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Scranton, Pa.—Continued				
Bread only—Machine shops:				
Shipping clerks	$1.283	40	$1.058	40
Mixers, peel-oven men, molders, divider operators, utility-men	1.205	40	.980	40
Flour blenders	1.070	40	.845	40
Mixers' helpers	1.040	40	.815	40
Molders' helpers	1.030	40	.805	40
Pan greasers	1.024	40	.799	40
Traveling-oven feeders and dumpers, assistant shippers	.980	40	.755	40
Machine wrappers	.955	40	.730	40
Bread rackers:				
First 6 months	.880	40	.655	40
After 6 months	.980	40	.755	40
Pie and cake:				
Mixers	.963	40	.913	40
Ovenmen, fruit cookers	.938	40	.888	40
Shipping clerks	.813	40	.763	40
Helpers	.725	40	.675	40
Scalers	.675	40	.625	40
Cake dumpers, pan greasers, depositor operators	.650	40	.600	40
Fruit cookers' helpers, depositors' helpers, bowl washers	.550	40	.500	40
Women employees:				
Icers, packers	.588	40	.538	40
Box makers, wrappers, wrapping-machine operators	.550	40	.500	40
Crackers and cookies:				
Mixers	1.085	40	.935	40
Working foremen	1.025	40	.875	40
Shipping clerks	.900	40	.750	40
Marshmallow mixers	.845	40	.695	40
Peelers, machinemen, assistant mixers	.805	40	.655	40
Ovenmen	.800	40	.650	40
Assistant machinemen	.780	40	.630	40
Ovenmen's helpers, assistant shipping clerks	.760	40	.610	40
Stackers, pan feeders, dough rollers, oven feeders	.695	40	.545	40
Pan catchers and greasers, flour blenders, sugar grinders, general helpers	.660	40	.510	40
Utilitymen	.600	40	.450	40
Women employees:				
Working foreladies	.610	40	.485	40
Machine operators and handlers	.585	40	.460	40
Marshmallow girls, box makers, packers, bundlers, stackers, all others	.575	40	.450	40
Seattle, Wash.				
Bread and cake—Hand and machine shops:				
Foremen	1.670	36	1.420	36
Mixers, ovenmen, machinemen	1.545	36	1.354	36
Bench hands	1.465	36	1.277	36
Control-room men	1.165	36	.978	36
Helpers:				
After 1 year	1.130	36	.972	36
After 2 years	1.285	36	1.094	36
Unskilled help:				
Stockmen	1.100	40	.963	40
Men-in-charge, assistant stockmen	1.000	40	.850	40
General helpers:				
First 6 months	.750	40	.625	40
6–12 months	.805	40	.688	40
After 1 year	.930	40	.775	40
Women:				
Floorladies	.885	40	.825	40
Assistant floorladies	.835	40	.775	40
Machine operators, experienced	.810	40	.750	40
General workers:				
First 3 months	.600	40	.500	40
3–12 months	.635	40	.575	40
1 year and over	.710	40	.613	40
Crackers and cookies:				
Agreement A:				
Machinemen	1.155	40	1.080	40
Mixers	1.075	40	1.000	40
Peelers	1.055	40	.980	40
Receiving clerks	1.015	40	.940	40
Ovenmen	1.010	40	.935	40
Rollermen	.965	40	.890	40

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Seattle, Wash.—Continued				
Crackers and cookies—Continued				
Agreement A—Continued				
Scalers, wrappers, oven helpers	$0.945	40	$0.870	40
Mixers' helpers	.905	40	.830	40
Stackers	.835	40	.760	40
Icing helpers	.830	40	.755	40
Pan cleaners, feeders and other helpers:				
First 6 months	.780	40	.705	40
After 6 months	.830	40	.755	40
Women employees:				
Experienced sponge and combination packers	.675	40	.600	40
Icing and sugar-wafer girls	.635	40	.560	40
Plain sweet packers	.635	40	.550	40
Agreement B:				
Machinemen	1.430	40	1.250	40
Mixers	1.280	40	1.250	40
Peelers, ovenmen	1.280	40	1.100	40
Rollermen, receiving clerks, oven helpers	1.180	40	1.000	40
Scalers and wrappers	1.080	40	1.000	40
Mixers' helpers	1.080	40	.900	40
Pan cleaners, feeders and other helpers:				
After 6 months	1.080	40	.850	40
Women employees:				
Sponge packers, experienced	.880	40	.620	40
Plain sweet and combination packers, icing and sugar-wafer girls	.830	40	.570	40
South Bend, Ind.				
read and cake—Hand shops:				
Agreement A:				
First hands	1.146	48	1.146	48
Second hands	1.042	48	1.042	48
Agreement B:				
Working foremen	1.050	42	1.050	42
Bench hands	.900	42	.900	42
Bench helpers	.750	42	.750	42
Agreement C:				
Bakers, first class	.875	48	.875	48
Bakers, second class	.625	48	.625	48
Helpers	.375	48	.375	48
Agreement D:				
Bakers, first class	.771	48	.771	48
Bakers, second class	.500	48	.500	48
Helpers	.375	48	.375	48
ead and cake—Machine shops:				
Agreement A:				
Mixers, dividermen, ovenmen, head benchmen, receiving clerks	1.135	40	.950	40
Molder operators	1.105	40	.920	40
Benchmen, repairmen	1.085	40	.900	40
Stockroom, helpers	1.030	40	....	....
Molders' helpers, mixers' helpers	1.005	40	.820	40
Checkers	.985	40	.800	40
Conveyormen, bake-shop helpers	.965	40	.780	40
Stockroom men	.935	40	.750	40
Packers	.915	40	.730	40
Slicers and wrappers	.855	40	.670	40
Stale checkers	.835	40	.650	40
Agreement B:				
Mixers, dividers, ovenmen	1.100	40	.950	40
Mixers' helpers, molders	.990	40	.840	40
Wrappers	.920	40	....	....
Checkers	.870	40	.670	40
Oven feeders	.850	40	.700	40
Molders' helpers	.840	40	.740	40
Slicers	.800	40	.540	40
Conveyormen, bake-shop helpers	.750	40	.650	40
Packers	.700	40	.600	40
Agreement C:				
Mixers, dividers, ovenmen, benchmen, molder operators	.900	42	.900	42
Wrappers	.850	42	.850	42

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and Classification	July 1, 1946 Rate per Hour	July 1, 1946 Hours per week	July 1, 1945 Rate per hour	July 1, 1945 Hours per week
South Bend, Ind.—Continued				
Bread and cake—Machine shops—Continued:				
Agreement D:				
Ovenmen, loaders, dough mixers	$0.960	40	$0.790	40
Cookers, ingredientmen	.960	40	....	....
Pie table operators	.930	40	.770	40
Cookers, oven helpers	.880	40	....	....
Fruit mixers	.860	40	.710	40
Dough feeders	.810	40	.660	40
Receivers' helpers	.750	40	....	....
Women supervisors	.720	40	.590	40
Women helpers, miscellaneous	.680	40	.550	40
Spokane, Wash.				
Bread and cake—Machine shops:				
Foremen, mixers, ovenmen	1.470	40	1.271	40
Machine hands	1.410	40	1.213	40
Bench hands	1.350	40	1.155	40
Bread dumpers	1.170	40	.988	40
Bread packers, conveyor-men, machine wrappers, shipping and stock clerks, flour blenders	1.060	40	.888	40
Carton strippers, helpers	.930	40	.772	40
Women wrappers	.750	40	.604	40
Crackers and cookies:				
Agreement A:				
Machinemen	1.120	40	1.020	40
Mixers	1.050	40	.970	40
Peelers	1.000	40	.910	40
Receiving clerks	.970	40	.890	40
Ovenmen	.950	40	.890	40
Rollermen	.950	40	.860	40
Scalers and wrappers	.908	40	.855	40
Ovenmens' helpers	.900	40	.850	40
Rollermens' helpers, dough feeders	.900	40	.770	40
Mixers' helpers	.870	40	.820	40
Assemblymen	.825	40	.770	40
Stackers	.800	40	.750	40
Pan cleaners and feeders, icing helpers	.795	40	.745	40
Women workers:				
Floorladies	.800	40	.645	40
Experienced workers	.650	40	.560	40
Agreement B:				
Working supervisors	1.108	40	....	....
Machinemen	1.058	40	1.008	40
Mixers	1.020	40	.970	40
Peelers	.995	40	.945	40
Receiving clerks	.970	40	.920	40
Ovenmen	.945	40	.895	40
Rollermen	.910	40	.860	40
Scalers and wrappers	.908	40	.857	40
Ovenmens' helpers	.900	40	.850	40
Mixers' helpers	.870	40	.820	40
Rollermen's helpers, dough feeders, assemblymen	.820	40	.770	40
Pan greasers and feeders, helpers	.795	40	.745	40
Women:				
Stackers	.800	40	.750	40
Working supervisors	.695	40	.645	40
Floorgirls, cracker packers	.620	40	.570	40
Experienced icing room girls	.600	40	.550	40
Springfield, Mass.				
Bread, cakes and pies—Hand shops:				
Foremen	1.225	48	1.100	48
Second hands, dough mixers, bench hands	1.125	48	1.000	48
Bread and cake—Machine shops:				
Agreement A:				
Cake foremen	1.510	40	1.510	40
Dough mixers	1.125	40	1.010	40
Reliefmen	1.125	40	.835	40
Oven dumpers	1.135	40	1.000	40
Ovenmen	1.035	40	.910	40
Oven helpers, benchmen	.960	40	.840	40
Divider operators	.960	40	.835	40

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Springfield, Mass.—Continued				
read and cake—Machine shops—Continued				
Agreement A—Continued				
Molder operators	$0.960	40	$0.810	40
Doughnut-bench hands	.960	40	......	......
Shipping room workers	.910	40	.835	40
Doughnut-machine men and fryers	.875	40	......	......
Cake icing girls	.735	40	.560	40
Helpers, women	.680	40	.550	40
Agreement B:				
Foremen	1.210	40	1.085	40
Dough mixers, peel-oven men	1.110	40	1.010	40
Floormen, assistant foremen	1.085	40	.983	40
Cake mixers	1.025	40	.910	40
Cake-oven men	.985	40	.910	40
Conveyor-oven men	.975	40	.860	40
Dividers, molder operators, bench hands	.960	40	.835	40
Scalers	.950	40	.810	40
Dough room helpers	.935	40	.835	40
Women employees:				
Foreladies	.835	40	.660	40
Other belpers	.785	40	.560	40
Hand cake icers	.735	40	.610	40
read only—Machine shops:				
Agreement A:				
Foremen	1.210	40	1.085	40
Dough mixers, bench foremen	1.110	40	.985	40
Assistant foremen	1.085	40	.910	40
Peel-oven men	.985	40	.860	40
Order men (retail shop)	.980	40	.835	40
Dividers, scalers, molder operators, bench hands	.960	40	.835	40
Conveyor-oven men, dough-room helpers	.935	40	.810	40
Pan greasers	.910	40	.810	40
Packers, slicers, icers, coolers	.860	40	.735	40
Helpers, men	.860	40	.760	40
Women employees:				
Foreladies	.835	40	.660	40
Helpers	.675	40	.550	40
Agreement B:				
Reliefmen	1.125	40	1.000	40
Dough mixers	1.110	40	.960	40
Oven feeders	.985	40	.860	40
Molder operators	.960	40	.810	40
Divider operators	.960	40	.860	40
Other workers	.885	40	.760	40
Hebrew—Hand shops:				
Foremen	1.514	40	1.364	45
Second hands, dough mixers	1.398	40	1.248	45
Bench hands	1.281	40	1.131	45
Tampa, Fla.				
e—Hand shops:				
Head cakemen	1.250	40	......	......
Second cakemen	1.070	40	......	......
Piemen	1.000	40	......	......
Ovenmen, third cakemen	.870	40	......	......
Helpers	.650	40	......	......
ad and cake—Machine shops:				
Agreement A:				
Foremen	1.150	40	1.000	48
Dough mixers, overmen	1.000	40	.850	48
Bench and machinemen	.900	40	.750	48
Wrapping-machine operators	.850	40	.700	48
Oven dumpers and loaders	.800	40	.700	48
Helpers, hand wrappers	.650	40	.600	48
Stockmen	.650	40	.550	48
Agreement B:				
Dough mixers	1.000	40	......	......
Ovenmen	.890	40	......	......
Cuban shops:				
Master bakers, first cakemen, ovenmen-in-charge	.906	48	.854	48
Dough mixers-in-charge, ovenmen	.835	48	.783	48
Dough mixers	.763	48	.711	48
Benchmen	.666	48	.615	48
Helpers	.571	48	.520	48

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946*		July 1, 1945	
	Rate per Hour	Hours per week	Rate per hour	Hours per week
Toledo, Ohio				
Bread and cake—Hand shops:				
First hands	$1.160	48	$1.000	48
Second hands	1.110	48	.950	48
Third hands	1.060	48	.900	48
Helpers	1.010	48	.850	48
Bread and cake—Machine shops:				
Agreement A:				
Major bread shops:				
First mixers	1.200	40	1.020	40
Ovenmen	1.200	40	.950	40
Second mixers	1.200	40	.970	40
Benchmen, bread	1.050	40	.930	40
Traveling-oven men, mixers' helpers, dividers, molders	1.050	40	.890	40
Wrapping-machinemen	1.050	40	.870	40
Molders' helpers	1.050	40	.840	40
Flour blenders	1.000	40	.820	40
Helpers	.950	40	.790	40
Agreement B:				
Ovenmen, depositors, icing mixers, dough mixers, ingredient scalers	1.160	40	.990	40
Wrapping-machine operators	1.000	40	.850	40
Icing mixers' helpers, dough helpers	.990	40	.840	40
Icing-machine operators	.960	40	.810	40
Depositors' helpers, checkers, dumpers	.950	40	.800	40
Stockroom men	.940	40	.790	40
Pan greasers	.920	40	.770	40
Loaders	.910	40	.760	40
Miscellaneous male help	.850	40	.760	40
Women helpers, packers, hand icers and wrappers	.750	40	.610	40
Agreement C:				
Smaller machine shops:				
First mixers, ovenmen	1.170	40	.990	40
Cake mixers, second mixers	1.170	40	.940	40
Ovenmen	1.170	40	.920	40
Cake and bread bench foremen	1.110	40	.950	40
Peel-oven men	1.080	40	.920	40
Frymen, bread, cake and rolls bench hands	1.060	40	.900	40
Peel-oven pullers	1.020	40	.900	40
Molders, dividermen	1.020	40	.860	40
Ingredientmen	.970	40	.856	40
Helpers, bread slicers, rackers, shipping room helpers	.970	40	.760	40
Hand fryers, cake and doughnut	.960	40	.900	40
Automatic-machine frymen	.960	40	.800	40
Wrapping-machine helpers	.920	40	.760	40
Pie and pastry:				
Ovenmen	1.040	48	.850	48
Bench hand fillers	.940	48	.820	48
Helpers, men:				
First 30 days	.890	48	.580	48
After 30 days	.940	48	.680	48
Helpers, women:				
First 30 days	.710	48	.520	48
After 30 days	.760	48	.600	48
Crackers and cookies:				
Mixing department:				
Head mixers	1.065	40	.925	40
Sponge mixers, flour dumpers, assistant mixers	.995	40	.855	40
Mixers' helpers	.915	40	.805	40
Baking department:				
Oven No. 1:				
Machinemen	1.135	40	1.005	40
Peelers-in	1.040	40	.900	40
Ovenmen, spray-machine operators	1.015	40	.875	40
Peelers-out, rollermen	.995	40	.855	40
Intermediate rollermen	.935	40	.825	40
Tray and panmen	.895	40	.775	40
Oven No. 2:				
Machinemen	1.145	40	1.005	40
Peelers-in	1.065	40	.925	40
Ovenmen, rollermen	1.015	40	.875	40
Peelers-out	.995	40	.855	40
Intermediate rollermen	.935	40	.825	40
Traymen	.915	40	.795	4

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946 Rate per hour	July 1, 1946 Hours per week	July 1, 1945 Rate per hour	July 1, 1945 Hours per week
Toledo, Ohio—Continued				
racker and cookies—Continued				
Oven No. 3:				
Oven and machinemen	$1.180	40	$1.040	40
General labor	.825	40	.695	40
Icing department:				
Men workers:				
Machinemen	1.045	40	.905	40
Chocolate mixers	1.015	40	.875	40
Icing and marshmallow mixers	.895	40	.775	40
Supply clerks	.790	40	.660	40
Women workers:				
Working leaders	.825	40	.695	40
Marshmallow-machine packers and feeders, scalers	.755	40	.625	40
Sandwich-machine packers, sandwich feeders, caddy and case formers, supply workers	.735	40	.605	40
Separators	.710	40	.590	40
General helpers	.710	40	.570	40
Packing department:				
Men:				
Machine operators	1.115	40	.945	40
Scalers	.895	40	.775	40
General helpers	.825	40	.695	40
Women:				
Working leaders, No. 2 bundlers	.825	40	.695	40
Machine bundlers, tin wrappers	.795	40	.665	40
Sponge packers, carton formers, scalers	.775	40	.645	40
Caddy and case formers, sweet packers, wrapper feeders	.735	40	.605	40
Stackers	.710	40	.570	40
General helpers	.650	40	.500	40
Receiving department:				
Stock clerks	.995	40	.855	40
Stock handlers	.895	40	.775	40
General helpers	.780	40	.650	40
Shipping department:				
Head loaders, working	1.300	40	1.160	40
Order fillers	1.098	40	.958	40
Stockmen	1.035	40	.895	40
Shipping laborers	.930	40	.825	40
Conveyormen	.790	40	.660	40
Washington, D. C.				
d and cake—Machine shops:				
Day work:				
Journeymen	1.250	40	1.250	40
Helpers	.850	40	.850	40
Packers and wrappers	.750	40	.750	40
Women wrappers	.650	40	.650	40
Night work:				
Journeymen	1.450	40	1.450	40
Helpers	.950	40	.950	40
Packers, wrappers	.800	40	.800	40
Wichita, Kans.				
d and cake—Machine shops:				
Foremen	1.175	40	1.025	40
Mixers, spongers, ovenmen, head pastry men	1.050	40	.900	40
Dividers, panners, machinemen, second pastry men	.950	40	.800	40
Bread twisters	.900	40	.750	40
Checkers	.800	40	.700	40
Wrapping-machine operators:				
First 3 months	.780	40	.700	40
After 3 months	.850	40	.780	40
Helpers, bake-shop	.750	40	.650	40
Helpers, women:				
First 3 months	.550	40	.400	40
After 3 months	.650	40	.500	40
Worcester, Mass.				
l and cake—Machine shops:				
greement A:				
Foremen	1.300	40	1.100	40
Peel-oven men	1.180	40	.980	40

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
Worcester, Mass.—Continued				
Bread and cake—Machine shops—Continued				
Agreement A—Continued				
Head benchmen	$1.125	40	$0.925	40
Mixers	1.108	40	.908	40
Molders, bench hands, dividermen	1.075	40	.875	40
Special packers, tray-oven men	1.000	40	.800	40
Pan rackers	.905	40	.705	40
Shipping packers, wrapping-machine operators	.935	40	.735	40
Mixers helpers	.900	40	.700	40
Flour blenders	.800	40	....	....
Pan greasers	.850	40	.650	40
General helpers	.800	40	.600	40
General helpers, women	.750	40	.550	40
Agreement B:				
Dough mixers, cake	1.650	40	1.500	40
Dough mixers, bread	1.150	40	1.000	40
Cake and pastrymen	1.100	40	.950	40
Benchmen, dividers	.950	40	.800	40
Ovenmen, molders, molders' helpers	.900	40	.750	40
Bread wrappers, helpers, men	.800	40	.650	40
Frosters:				
Starting rate	.650	40	.450	40
Job rate	.800	40	.650	40
Packers, wrappers, women helpers:				
Starting rate	.650	40	.450	40
Job rate	.650	40	.500	40
Bread only—Machine shops:				
Agreement A:				
Foremen:				
Baking	1.125	40	1.125	40
Sweet goods	1.050	40	1.050	40
Mixers	.950	40	.950	40
Assistant packers	.900	40	.900	40
Batchmen	.850	40	.850	40
Moldermen, dividermen	.800	40	.800	40
Oven dumpers	.750	40	.750	40
Mixers' helpers	.725	40	.725	40
Oven loaders, flour blenders, bread packers	.700	40	.700	40
Machine wrappers, bakery helpers	.675	40	.675	40
Hand wrappers	.625	40	.625	40
Helpers, women	.600	40	.600	40
Agreement B:				
Working foremen:				
Special	1.350	40	....	....
Shipping	1.300	40	....	....
Dough mixers, rovers	1.150	40	....	....
Special packers, wrappers, utilitymen	1.050	40	....	....
Dividermen	.950	40	....	....
Moldermen	.900	40	....	....
Ovenmen	.850	40	....	....
Packers, machine operators, mixers' helpers	.750	40	....	....
Pan rackers, bread packers, pan greasers	.650	40	....	....
Pie and pastry:				
Foremen	1.150	40	1.050	40
Mixers	1.060	40	.960	40
Ovenmen	1.000	40	.900	40
Bench hands	.980	40	.880	40
Shippers	.950	40	.850	40
Helpers, cleaners	.850	40	.750	40
Miscellaneous women helpers	.800	40	.700	40
Pie fillers, wrapping-machine operators, apple- and pie-machine operators, conveyors	.750	40	.650	40
Hebrew shops:				
Foremen	1.458	48	1.250	48
Second hands	1.354	48	1.146	48
York, Pa.				
Pie and pastry:				
Head order packers, ovenmen, cooks, dough and custard mixers	.875	40	.835	4
Cooks' helpers, washing-machine men, ovenmens' helpers, order packers	.775	40	.735	4

TABLE 9.—*Union scales of wages and hours in the bakery trades in selected cities, July 1, 1946 and July 1, 1945—Continued*

City and classification	July 1, 1946		July 1, 1945	
	Rate per hour	Hours per week	Rate per hour	Hours per week
York, Pa.—Continued				
Pie and pastry—Continued				
Ingredient scalers	$0.775	40	$0.725	40
Pie makers, shell makers, women toppers and fillers	.725	40	.685	40
Utilitymen and helpers, dishwashers	.650	40	.635	40
Pie wrappers and crown makers, women	.575	40	.560	40
Crackers and cookies:				
Machinemen	.870	40	.795	40
Ovenmen	.790	40	.715	40
Supervisors, women	.640	40	.565	40
Helpers, women	.590	40	.515	40
Dough mixers	.800	40	.725	40
Youngstown, Ohio				
read and cake—Hand shops:				
Working foremen	1.150	40	.930	48
Ovenmen, mixers	1.080	40	.870	48
Bench hands	1.020	40	.810	48
Checkers	.920	40	.750	48
Helpers	.800	40	.600	48
Helpers, women	.625	40	.510	48
read and cake—Machine shops:				
Mixers, ovenmen	1.175	40	.975	40
Mixers' helpers, bench and machine hands, dumpers and feeders	1.100	40	.900	40
Checkers	1.000	40	.750	40
Wrapping-machine set-up men	1.000	40	.800	40
Bake-shop helpers	.960	40	.780	40
Bread rackers, packers, wrapping- and slicing-machine feeders	.930	40	.750	40
Women employees:				
Bread rackers, packers and shippers	.930	40	.725	40
Hand wrappers	.810	40	.630	40

* U. S. GOVERNMENT PRINTING OFFICE: 1948—746583

ERRATA

The following data are to be used in lieu of those for corresponding cities appearing on pages 157-160, BLS Bulletin 915, "Construction in the War Years, 1942-45."

APPENDIX.--Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945--Continued

WEST SOUTH CENTRAL STATES--Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
xas--Continued										
Hamlin	1943	0	$0	0	$0	0	$0	0	$0	0
	1944	0	0	0	0	0	0	0	0	0
Harlingen	1943	38	119,020	26	4,463	5	113,642	7	915	26
	1944	274	598,940	210	418,355	44	167,360	20	13,225	210
	1/ 1945	235	507,209	90	110,980	95	360,510	50	35,719	99
Haskell	1943	0	0	0	0	0	0	0	0	0
	1944	5	3,650	3	2,150	1	1,000	1	500	3
Hearne	1943	65	21,434	58	18,826	0	0	7	2,608	57
	1944	74	38,800	47	21,225	1	3,000	26	14,575	47
	1945	90	89,159	69	54,341	4	23,850	17	10,968	70
Henderson	1943	25	20,935	1	200	3	12,750	21	7,985	1
	1944	62	37,485	0	0	8	9,700	54	27,785	0
	1945	110	161,718	9	22,150	20	65,290	81	74,278	9
Hereford	1943	0	0	0	0	0	0	0	0	0
	1944	13	20,150	9	12,700	2	7,000	2	450	9
	1945	55	258,770	27	80,820	17	166,900	11	11,050	27
Highland Park	1943	170	272,938	4	212,000	0	0	166	60,938	72
	1944	147	410,030	5	332,000	1	15,000	141	63,030	112
	1945	156	454,843	33	360,250	1	3,000	122	91,593	46
Houston	1943	2,733	6,273,011	1,473	3,628,127	110	1,333,725	1,150	1,311,159	1,563
	1944	2,886	10,314,269	1,327	4,057,050	523	5,370,469	1,036	886,750	1,517
	1945	4,750	45;335,871	1,722	7,081,903	1,442	35,409,727	1,586	2,844,241	1,980
Huntsville	1943	10	27,105	7	4,250	2	19,855	1	3,000	7
	1944	0	0	0	0	0	0	0	0	0
	1945	65	174,500	53	160,400	4	6,100	8	8,000	52
Iowa Park	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Irving	1943	3	2,850	1	1,000	2	1,850	0	0	1
	1944	6	8,200	5	4,200	1	4,000	0	0	5
	1/ 1945	17	35,500	13	26,000	4	9,500	0	0	13
Jacksonville	1943	22	9,425	7	3,550	8	4,075	7	1,800	7
	1944	42	49,612	25	32,612	4	5,300	13	11,700	25
Kaufman	1943	6	4,300	0	0	0	0	6	4,300	0
	1944	25	34,850	4	6,950	3	11,100	18	16,800	4
	1945	27	27,010	8	9,750	2	900	17	16,360	8
Kenedy	1943	14	5,215	0	0	0	0	14	5,215	0
	1944	11	13,038	0	0	1	1,000	10	12,038	0
	1/ 1945	19	144,262	7	14,350	7	38,400	5	91,512	7
Kerrville	1943	40	58,768	0	0	6	1,259	34	57,509	0
	1944	39	38,867	11	28,620	5	3,080	23	7,167	11
	1945	166	344,593	73	239,244	28	37,975	65	67,374	68
amesa	1943	17	48,750	15	48,000	1	600	1	150	15
	1944	2	16,750	1	1,750	1	15,000	0	0	1
	1/ 1945	28	76,550	17	32,100	9	43,800	2	650	18
ampasas	1943	47	11,416	20	4,023	5	865	22	6,528	20
	1944	35	10,633	13	2,488	5	5,495	17	2,650	13
a Porte	1943	12	112,415	6	950	4	91,115	2	20,350	6
	1944	19	10,730	8	6,975	5	785	6	2,970	8
	1945	31	35,085	14	12,600	6	15,250	11	7,235	14
aredo	1943	508	583,350	411	539,880	0	0	97	43,470	442
	1944	537	191,620	413	164,585	1	2,200	123	24,835	413
	1/ 1945	558	442,715	469	416,110	0	0	89	26,605	475
evelland	1943	57	31,872	2	1,600	17	15,335	38	14,937	2
	1944	112	236,160	70	153,825	26	79,505	16	2,830	72
	1/ 1945	160	268,916	82	100,046	40	151,550	38	17,320	84
erty	1943	14	9,550	3	940	7	7,150	4	1,460	3
	1944	11	5,690	6	4,340	1	350	4	1,000	6
	1945	28	62,580	16	31,550	7	19,730	5	11,300	16

sample of 257 cities. See text and tables, pp. 12 to 16.

1/ 11 months only.

APPENDIX.--Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945--Continued

WEST SOUTH CENTRAL STATES--Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
exas--Continued										
Livingston	1943	8	$3,800	1	$1,400	2	$950	5	$1,450	1
	1944	12	8,249	5	5,750	4	1,874	3	625	5
	1945	46	84,881	20	21,935	10	52,870	16	10,076	20
Lubbock	1943	748	268,269	45	13,517	81	79,946	622	174,806	46
	1944	1,250	1,057,700	139	268,474	155	494,517	956	294,709	147
	1945	1,462	3,736,327	465	1,435,564	305	1,877,020	692	423,743	462
Lufkin	1943	155	76,461	22	52,770	14	10,858	119	12,833	21
	1944	391	330,036	114	191,120	23	91,855	254	47,061	114
	1/ 1945	195	339,380	95	160,290	31	141,350	69	37,740	106
McAllen	1943	278	98,063	68	12,735	29	41,780	181	43,548	68
	1944	344	231,650	66	57,030	43	117,565	235	57,055	67
	1/ 1945	328	428,545	66	116,365	46	232,300	216	79,880	66
McCaney	1943	3	425	0	0	0	0	3	425	0
	1944	33	107,025	25	97,000	3	7,625	5	2,400	25
	1945	11	9,675	3	6,500	0	0	8	3,175	3
Marshall	1943	741	338,159	213	288,481	82	3,813	446	45,865	213
	1944	706	153,031	86	17,285	75	52,174	545	83,572	86
	1945	924	377,607	167	88,009	133	99,492	624	190,106	167
Midland	1943	85	63,145	19	12,840	6	21,700	60	28,605	19
	1944	163	472,750	111	316,500	14	101,300	38	54,950	111
	1945	420	1,543,735	259	703,045	54	721,150	107	119,540	271
Mineral Wells ...	1943	84	65,365	38	36,025	5	16,610	41	12,730	38
	1944	7	1,495	1	120	0	0	6	1,375	1
Mission	1943	101	31,785	27	5,430	6	4,845	68	21,510	27
	1944	116	188,174	45	18,880	15	116,900	56	52,394	45
	1945	119	163,410	45	58,485	24	88,020	50	16,905	46
Mount Pleasant ..	1943	4	2,150	1	200	1	1,250	2	700	1
	1944	19	36,435	15	20,935	2	10,500	2	5,000	15
	1945	98	236,060	51	90,810	17	110,300	30	34,950	52
Nacagdoches	1943	8	9,800	0	0	5	7,800	3	2,000	0
	1944	20	23,015	9	8,415	7	10,900	4	3,700	12
	1945	85	153,355	37	60,800	22	63,400	26	29,155	37
Navasota	1943	13	3,000	7	1,500	2	275	4	1,225	7
	1944	28	5,702	7	2,450	5	1,025	16	2,227	7
	1945	40	32,800	25	17,150	6	12,750	9	2,900	25
New Braunfels ...	1943	113	18,542	18	5,020	18	3,039	77	10,483	17
	1944	177	47,851	22	13,275	50	8,542	105	26,034	23
	1945	246	214,057	54	106,013	70	59,287	122	48,757	55
Newcastle	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Olney	1944	44	28,500	5	7,500	4	6,000	35	15,000	5
	1945	76	50,000	6	20,000	0	0	70	30,000	6
Orange	1943	188	23,710	0	0	23	17,210	165	6,500	0
	1944	119	254,934	0	0	32	184,992	87	69,942	0
	1/ 1945	615	247,861	50	27,348	145	166,985	420	53,528	53
Paducah	1943	4	910	1	250	1	250	2	410	2
	1944	8	4,610	1	1,500	1	500	6	2,610	1
	1945	17	14,150	9	9,975	3	2,800	5	1,375	9
Palestine	1943	51	41,760	10	5,000	3	16,025	38	20,735	10
	1944	52	21,822	19	10,530	0	0	33	11,292	19
	1/ 1945	220	232,574	85	100,800	34	70,865	101	60,909	85
Pampa	1943	136	236,750	72	188,000	4	3,950	60	44,800	79
	1944	72	71,431	19	55,500	1	1,500	52	14,431	19
	1945	242	760,975	168	556,400	20	119,650	54	84,925	168
Paris	1943	290	263,304	181	212,375	6	18,299	103	32,630	181
	1944	219	190,655	111	130,425	7	8,375	101	51,855	12
	1/ 1945	206	205,481	108	135,825	18	40,290	80	29,366	108
Pasadena	1943	260	510,151	242	504,676	13	4,375	5	1,100	24
	1944	1,262	3,844,133	984	3,119,862	115	562,652	163	161,619	99
Pilot Point	1943	26	6,475	1	200	7	1,835	18	4,440	
	1944	44	8,650	3	2,000	10	1,300	31	5,350	
Plainview	1943	28	35,880	2	1,600	8	19,925	18	14,355	
	1944	64	70,691	14	14,241	12	40,720	38	15,730	1

*In sample of 257 cities. See text and tables, pp. 12 to 16.

1/ 11 months only.

APPENDIX.--Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945--Continued

WEST SOUTH CENTRAL STATES--Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
xas--Continued										
Port Arthur	1943	539	$188,138	67	$55,052	69	$10,682	403	$122,404	68
	1944	677	315,821	103	111,990	94	32,198	480	171,633	105
	1945	1,027	955,474	124	326,294	187	275,080	716	354,100	122
Quanah	1943	3	885	0	0	2	585	1	300	0
	1944	3	9,500	0	0	3	9,500	0	0	0
	1945	14	16,235	4	2,725	4	9,300	6	4,210	4
Ranger	1943	1	500	1	500	0	0	0	0	1
	1944	0	0	0	0	0	0	0	0	0
	1945	6	17,000	3	8,500	3	8,500	0	0	3
Rosebud	1943	120	18,965	1	78	1	112	118	18,775	1
	1944	123	17,850	1	200	0	0	122	17,650	1
	1945	155	91,050	9	22,000	14	43,300	132	25,750	9
San Angelo	1943	441	195,305	83	77,023	88	65,185	270	53,097	105
	1944	479	483,810	150	166,689	70	249,335	259	67,786	160
	1945	804	1,590,647	316	727,810	171	690,879	317	171,958	317
San Antonio	1943	7,617	3,570,971	844	1,578,313	182	673,285	6,591	1,319,373	1,040
	1944	9,670	5,331,510	832	1,547,471	291	1,189,198	8,547	2,594,841	879
	1945	10,419	14,518,375	1,636	4,909,737	596	6,202,526	8,187	3,406,112	1,741
Sanger	1943	12	3,970	2	3,000	2	85	8	885	4
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
San Juan	1943	81	8,564	17	2,435	4	725	60	5,404	17
Sequin	1943	68	12,929	40	7,490	14	3,248	14	2,191	40
	1944	98	36,468	64	12,703	12	19,825	22	3,940	64
	1945	137	137,474	95	96,488	26	30,550	16	10,436	95
Seminole	1943	0	0	0	0	0	0	0	0	0
	1944	1	2,500	0	0	0	0	1	2,500	0
South Houston	1943	9	2,355	4	1,000	5	1,355	0	0	4
	1944	35	54,215	22	51,750	8	1,265	5	1,200	22
	1945	48	49,000	12	17,400	26	19,900	10	11,700	12
Spur	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	10	28,000	8	23,500	1	4,000	1	500	7
Sweetwater	1943	186	107,005	42	69,950	6	1,175	138	35,880	42
	1944	186	177,385	46	102,800	18	41,240	122	33,345	46
	1945	254	219,120	80	94,770	26	50,020	148	74,330	80
Tahoka	1943	6	46,560	0	0	2	41,000	4	5,560	0
	1944	17	53,695	2	3,000	11	44,875	4	5,820	2
	1945	18	42,000	6	6,100	8	31,000	4	4,900	6
Taylor	1943	72	20,924	6	1,550	7	1,156	59	18,218	6
	1944	136	138,753	14	6,425	23	96,423	99	35,905	16
	1945	177	128,991	27	30.525	18	54,965	132	43,501	27
Temple	1943	171	345,172	140	226,779	9	93,159	22	25,234	140
	1944	349	722,698	297	573,315	15	110,022	37	39,361	296
	1945	492	1,164,488	312	792,965	71	318,118	109	53,405	300
Terrell	1943	9	11,936	2	2,700	0	0	7	9,236	2
	1944	13	9,650	6	4,800	2	3,500	5	1,350	6
	1945	30	27,350	20	15,350	8	11,400	2	600	19
Texas City	1943	501	5,187,872	386	1,068,712	38	4,094,315	77	24,845	444
	1944	315	580,364	191	349,620	36	207,524	88	23,220	208
	1945	197	359,558	55	82,550	70	240,600	72	36,408	58
Tulia	1943	10	5,675	1	300	0	0	9	5,375	1
	1944	10	41,800	8	40,000	0	0	2	1,800	8
	1945	38	185,780	22	62,930	13	117,100	3	5,750	21
Turkey	1943	0	0	0	0	0	0	0	0	0
	1944	1	700	0	0	0	0	1	700	0
	1945	0	0	0	0	0	0	0	0	0
Tyler	1943	480	128,022	17	5,667	32	12,440	431	109,915	17
	1944	949	257,759	28	9,961	33	58,151	888	189,647	30
	1945	1,676	1,185,344	139	330,722	107	527.720	1,430	326,902	139
University Park ..	1943	72	28,853	1	3,500	1	175	70	25,178	1
	1944	117	58,995	3	16,400	12	9,105	102	33,490	3
	2/ 1945	281	1,074,922	131	862,347	13	137,950	137	74,625	157

In sample of 257 cities. See text and tables, pp. 12 to 16. 1/ 11 months only. 2/ 10 months only.

APPENDIX.--Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945--Continued

WEST SOUTH CENTRAL STATES--Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Texas--Continued										
Uvalde	1943	35	$14,935	12	$6,040	2	$1,550	21	$7,345	12
	1944	82	71,031	52	28,020	2	22,000	28	21,011	52
	1945	82	125,354	33	34,920	25	83,580	24	6,854	33
Vernon	1943	13	8,750	2	2,000	0	0	11	6,750	2
	1944	13	30,950	2	2,900	6	24,500	5	3,550	5
	1945	58	137,550	42	91,200	10	38,950	6	7,400	42
Waco	1943	531	549,118	106	204,025	49	111,396	376	233,697	106
	1944	710	953,908	272	630,350	68	164,667	370	158,891	272
	1945	905	2,167,937	416	659,920	161	1,247,074	328	260,943	416
Waxahachie	1943	66	33,650	6	2,050	5	15,025	55	16,575	6
	1944	123	64,515	32	19,800	12	14,640	79	30,075	32
	1945	166	248,925	59	173,950	21	21,750	86	53,225	60
Weslaco	1943	61	63,925	24	2,960	5	53,460	32	7,505	24
	1944	81	148,466	39	10,595	6	131,500	36	6,371	39
	1945	156	185,620	50	49,275	17	93,750	89	42,595	51
West University .	1/ 1945	406	1,320,121	212	1,221,410	136	59,425	58	39,286	221
Wichita Falls ...	1943	333	280,799	67	56,170	36	40,203	230	184,426	67
	1944	353	277,056	57	20,281	45	76,833	251	179,942	57
	1945	590	695,015	169	215,832	92	252,813	329	226,370	171
Yoakum	1943	60	10,043	0	0	0	0	60	10,043	0
	1944	59	18,065	0	0	0	0	59	18,065	0
	1945	102	57,840	11	16,100	4	1,850	87	39,890	11

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*In sample of 257 cities. See text and tables, pp. 12 to 16.

1/ 11 months only.

UNITED STATES DEPARTMENT OF LABOR
L. B. Schwellenbach, *Secretary*

BUREAU OF LABOR STATISTICS
Ewan Clague, *Commissioner*

★

CONSTRUCTION IN THE WAR YEARS 1942–45

Employment, Expenditures, and Building Volume

Bulletin No. 915

For sale by the Superintendent of Documents, U. S. Government Printing Office
Washington 25, D. C. - Price 55 cents

Letter of Transmittal

United States Department of Labor,
Bureau of Labor Statistics,
Washington, D. C., June 16, 1948.

The Secretary of Labor:

I have the honor to transmit herewith a statistical report showing trends in construction activity, particularly during the 4 years of World War II. In addition to presenting the effects of war on the construction industry, this report resumes the annual publication of a statistical bulletin on construction expenditures, employment, and building volume, interrupted in 1944 by wartime pressures.

This bulletin was prepared in the Bureau's Division of Construction Statistics, H. E. Riley, Chief. Henry F. Haase was in charge of statistical estimating and developed the tabulating and estimating techniques. Adela L. Stucke planned the tables and prepared the text, under the general direction of Dorothy K. Newman.

Ewan Clague, *Commissioner.*

Hon. L. B. Schwellenbach,
Secretary of Labor.

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CONSTRUCTION IN THE WAR YEARS

Total Construction Activity

Expenditures for Construction

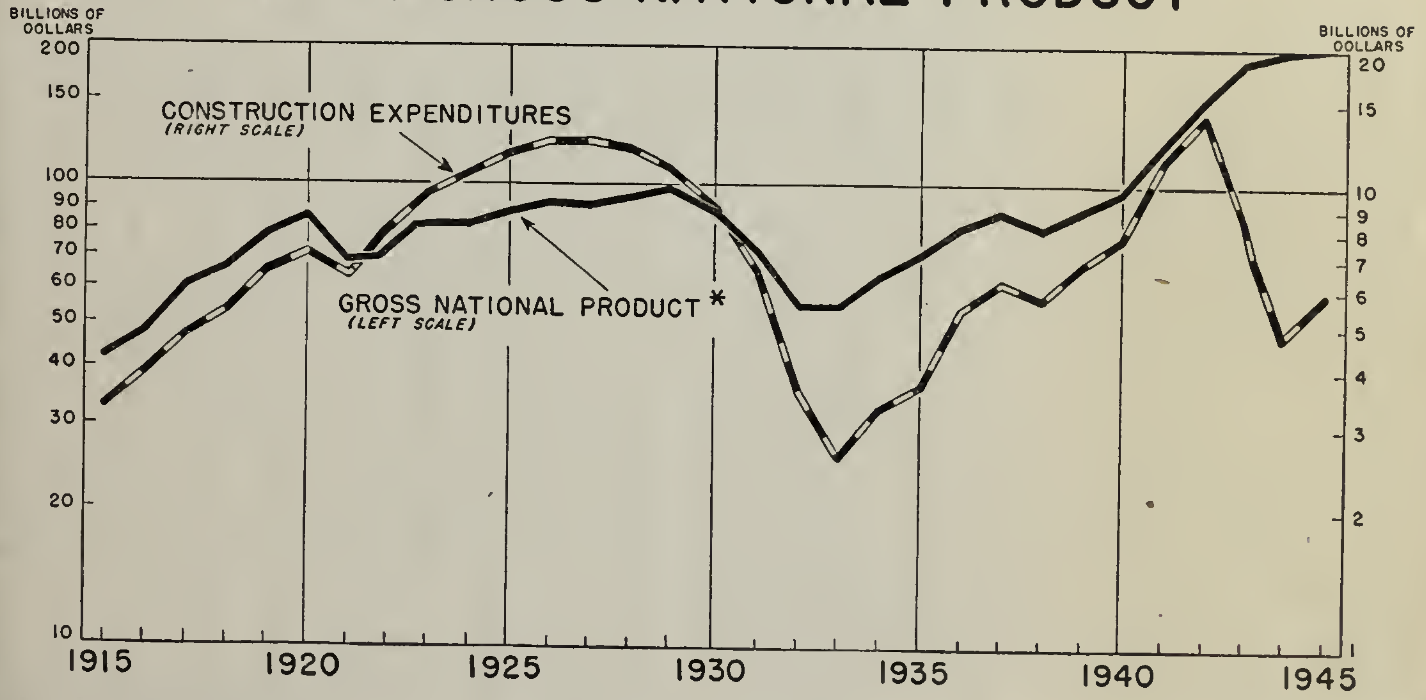
The course of construction activity during the years 1940 to 1945 reflects clearly the pressures and tensions of a wartime economy. Stimulated first by the national defense program and later by the all-out war production effort, expenditures for construction reached a new high in 1942—over 14 billion dollars. By 1944, however, as a result of the completion of most war construction and curtailment of all nonessential building, expenditures had dropped to less than 5 billion dollars—a 66-percent decline. This was the most violent downsweep in any 2-year period for which reliable figures are available. Thus, the developing construction boom of the 1940's was split in two by the war.

Available evidence, dating from 1915, points to a similarity in the pattern of both long-term trends in construction expenditures and general movements in the value of gross national product.[1] Major swings occur in both series at about the same time, but fluctuations are more extreme in the case of construction. During the period between World Wars I and II, for example, construction volume and national product both were at peak in the last half of the 1920's and both dropped to the low point in their cycle in the depression year of 1933. The range from peak to trough for construction expenditures was 79 percent (from 12.3 billion to 2.6 billion dollars), in contrast to 45 percent (from 99.4 billion to 54.8 billion dollars) for national product.

From 1934 on, construction activity moved in the same direction with general business activity but expanded more rapidly, until 1942. Then the

CHART 1

CONSTRUCTION EXPENDITURES COMPARED WITH GROSS NATIONAL PRODUCT



UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS

* SOURCE: U.S. DEPARTMENT OF COMMERCE

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[1] Gross national product figures shown here are derived by the U. S. Department of Commerce. Estimates for the period prior to 1929 are adjusted data of the National Bureau of Economic Research.

impact of the war caused the two series to develop opposite trends—business continued sharply upward while construction was forced to contract drastically. As soon as the war ended, however, construction began to expand at a much higher rate than national product as a whole.

Although these figures, which are in current dollars, may not state the case fully because they do not allow for changes in prices and differences in pricing bases between war and nonwar production, they demonstrate adequately the relationship of movements in the construction industry to those in the economy as a whole. The extreme year-to-year fluctuations which characterize construction activity cause repercussions upon other components of general business. For this reason, and because it is the largest single industry except agriculture, construction is a particularly important part of the economy.

Estimating construction expenditures

Construction expenditures are a measure of the dollar value of construction work actually done. Hence, they differ from the building permit and contract award series, discussed on pages 12–22, which represents the value of work planned to be started immediately or in the near future. Expenditures include the installed value of equipment considered

TABLE 1.—*Estimated construction expenditures, by type of construction, 1915–45*[1]

Type of construction	Expenditures (in millions of dollars)														
	1945	1944	1943	1942	1941	1940	1939	1938	1937	1936	1935	1934	1933	1932	1931
Total construction	5,696	4,837	8,411	14,130	11,260	7,661	6,836	5,738	6,182	5,410	3,746	3,321	2,594	3,604	6,504
New construction[2]	**4,609**	**4,073**	**7,734**	**13,353**	**10,308**	**6,807**	**6,062**	**5,018**	**5,308**	**4,714**	**3,110**	**2,756**	**2,223**	**3,260**	**5,980**
Private construction	*2,569*	*1,746*	*1,669*	*2,908*	*5,238*	*4,199*	*3,619*	*2,941*	*3,274*	*2,486*	*1,648*	*1,221*	*1,005*	*1,482*	*3,416*
Residential building (nonfarm)	684	535	650	1,315	2,765	2,355	2,114	1,511	1,372	1,131	665	361	278	462	1,228
Nonresidential building[3]	1,014	350	232	635	1,486	1,028	785	764	1,088	712	472	455	404	499	1,104
Industrial	642	208	156	346	801	442	254	232	492	266	158	191	176	74	221
Commercial	199	55	32	150	400	342	287	279	378	283	206	169	127	216	437
Warehouses, office and loft buildings	52	16	13	57	114	85	76	89	128	104	70	62	41	110	259
Stores, restaurants and garages	147	39	19	93	286	257	211	190	250	179	136	107	86	106	178
Religious	26	11	5	29	59	56	46	48	42	32	26	20	20	43	82
Educational	28	10	6	23	55	47	37	38	40	37	16	13	14	50	94
Social and recreational	24	16	6	28	68	63	94	92	69	51	32	32	32	57	116
Hospital and institutional	34	25	11	27	44	31	29	33	30	16	10	8	9	32	67
Hotels	11	4	2	14	27	23	17	19	22	15	11	8	8	15	46
Miscellaneous	50	21	14	18	32	24	21	23	15	12	13	14	18	12	41
Farm construction	191	213	292	271	303	236	226	196	225	189	176	93	69	39	97
Residential	116	136	185	144	174	127	120	104	118	104	96	54	43	26	59
Nonresidential	75	77	107	127	129	109	106	92	107	85	80	39	26	13	38
Public utilities	672	648	495	687	684	580	494	470	589	454	335	312	254	482	987
Railroads	264	247	211	197	187	167	137	119	199	149	116	128	94	139	292
Street railways	20	15	14	12	30	50	54	41	39	45	40	30	21	29	69
Pipe lines	50	71	77	80	60	30	35	21	67	41	20	12	7	37	77
Electric light and power	102	86	69	156	117	120	114	132	102	75	59	52	52	124	266
Gas	119	146	63	87	111	91	61	65	80	77	48	43	35	66	117
Telephone and telegraph	117	83	61	155	179	122	93	92	102	67	52	47	45	87	166
Public construction	*2,048*	*2,327*	*6,065*	*10,445*	*5,070*	*2,608*	*2,443*	*2,077*	*2,034*	*2,228*	*1,462*	*1,535*	*1,218*	*1,778*	*2,564*
Residential building	71	190	700	545	430	200	65	35	93	61	9	1	0	.0	0
Nonresidential building	652	638	1,800	3,634	1,540	519	835	556	459	597	273	256	193	392	578
Industrial	470	507	1,668	3,437	1,280	164	23	12	2	4	2	11	2	(5)	(5)
Commercial	4	4	4	6	21	34	32	18	22	14	7	13	4	(5)	(5)
Public administration	15	11	9	28	45	96	180	127	110	130	74	44	89	173	173
Educational	59	41	62	116	135	132	418	266	221	323	130	110	43	123	269
Social and recreational	9	7	8	5	15	18	47	37	34	50	19	27	6	15	18
Hospital and institutional	85	58	43	32	34	50	114	83	62	63	31	41	43	78	104
Miscellaneous	10	10	6	10	10	25	21	13	8	13	10	10	6	3	14
Military and naval facilities	690	837	2,550	5,016	1,620	385	125	62	37	29	37	47	36	34	40
Highways	342	360	450	675	850	875	835	837	850	876	622	821	675	916	1,323
State	220	215	270	396	525	529	470	521	557	601	412	544	424	524	694
County	79	94	108	154	176	186	185	130	139	150	111	163	136	183	278
Municipal	43	51	72	125	149	160	180	186	154	125	99	114	115	209	351
Sewage disposal	37	26	32	39	48	67	82	89	95	115	68	54	34	69	114
Water supply	60	53	70	100	120	127	80	90	79	93	69	62	47	87	156
Miscellaneous public service enterprises	55	46	43	36	63	90	91	94	101	111	59	41	61	135	209
Conservation and development	130	163	285	350	354	310	310	299	310	339	317	245	168	139	135
Bureau of Reclamation	39	36	42	60	79	74	72	67	60	56	47	35	26	26	20
Army Engineers	63	73	160	150	159	158	157	157	176	192	177	142	102	81	81
Tennessee Valley Authority	18	45	76	131	83	38	32	31	30	32	28	17	5	0	0
Other	10	9	7	9	33	40	49	44	44	59	65	51	35	32	34
All other Federal	11	14	135	50	45	35	20	15	10	7	8	8	4	6	9
Pipe lines	0	4	125	25	0	0	0	0	0	0	0	0	0	0	0
Other Federal	11	10	10	25	45	35	20	15	10	7	8	8	4	6	9
Minor building repairs	**1,087**	**764**	**677**	**777**	**952**	**854**	**774**	**720**	**874**	**696**	**636**	**565**	**371**	**344**	**524**
Nonfarm[8]	770	415	340	435	540	520	470	469	601	470	427	413	246	243	354
Residential	310	215	150	210	340	300	290	250	261	221	238	222	132	166	180
Nonresidential	460	200	190	225	200	220	180	219	340	249	189	191	114	77	174
Farm[9]	317	349	337	342	412	334	304	251	273	226	209	152	125	101	170

See footnotes at end of table.

TABLE 1.—*Estimated construction expenditures, by type of construction, 1915–45—Continued*

Type of construction	Expenditures (in millions of dollars)															
	1930	1929	1928	1927	1926	1925	1924	1923	1922	1921	1920	1919	1918	1917	1916	1915
Total construction	8,782	10,828	11,848	12,282	12,209	11,488	10,555	9,637	7,948	6,391	7,146	6,549	5,299	4,693	3,928	3,313
New construction[2]	**8,059**	**9,913**	**10,801**	**11,130**	**11,179**	**10,559**	**9,577**	**8,604**	**7,042**	**5,548**	**6,119**	**5,738**	**4,717**	**4,142**	**3,456**	**2,935**
Private construction	*5,306*	*7,522*	*8.339*	*8,762*	*9,066*	*8,451*	*7,715*	*7,006*	*5,385*	*3,998*	*4,785*	*3,775*	*2,486*	*2,869*	*2,753*	*2,220*
Residential building (nonfarm)	1,446	2,797	3,869	4,175	4,496	4,505	4,195	3,640	2,734	1,661	1,545	1,536	691	902	1,066	950
Nonresidential building[3]	2,099	2,822	2,797	2,825	2,878	2,373	1,897	1,896	1,638	1,543	2,082	1,147	771	860	771	513
Industrial	532	949	802	696	727	513	460	549	467	574	1,099	(4)	(4)	(4)	(4)	(4)
Commercial	856	1,097	1,121	1,145	1,107	940	740	716	613	570	625	(4)	(4)	(4)	(4)	(4)
Warehouses, office and loft buildings	559	581	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Stores, restaurants and garages	297	516	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Religious	128	139	168	179	177	165	130	117	103	71	55	(4)	(4)	(4)	(4)	(4)
Educational	112	113	107	106	108	108	91	83	61	32	22	(4)	(4)	(4)	(4)	(4)
Social and recreational	140	164	224	252	255	199	131	128	132	119	104	(4)	(4)	(4)	(4)	(4)
Hospital and institutional	103	98	100	106	83	79	63	57	53	44	30	(4)	(4)	(4)	(4)	(4)
Hotels	164	199	224	291	365	313	222	199	181	109	118	(4)	(4)	(4)	(4)	(4)
Miscellaneous	64	63	51	50	56	56	60	47	28	24	29	(4)	(4)	(4)	(4)	(4)
Farm construction	193	279	275	283	251	259	257	270	218	183	381	414	323	315	255	205
Residential	107	147	145	149	132	136	135	142	115	96	201	218	170	166	134	108
Nonresidential	86	132	130	134	119	123	122	128	103	87	180	196	153	149	121	97
Public utilities	1,568	1,624	1,398	1,479	1,441	1,314	1,366	1,200	795	611	777	678	701	792	661	552
Railroads	521	510	433	462	491	393	365	361	176	184	184	266	365	361	281	241
Street railways	85	82	90	77	51	52	56	74	85	59	82	63	107	154	109	112
Pipe lines	30	97	53	80	36	55	70	53	41	30	41	56	24	20	20	20
Electric light and power	418	396	364	391	388	433	473	421	237	170	268	161	106	127	120	95
Gas	181	185	212	257	248	171	206	133	139	66	78	56	26	45	70	41
Telephone and telegraph	333	354	246	212	227	210	196	158	117	102	124	76	73	85	61	43
Public construction	*2,753*	*2,391*	*2,462*	*2,368*	*2,113*	*2,108*	*1,862*	*1,598*	*1,657*	*1,550*	*1,334*	*1,963*	*2,231*	*1,273*	*703*	*715*
Residential building	0	0	0	0	0	0	0	0	0	0	0	14	28	0	0	0
Nonresidential building	623	622	638	596	603	573	494	481	481	387	283	246	199	192	207	217
Industrial	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(4)	(4)	(4)	(4)	(4)
Commercial	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(4)	(4)	(4)	(4)	(4)
Public administration	121	103	85	84	70	56	39	44	55	51	38	(4)	(4)	(4)	(4)	(4)
Educational	344	367	378	367	399	400	353	346	342	274	190	(4)	(4)	(4)	(4)	(4)
Social and recreational	26	36	50	48	47	37	22	20	15	14	12	(4)	(4)	(4)	(4)	(4)
Hospital and institutional	111	95	108	80	68	61	60	55	60	40	33	(4)	(4)	(4)	(4)	(4)
Miscellaneous	21	21	17	17	19	19	20	16	9	8	10	(4)	(4)	(4)	(4)	(4)
Military and naval facilities	29	19	15	12	11	8	9	16	25	49	161	1,089	1,555	608	21	17
Highways	1,481	1,248	1,270	1,190	1,039	1,056	951	783	851	840	640	415	288	313	308	298
State	678	529	511	416	363	396	384	284	286	281	432	256	180	174	168	165
County	297	257	282	289	266	265	256	242	330	337	(6)	(6)	(6)	(6)	(6)	(6)
Municipal	506	462	477	485	410	395	311	257	235	222	208	159	108	139	140	133
Sewage disposal	142	127	183	174	145	133	108	90	88	78	67	53	38	45	46	52
Water supply	201	126	117	138	140	145	155	113	113	100	86	71	56	46	49	54
Miscellaneous public service enterprises	157	150	157	192	112	119	65	48	49	43	41	35	37	41	43	40
Conservation and development	111	86	72	63	61	73	79	65	48	52	55	39	29	27	28	36
Bureau of Reclamation	11	8	7	6	6	7	8	9	9	7	5	5	6	6	6	7
Army Engineers	75	59	46	40	41	51	55	43	30	36	41	29	20	18	20	27
Tennessee Valley Authority	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	25	19	19	17	14	15	16	13	9	9	9	5	3	3	2	2
All other Federal	9	13	10	3	2	1	1	2	2	1	1	1	1	1	1	1
Pipe lines	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Federal	9	13	10	3	2	1	1	2	2	1	1	1	1	1	1	1
Minor building repairs	**723**	**915**	**1,047**	**1,152**	**1,030**	**929**	**978**	**1,033**	**906**	**843**	**1,027**	[7] **811**	[7] **582**	[7] **551**	[7] **472**	[7] **378**
Nonfarm[8]	485	563	697	792	710	599	652	690	629	611	543	[7] 285	[7] 170	[7] 151	[7] 147	[7] 118
Residential	204	233	328	406	338	281	374	417	353	349	228	(4)	(4)	(4)	(4)	(4)
Nonresidential	281	330	369	386	372	318	278	273	276	262	315	285	170	151	147	118
Farm[9]	238	352	350	360	320	330	326	343	277	232	484	526	412	400	325	260

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[1] Revised as of April 1947.

[2] Estimates of new construction from 1915 through 1938, except for nonfarm residential building, were made by the Office of Domestic Commerce, U. S. Department of Commerce. For 1939 and subsequent years estimates were made jointly by the Bureau of Labor Statistics, U. S. Department of Labor, and the Office of Domestic Commerce. New construction includes expenditures for major additions and alterations.

[3] Excludes nonresidential building by privately owned public utilities.

[4] Unavailable.

[5] Public industrial and commercial building not segregable from private for 1920 through 1932, but the amount involved is believed to be negligible.

[6] Included in "State."

[7] Excludes residential nonfarm minor building repairs because the data are unavailable.

[8] Covers privately financed structural repairs of the type for which building permits are generally required.

[9] Covers maintenance and repairs.

an integral part of a structure, but exclude the value of land, machinery, and movable equipment. Included under new construction is the value of major additions and alterations. Minor building repairs, which are shown separately, include those types of work for which building permits are generally issued. They exclude maintenance work such as painting, plumbing and heating, waterproofing, papering, electrical repairs, etc., not incident to structural repairs.

Estimates of expenditures for private residential building are based on the valuation figures recorded on reports of building permits issued, which are submitted to the Bureau of Labor Statistics by local building officials. These data are adjusted to account for residential building activity in nonpermit issuing places, abandonments, and for the understatement of construction costs inherent in building permit valuations.

Separate estimates are made for each of several types of private nonresidential building, based upon records of contracts awarded as reported monthly by the F. W. Dodge Corp. Estimates for the other types of construction, Federal and non-Federal, are for the most part derived from reports obtained from other government agencies and private industry, as well as published sources such as the weekly periodical, Engineering News-Record, and the annuals, Budget of the United States Government and Financial Statistics of Cities.

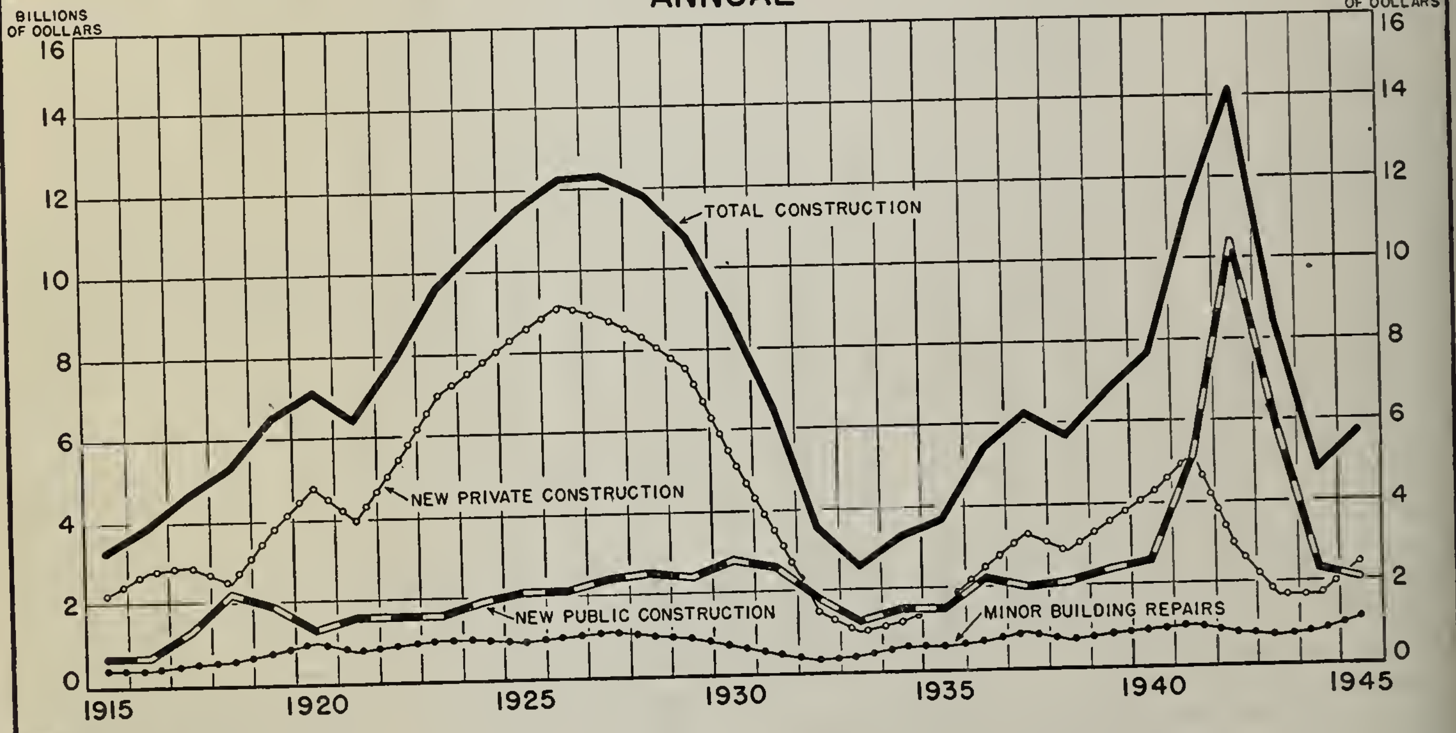
New construction expenditures, 1942–45

New private construction expenditures, which accounted for approximately 80 percent of all the money spent for new construction during the entire period of the 1920's, dropped to 22 percent of the total in 1942, the first year of World War II. In 1942, outlays from private funds amounted to only 2.9 billion dollars, compared with the 1926 peak of over 9 billion dollars. On the other hand, an unprecedented volume of publicly financed construction (10.4 billion dollars) brought the total for new work to 13.3 billion dollars—the highest level in the country's history.

CHART 2

CONSTRUCTION EXPENDITURES

ANNUAL



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Expenditures for military and naval facilities construction, which ordinarily account for only a few million, and even in 1918 totaled but 1.6 billion dollars, rose to over 5 billion dollars in 1942. This was almost two-fifths of the 1942 expenditures for all new work. The largest category after military and naval facilities was publicly financed industrial buildings, which reached the unprecedented amount of 3.4 billion dollars. In no year prior to 1941 was more than about 164 million dollars spent for construction of new public industrial buildings. Highway construction, which normally forms a larger part of the public total than any of the other classes, exceeded a billion dollars each year between 1925 and 1931 but fell to 675 million dollars in 1942.

Private residential construction, at 1.3 billion dollars, comprised the third largest segment of new construction expenditures in the opening war year. This was less than half the amount (2.8 billion dollars) spent in the good prewar home-building year 1941.

In 1943, new construction expenditures totaled 7.7 billion dollars—a drop of more than 40 percent from the 1942 high mark; in 1944, they fell even more—to around 4 billion dollars. Completion of most war construction projects was entirely responsible for the drop between 1943 and 1944. Private work was about the same in both years, 1.7 billion dollars, whereas public activity declined from 6 billion dollars in 1943 to 2.3 billion dollars in 1944.

By 1944, construction of military and naval facilities was down to 837 million dollars; private residential building accounted for only 535 million dollars, and publicly financed industrial buildings for 507 million dollars.

Commercial building financed from private funds shrank to 32 million dollars in 1943—the lowest dollar volume in any year for which estimates are available. In the middle 1920's this type of construction came to over a billion dollars a year.

Privately financed construction, previously restricted by wartime necessities, was allowed to expand prior to the actual termination of the war. Limitation orders were eased at an early date, opening the road to recovery of civilian construction. The problems connected with reconversion were not the same in the construction industry as those confronting manufacturers. For example, there were no plants to clear out, very little war work to complete, and few contracts to terminate. On the other hand, a great deal of recruitment was necessary to expand the construction work force. In addition, there was the task of organizing new undertakings, getting materials assembled on the site, and obtaining sufficient supplies of building materials from plants operating far below capacity.

Work forged ahead on many fronts, however, as soon as labor was recruited and the required inventories were accumulated. The latter, especially, presented grave obstacles, but they were overcome sufficiently for construction to advance notably in the closing months of 1945. The dollar volume of new private construction put in place in the last half of the year was about double that for the first 6 months.

For the year as a whole, new construction expenditures totaled 4.6 billion dollars, an increase of 13 percent over 1944. One of the outstanding features of this expansion was the marked shift in importance between publicly and privately financed activity. In the early part of 1945, expenditures averaged over 160 million dollars a month for new public construction and around 120 million dollars for new private work. By December, the public construction volume dropped to 98 million dollars, but private activity rose to 352 million dollars.

The greatest advance, by far, took place in private nonresidential building construction. This was one of the first areas to be affected by the changing military situation. On May 29, 1945, and again on June 11, the War Production Board relaxed the terms of L–41[2] to hasten the construction or alteration of industrial plants for the production of bottleneck items and essential civilian articles in short supply. These amendments were made to insure that limitations on construction would not obstruct the rapid reconversion of industry nor delay the reemployment in civilian production of the greatest possible number of workers.

This policy was further implemented as soon as the war was over by the issuance of an order permitting the building of industrial plants without WPB authorization after August 21, 1945. Consequently, outlays for new private nonresidential building construction in 1945 amounted to over a billion dollars, three-fifths of which were for industrial facilities. The 1944 figure for private nonresidential building (350 million dollars) was about a third of the 1945 total.

Private new residential construction also increased substantially in 1945. All during the war, home building had been subordinated to the needs of vital industrial construction, so that the demand for new houses was extremely urgent by the end of the period. On the assumption that the most expeditious way to get an immediate expansion of residential building was to remove restrictions on all construction, the War Production Board revoked L–41 on October 15, 1945. As a result expenditure figures for the last months of 1945 rose markedly. Within the short span of a year the monthly volume of private housing expenditures increased fivefold. In the first quarter of 1945 the monthly rate was about 23 million dollars, the lowest in the entire war period; by December, despite normal seasonal tendencies, it was 116 million dollars. During the entire year, 670 million dollars was spent for residential building—a fourth above the 1944 dollar volume.

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[2] Conservation Order L–41 was issued on April 9, 1942, placing all construction under rigid control. The order made it necessary for builders to obtain authorization from the War Production Board to begin residential construction costing $500 or more; agricultural construction costing $1,000 or more; or commercial and other construction costing $5,000 or more during any continuous 12-month period.

CHART 3

CONSTRUCTION EXPENDITURES

MONTHLY

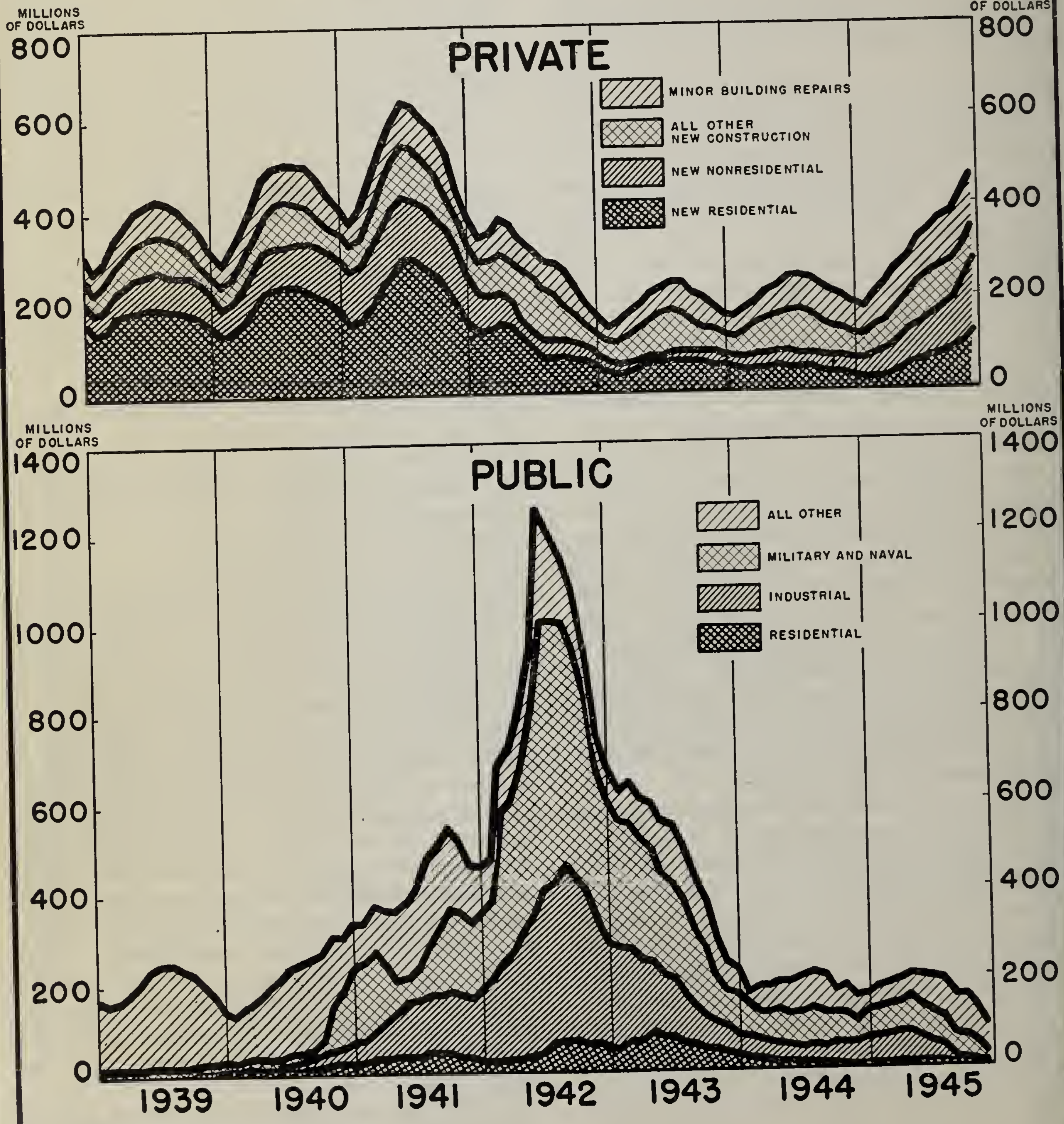

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TABLE 2.—*Estimated construction employment, private and public projects, 1929–45*[1]

Year and month	Average monthly employment (in thousands) on—		
	All construction	Private projects	Public projects
1929	2,508	1,997	511
1930	2,102	1,487	615
1931	1,759	1,120	639
1932	1,165	597	568
1933	976	452	524
1934	1,151	538	613
1935	1,292	680	612
1936	1,763	920	843
1937	1,778	1,054	724
1938	1,524	918	606
1939: Average	1,909	1,181	728
January	1,582	974	608
February	1,564	968	596
March	1,552	953	599
April	1,813	1,118	695
May	1,973	1,198	775
June	2,144	1,292	852
July	2,249	1,386	863
August	2,276	1,415	861
September	2,215	1,386	829
October	2,035	1,253	782
November	1,853	1,155	698
December	1,650	1,073	577
1940: Average	1,916	1,320	596
January	1,420	995	425
February	1,367	981	386
March	1,418	991	427
April	1,657	1,169	488
May	1,872	1,320	552
June	2,090	1,501	589
July	2,210	1,595	615
August	2,228	1,615	613
September	2,220	1,593	627
October	2,146	1,454	692
1940—Continued			
November	2,186	1,353	833
December	2,173	1,276	897
1941: Average	2,446	1,423	1,023
January	2,073	1,100	973
February	2,047	1,080	967
March	2,078	1,098	980
April	2,216	1,275	941
May	2,448	1,495	953
June	2,615	1,693	922
July	2,774	1,799	975
August	2,863	1,765	1,098
September	2,879	1,679	1,200
October	2,698	1,544	1,154
November	2,498	1,395	1,103
December	2,160	1,157	1,003
1942: Average	2,214	726	1,488
January	1,960	953	1,007
February	1,902	906	996
March	1,912	868	1,044
April	2,106	936	1,170
May	2,251	896	1,355
June	2,292	770	1,522
July	2,453	665	1,788
August	2,579	629	1,950
September	2,469	586	1,883
October	2,400	557	1,843
November	2,262	513	1,749
December	1,987	436	1,551
1943: Average	1,338	381	957
January	1,827	395	1,432
February	1,653	356	1,297
March	1,551	331	1,220
April	1,482	344	1,138
1943—Continued			
May	1,465	362	1,103
June	1,365	374	991
July	1,301	392	909
August	1,254	412	842
September	1,177	415	762
October	1,083	404	679
November	996	401	595
December	905	384	521
1944: Average	762	375	387
January	827	348	479
February	779	336	443
March	746	339	407
April	759	359	400
May	769	372	397
June	779	385	394
July	787	395	392
August	790	400	390
September	760	390	370
October	741	383	358
November	720	398	322
December	683	395	288
1945: Average	968	685	283
January	689	403	286
February	708	421	287
March	758	448	310
April	809	492	317
May	908	580	328
June	970	636	334
July	1,043	724	319
August	1,065	765	300
September	1,097	843	254
October	1,175	939	236
November	1,183	953	230
December	1,215	1,021	194

[1] Covers all types of workers (wage earners, salaried employees, working proprietors, and self-employed persons, as well as force-account workers) actively engaged on all types of new construction work and on alteration, addition, and repair work of the kind usually covered by building permits. (Force-account employees are workers hired, not through a contractor, but directly by a business or government agency, and utilized as a separate work force to perform nonmaintenance construction work on the agency's own properties.) Persons engaged in maintenance work are not included.

These estimates indicate average employment during the month (as distinguished from the number of different persons shown on pay-roll or employment records) and have been derived primarily by the conversion of dollar-expenditure figures into employment by the use of average performance factors.

Employment in the Construction Industry

Estimating methods

Construction employment figures presented in this section are estimates of the average number of workers employed in connection with construction operations in the United States. They include wage earners and salaried employees engaged on all types of new construction work and on alteration, addition, and repair work of the kind usually covered by building permits. Force-account workers[3] are also included, as well as self-employed persons, working proprietors, and workers employed by construction firms either on or off the construction site. The estimates exclude persons engaged in maintenance work.

The employment averages are derived primarily by converting construction expenditure figures into the average number of man-months of labor ordinarily required to perform the volume of work reported, using a currently adjusted figure for the value of work performed per man per month. The average employment figures obtained for the periods specified (man-months of employment) may be considerably lower than the number of different individuals employed during these periods as shown on pay-roll records, because of the high turn-over in the construction industry.

It should be noted that the above procedure is used only in the case of nonfederally financed construction. In the case of Federal construction, employment is estimated directly from reports on employment obtained from contractors.

Estimates of the value of work performed per man-month on non-Federal work are adjusted regularly for changes in average hourly earnings and in the average workweek of construction workers, as well as for changes in materials prices. They are checked periodically also against actual experience, using data on the operation of sample projects under construction.

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[3] Force-account employees are workers hired not through a contractor, but directly by a business or government agency, and utilized as a separate work force to perform nonmaintenance construction work on the agency's own properties.

It is assumed in making these adjustments that contractors' overhead and profit remain a constant percentage of the value of work performed. This assumption introduces error in the results, since the percentage undoubtedly changes with competitive conditions and as mechanization and other developments in method of operation affect overhead. Another assumption affecting the level of the employment figures is that productivity per man-hour is constant. While changes in productivity are ordinarily slow, they can be rapid when technological developments occur. They are both rapid and erratic during periods of shortages and other conditions of disorganization similar to those of the recent past. Sufficient information is not available to adjust for these considerations. The average employment figures shown must therefore be interpreted accordingly.

Employment by type of project, 1941–45

During 1941 and 1942, employment on all types of construction projects exceeded the 2-million-mark for the first time in a decade. Average monthly employment on public construction projects, which had fluctuated relatively little during the 12 years 1929–40, rose almost constantly during early war preparations to an unprecedented level of 1,950,000 persons in August 1942. The decline from that month on was consistent and rapid. In fact, the decrease in 1943 released an average of almost 86,000 persons a month. (More than 90 percent of the publicly financed war construction program was completed by the end of 1943.) Average employment on public construction for 1943 was 957,000, compared with 1,488,000 in 1942, and by 1945, the average for the year was only 283,000.

With recovery and growing economic prosperity, average employment on private construction projects rose steeply in the early defense period, reaching almost 1,800,000 in July 1941. The high employment volume in 1929 (which averaged 2½ million for the year) was never again attained, however, for late in 1941 control of materials and restrictions on private projects were imposed to assure materials and men for war production. Private construction employment then decreased sharply to an average of 726,000 workers in 1942, slightly over half the 1,423,000 average for 1941. The decline to 375,000 in 1944 gave employment to 21 percent fewer workers in that year than in the depression year 1933. Although the monthly average for the entire year had recovered to only 685,000 in 1945, by December over a million persons were working on private construction, foreshadowing the surge in postwar building.

TABLE 3.—*Estimated construction employment, by type of construction, 1941–45*[1]

Type of construction	Average monthly employment (in thousands)				
	1945	1944	1943	1942	1941
All types	968	762	1,338	2,214	2,446
New construction	**771**	**658**	**1,244**	**2,066**	**2,233**
Private construction	*488*	*271*	*287*	*578*	*1,210*
Residential (nonfarm) building	129	88	118	256	627
Nonresidential (nonfarm) building	200	66	47	142	324
Farm construction	33	17	23	43	75
Public utilities	126	100	99	137	184
Public construction	*283*	*387*	*957*	*1,488*	*1,023*
Federal	226	344	909	1,372	841
Residential building	11	28	85	76	85
Nonresidential building	[2]157	[2]222	[2]598	1,021	571
Reclamation	7	14	27	43	34
River, harbor, and flood control	17	22	32	38	35
Streets and highways	10	16	30	50	69
All other[3]	24	42	137	144	47
Nonfederal	57	43	48	116	182
Streets and highways	28	27	37	86	115
All other[4]	29	16	11	30	67
Minor building repairs	**197**	**104**	**94**	**148**	**213**
Residential (nonfarm)	49	35	27	40	77
Nonresidential (nonfarm)	89	38	37	51	44
Farm construction	59	31	30	57	92

[1] See footnote 1, table 2.

[2] Includes construction workers engaged on the atomic bomb project.

[3] Mainly airports, water and sewer systems, and electrification projects.

[4] Includes community buildings, water supply and sewage disposal projects, and miscellaneous public service enterprises.

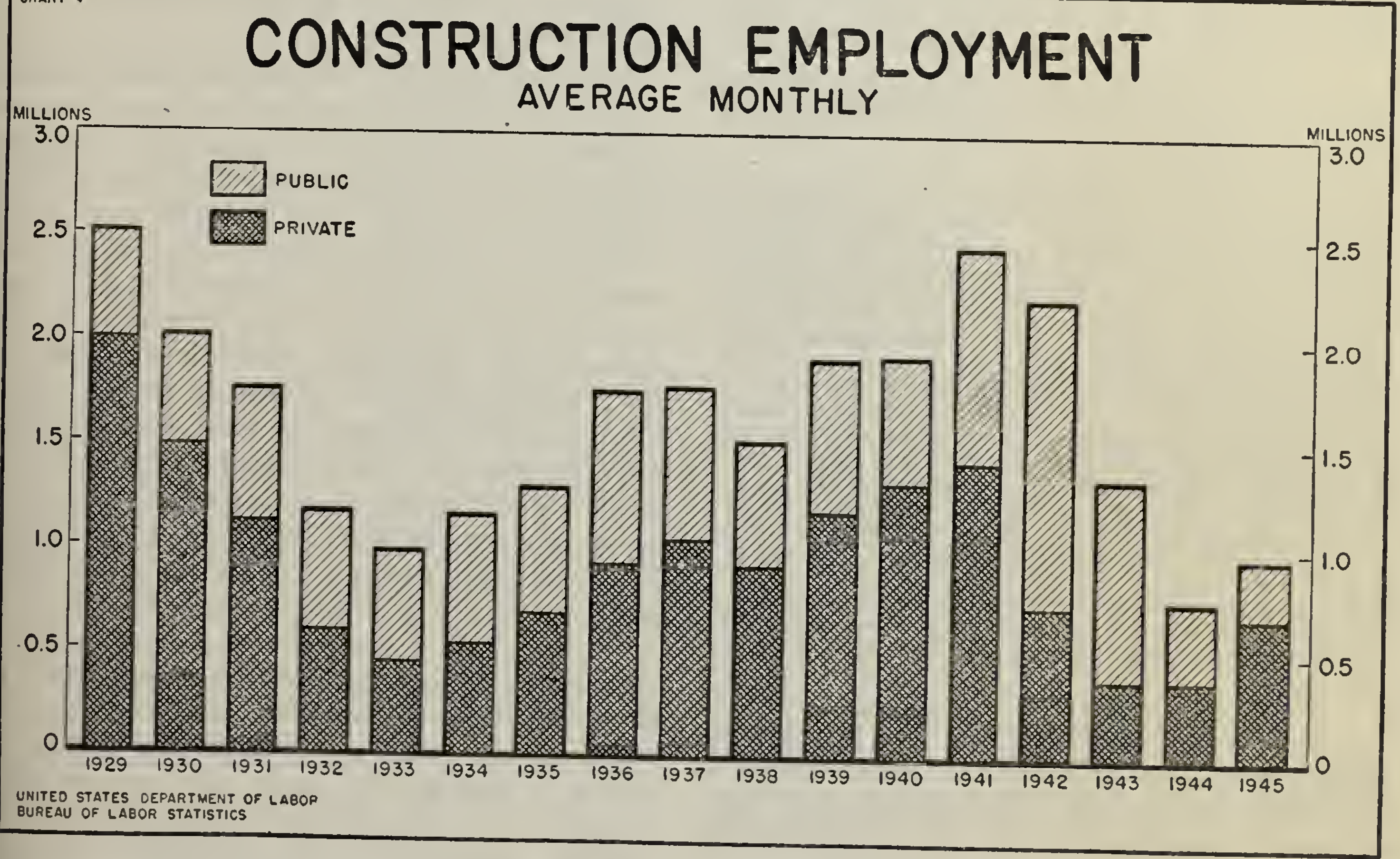
About half the 2 million persons engaged on new construction in 1942 were working on federally financed nonresidential building projects such as barracks, ordnance plants, shipbuilding and repair facilities, and warehouses. This type of employment, which declined over 40 percent between 1942 and 1943 and another 63 percent in the following year, dropped to a monthly average of 157,000 in 1945.

Because of the need for emergency housing and highways to move war goods, Federal residential building and non-Federal street and highway construction were the next most important types of public projects in providing employment in the defense and early war periods. About 85,000 workers were employed on the former and 115,000 on the latter in 1941. By 1945, however, the respective averages were 11,000 and 28,000.

Home construction has been the most important segment of private building, and in 1941, the very good housing year, 627,000 workers were employed on privately financed residential building. A rapid decline to an average of 256,000 in 1942 was brought about by the initiation of construction controls in April of that year. In 1944, the monthly employment figure for new private residential construction averaged only 88,000; but it increased by almost 50 percent in 1945.

Both residential and nonresidential building were given impetus by the lifting of wartime controls in 1945; however, the backlog of ready funds and completed plans was especially great in business and industry. Although privately financed nonresidential building accounted for only about half as much employment as residential building in 1941, the relationship was reversed as soon as the war ended. In 1945 an average of 200,000 persons a month were working on private new nonresidential building, compared with 129,000 on new housing construction.

CHART 4



UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS

Construction compared with total nonagricultural employment

An approximation of the weight of construction in the whole nonagricultural employment picture is given in table 4. It should be noted that figures shown for employment in all nonagricultural establishments exclude the self-employed, working proprietors, and firm members, whereas estimates for construction employment include such persons.

In addition, the construction employment series is designed to show the total employment effect of construction activity and, therefore, includes employees of nonconstruction (or multi-industry) organizations who may engage in construction. For example, a firm concerned principally with the marketing of lumber may at the same time contract for and build houses. Workers of such a firm would be counted in the nonagricultural series under wholesale or retail trade and again in the construction series under residential building.

Recognizing that the two series are not directly comparable because of the inclusion of self-employed and firm members in construction estimates, the series do, nevertheless, provide a rough measure of the relative importance of all construction employment to total nonagricultural employment.

Construction employment appears from such a comparison to be an exaggerated indicator of the trend in all nonfarm work, because it comprises a much greater proportion of total nonagricultural

TABLE 4.—*Estimated construction employment compared with nonagricultural employment, 1929–45*[1]

Year	Average monthly employment (in thousands)		Percent of construction employment on—		Construction employment as percent of all nonagricultural employment		
	Nonagricultural	Construction	Public projects	Private projects	All construction	Public	Private
1929	31,149	2,508	20.4	79.6	8.1	1.7	6.4
1930	28,996	2,102	29.3	70.7	7.2	2.1	5.1
1931	26,125	1,759	36.3	63.7	6.7	2.4	4.3
1932	22,921	1,165	48.8	51.2	5.1	2.5	2.6
1933	23,060	976	53.7	46.3	4.2	2.3	1.9
1934	25,449	1,151	53.3	46.7	4.5	2.4	2.1
1935	26,599	1,292	47.4	52.6	4.9	2.3	2.6
1936	28,809	1,763	47.8	52.2	6.1	2.9	3.2
1937	30,627	1,778	40.7	59.3	5.8	2.4	3.4
1938	28,663	1,524	39.8	60.2	5.3	2.1	3.2
1939	30,353	1,909	38.1	61.9	6.3	2.4	3.9
1940	31,784	1,916	31.1	68.9	6.0	1.9	4.1
1941	35,668	2,446	41.8	58.2	6.9	2.9	4.0
1942	38,447	2,214	67.2	32.8	5.8	3.9	1.9
1943	40,185	1,338	71.5	28.5	3.3	2.4	.9
1944	39,689	762	50.8	49.2	1.9	1.0	.9
1945	38,144	968	29.2	70.8	2.5	.7	1.8

[1] Data on employment in all nonagricultural establishments cover wage and salaried employees and exclude self-employed persons, working proprietors, and firm members. All of the groups mentioned are included in the construction employment estimates. The wage earners and salaried employees included in the construction series are construction and special trades contractors' wage-earner and salaried employees, whether working at the construction site or in the contractors' offices, shops, or yards.

The construction employment estimates are designed to show all employment afforded by construction activity; thus, they cover all persons performing work on, or employed on work directly incident to, new construction, major additions and alterations, and building repairs of the type for which building permits are usually issued. These employees are included even if working as force-account workers or as contract-construction employees in industries classified as nonconstruction for the purposes of the nonagricultural series. Persons engaged in maintenance work, however, are not included.

Force-account employees are workers hired, not through a contractor, but directly by a business or government agency, and utilized as a separate work force to perform nonmaintenance construction work on the agency's own properties.

employment in prosperous peacetime years than in depression years. Construction activity is affected so directly by good or bad times that employment in this field increases or falls off proportionately more than in industry as a whole.

Employment on construction projects comprised over 8 percent of the estimated total (31.1 million workers) employed in all nonagricultural establishments in 1929. After this boom year, the proportion of construction employment to total nonagricultural employment dropped each year to an average of 4.5 percent in the depression years 1933–35. Construction employment rose again in importance in the total nonagricultural labor force beginning with 1936; between 1936 and 1940 construction site workers comprised about 6 percent of all nonagricultural workers, and in 1941 the proportion was 6.9 percent.

Total industrial employment continued to rise steeply during the war years, while restraints on nonessential construction activity, instituted in 1942, and subsequent completion of the major part of the war construction program caused employment in the construction industry to fall off heavily. In 1943 construction employment comprised only 3.3 percent of the nonagricultural employed labor force, and in 1944 as little as 1.9 percent. By 1945, construction rose to 2.5 percent of total nonagricultural employment, but that was still below the proportion for the depression year 1933.

Volume of Federal Construction, 1935–45

A good indicator of the fluctuations in Federal construction in response to national programs and policies, is the value of contracts awarded and force-account work started on construction projects financed from Federal funds (either wholly or partially). Construction work by force account under a Federal agency is work for which no contract is let but which is conducted directly by the agency itself. The workers are usually employed for a specific project at completion of which their services may be terminated. Data presented here are a compilation of reports from Federal agencies on the value of construction contracts they awarded or of force-account work they started. Estimates of actual expenditures on all public works, State and local as well as Federal, are given on pages 2 to 6.

During the 11-year period January 1935 to December 1945, Federal construction awards and force-account work came to almost 29 billion dollars.[4] Considerably more than half of that amount, or 16 billion dollars, was for nonresidential building construction; the remainder, over 12 billion dollars, was spent for such construction projects as highways and roads, housing, airports, bridges, reclamation, and water supply and sewerage systems. In addition to projects financed from regular Federal appropriations, four emergency or special construction programs were either in operation or introduced within the 11-year period covered. The first and largest of these was the Public Works Administration program, which began in July 1933 and was practically completed by December 1941. The next largest program, financed from Work Projects Administration funds, but operated by other Federal agencies, included projects other than work relief and was in effect during the period July 1935 to December 1941. The other two programs were the low-rent housing projects under the United States Housing Authority, and the construction of schools, water systems, sewer systems, and various other types of facilities needed in crowded war areas under the War Public Works program begun in late 1941.

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[4] Data presented here somewhat understate the final value of contrac awards, since it was impractical to ascertain every revision made in initia construction estimates, and projects classified as secret by the militar (including atomic bomb production facilities) are excluded.

Trend, 1935–45

Although there has always been some construction financed by regular Federal appropriations, the PWA program in 1933 was the forerunner of large-scale Federal public works programs. From 1935 to 1939 well over three-fifths of Federal construction award values were for PWA and WPA projects. After extension of PWA from funds made available by the Emergency Relief Appropriation Act of 1935 and the inception of the WPA program financed from the same act, the contracts awarded or force-account work started in 1935 amounted to somewhat over 1¼ billion dollars—87 percent of the total for the year. Continuance of the PWA and WPA programs in 1936 raised the value of Federal awards slightly—from 1,478 million to 1,543 million dollars. Smaller PWA appropriations and a reduction in amounts transferred from WPA funds to Federal construction work in 1937 resulted in a drop in total Federal awards of nearly half a billion dollars. The 1937 figure of 1,046 million dollars was the lowest for any year, except 1945, during the 11-year period. Passage of the Public Works Administration Act of 1938 and the inception of the USHA program, however, caused total awards to mount again in 1938 and remain steady in 1939.

The next few years witnessed the introduction of the "defense program," in June 1940 and the "war program," after the attack on Pearl Harbor. PWA and WPA were decreasing in importance, but the defense program, including the first cantonment camp project, pushed 1940 Federal construction awards to $2,395,000,000, well over two-fifths above the 1939 figure. With increased demands for military camps and posts, and expanded construction of such production facilities as shipyards and aircraft and other munitions plants, the total for 1941 rose abruptly to $6,014,000,000, over 2½ times that for the previous year. The peak was reached in 1942 when contract awards for the war construction program amounted to more than $7,814,000,000, or 27 percent of the total for the entire period 1935–45.

A sudden drop occurred the following year, however, to a figure near the 1940 level because many of the most important war construction projects were already under way. Thus, in the 4-year period 1940–43, nearly 19 billion dollars worth of contracts were awarded for defense and war purposes, amounting to 66 percent of the 11-year total and over 2½ times the total for the 5 years 1935–39.

TABLE 5.—*Value of contracts awarded and force-account work started on construction financed wholly or partially from Federal funds, by type of project, 1935–45*[1]

Type of project	Value (in thousands of dollars)											
	Total 1935–45	1945	1944	1943	1942	1941	1940	1939	1938	1937	1936	1935
All types of projects	28,558,712	1,029,571	1,342,536	2,518,878	7,814,446	6,014,091	2,394,938	1,686,874	1,689,992	1,046,067	1,543,246	1,478,073
Airport construction[2]	1,616,002	41,219	110,872	243,443	579,176	499,427	137,112	4,753	(6)	(6)	(6)	(6)
Building construction[3]	17,975,019	617,001	875,002	1,698,079	6,130,389	4,422,131	1,537,910	669,222	676,542	344,567	561,394	442,782
Residential	1,997,903	53,133	101,491	375,471	549,472	322,248	244,671	231,071	[7]31,809	[7]17,239	[7]63,465	[7]7,833
Nonresidential	15,997,116	563,868	773,511	1,322,608	5,580,917	4,099,883	1,293,239	438,151	644,733	327,328	497,929	434,949
Conservation and development	2,246,112	72,150	112,415	155,737	217,795	199,684	197,589	225,423	303,874	133,010	189,710	438,725
Reclamation	1,042,199	30,765	66,679	101,270	150,708	41,880	69,028	115,612	175,382	59,051	73,797	158,027
River, harbor, and flood control	1,203,913	41,385	45,736	54,467	67,087	157,804	128,561	109,811	128,492	73,959	115,913	280,698
Electrification[4]	787,489	131,914	49,428	24,391	71,487	86,680	96,039	130,045	104,981	62,342	24,685	5,497
Highway, streets and roads	3,515,091	100,969	111,805	161,852	347,988	446,903	364,048	355,701	372,238	360,865	511,685	381,037
Water and sewerage	885,637	23,020	31,046	37,694	152,343	23,672	16,809	118,131	116,314	75,558	154,807	136,243
All other types[5]	1,533,362	43,298	51,968	197,682	315,268	335,594	45,431	183,599	116,043	69,725	100,965	73,789

[1] Data somewhat understate the final value of contract awards, since it was impractical to ascertain every revision made in initial construction estimates, and projects classified as secret by the military (including atomic bomb production facilities) are excluded. Figures for 1935 through 1942 include off-continent construction.

[2] Excludes hangars and other buildings, which are included under building construction.

[3] Includes additions, alterations, and repairs.

[4] Covers primarily loans granted by the Rural Electrification Administration. Includes hydroelectric power plants.

[5] Covers forestry, railroad construction, and other types of heavy engineering projects, and various military installations, n.e.c.

[6] Included in "All other types".

[7] Includes nonresidential construction at the site of 3 Resettlement Administration projects for which a breakdown of residential and nonresidential costs is not available.

Further reductions occurred in 1944 as the bulk of the war construction projects were completed; and in 1945 the total dropped to $1,030,000,000, the lowest volume reported in any year in the period under discussion.

Types of projects included in the program

Of all the types of projects undertaken, nonresidential building construction was by far the most important. The money for nonresidential building (16 billion dollars), from 1935 to 1945, was allocated for schools, hospitals, post offices, public buildings of all types, and, in connection with the war program, cantonment camps and barracks; hangars, magazines and storehouses, and the many different types of industrial plants and factories required to produce the supplies and equipment needed by a Nation at war. Next in importance in amount of contract awards was street, road, and highway construction with about 3½ billion dollars. Over four-fifths of this amount was administered under the Public Roads Administration.

Slum-clearance and low-rent housing projects accounted for nearly 2 billion dollars in awards and were built largely under jurisdiction of three agencies: The Housing Division of PWA, the United States Housing Authority, and the Federal Public Housing Authority, the latter having major responsibility for the large war housing program. Airport construction (with awards of $1,616,000,000), river, harbor, and flood-control projects ($1,204,000,000), and reclamation projects ($1,042,000,000) were the only other types to reach the billion-dollar mark.

The reclamation work that was carried on under Federal contract included large dams in the West and the TVA in the South. Enlargement and improvement of the Panama Canal, accounting for more than 275 million dollars appropriated in 1941, and construction of the Midtown Hudson Tunnel of New York City were among the largest heavy-engineering projects accomplished in the 11-year period. Miscellaneous projects swelled the total, especially in 1941 and 1942 when a great number of multiple-use military installations were begun. Sometimes as many as five or six different types of facilities were provided in one project—barracks, roads, sanitation, communication, and training facilities, hospitals, and administration buildings.

Building Construction

Building construction comprises the largest and most violently fluctuating part of total construction activity and strongly influences the behavior of the remainder. A great deal of nonbuilding construction, such as streets and highways, pipe lines, sewer systems, telephone equipment, which follows immediately after or is performed simultaneously with building construction, constitutes the other part of what is practically a joint demand. When building construction rises and falls, therefore, nonbuilding moves in the same direction, although frequently not to the same extreme degree.

During the 30-year period 1915–45, expenditures for building construction in almost every year amounted to at least half the dollar volume of all construction put in place, and in a number of years the proportion was well over three-fifths (table 1). In prosperous years especially, building construction forms the major part of the total.

Trends in City Building

257 cities, 1921–45

To relate current activity to past performances in city building construction, the Bureau of Labor Statistics prepares series showing the annual volume of building construction since 1921 in 257 large cities[5] (tables 6, 7, and 9). From 1929 on, building-construction trends are reflected more accurately through indexes (see table 12), which are based on data from a larger and more representative sample of incorporated places.

Both sets of figures reveal an almost continuous upward trend in permit valuation[6] of building con-

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[5] Cities with population of 25,000 or more, of which there were 412 in 1940. The 257 cities are marked with an asterisk in the appendix—Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945 (p. 57).

[6] Permit valuation figures are estimates based on reports of construction cost as recorded on building permits, and on notifications of Federal building construction contracts awarded.

TABLE 6.—*Estimated valuation, and indexes, of building construction for which permits were issued in 257 cities, by class of construction, 1921–45*[1]

[Indexes: 5-year average 1935–39 = 100]

Year	All building construction		New residential buildings		New nonresidential buildings		Additions, alterations, and repairs	
	Valuation	Index number	Valuation	Index number	Valuation	Index number	Valuation	Index number
1921	$1,837,841,665	166.0	$933,868,739	187.9	$631,167,199	167.8	$272,805,727	116.5
1922	2,767,782,634	250.0	1,614,891,486	324.9	869,512,807	231.2	283,378,341	121.0
1923	3,398,884,406	307.0	1,998,393,400	402.1	1,065,624,238	283.4	334,866,768	143.0
1924	3,508,266,587	316.9	2,038,427,392	410.2	1,125,290,699	299.2	344,548,496	147.2
1925	4,028,066,479	363.8	2,390,390,182	481.0	1,300,494,326	345.8	337,181,971	144.0
1926	3,826,927,204	345.7	2,222,874,645	447.3	1,262,738,028	335.8	341,314,531	145.8
1927	3,478,604,263	314.2	1,906,003,260	383.5	1,231,785,870	327.6	340,815,133	145.6
1928	3,304,699,712	298.5	1,859,423,751	374.1	1,135,569,986	302.0	309,705,975	132.3
1929	2,933,212,041	264.9	1,433,715,542	288.5	1,147,796,781	305.2	351,699,718	150.2
1930	1,697,724,944	153.3	601,269,847	121.0	849,386,873	225.9	247,068,224	105.5
1931	1,237,457,788	111.8	426,270,111	85.8	622,830,444	165.6	188,357,233	80.5
1932	481,219,448	43.5	103,445,244	20.8	275,509,435	73.3	102,264,769	43.7
1933	383,363,271	34.6	92,175,207	18.5	183,241,951	48.7	107,946,113	46.1
1934	413,335,750	37.3	78,322,545	15.8	197,407,829	52.5	137,605,376	58.8
1935	690,980,829	62.4	213,547,937	43.0	288,503,017	76.7	188,929,875	80.7
1936	1,074,041,134	97.0	460,957,356	92.7	376,062,438	100.0	237,021,340	101.2
1937	1,187,141,752	107.2	475,966,515	95.8	434,602,894	115.6	276,572,343	118.1
1938	1,185,561,486	107.1	580,028,372	116.7	382,633,246	101.8	222,899,868	95.2
1939	1,398,020,069	126.3	754,471,224	151.8	398,430,016	106.0	245,118,829	104.7
1940	1,760,881,878	159.0	797,284,564	160.4	720,323,251	191.6	243,274,063	103.9
1941	2,043,689,769	184.6	869,659,543	175.0	906,299,499	241.0	267,730,777	114.4
1942	1,651,899,995	149.2	478,756,747	96.3	986,022,154	262.2	187,121,094	79.9
1943	796,629,716	72.0	327,986,684	66.0	301,560,271	80.2	167,082,761	71.4
1944	720,343,577	65.1	207,038,816	41.7	291,385,390	77.5	221,919,371	94.8
1945	1,172,364,909	105.9	350,175,495	70.5	505,226,097	134.4	316,963,317	135.4

[1] Includes value of building construction in the 257 cities for which Federal construction contracts were awarded.

TABLE 7.—*Estimated number of new family dwelling units for which permits were issued*[1] *in relation to population, in 257 cities, and index of residential rents, 1910–45*

[Indexes: 5-year average 1935–39 = 100]

Year	Population[2] (in thousands)	New family dwelling units		New family dwelling units per 10,000 population		Index of residential rents[4]
		Number[3]	Index	Number	Index	
1910	28,629	238,000	184.0	83.1	298.3	(5)
1911	29,424	241,000	186.3	81.9	294.0	(5)
1912	30,218	245,000	189.4	81.1	291.1	(5)
1913	31,013	228,000	176.2	73.5	263.8	92.2
1914	31,808	223,000	172.4	70.1	251.6	92.2
1915	32,603	237,000	183.2	72.7	260.9	92.9
1916	33,397	241,000	186.3	72.2	259.2	94.0
1917	34,192	116,000	89.7	33.9	121.7	93.2
1918	34,987	61,000	47.2	17.4	62.5	94.9
1919	35,782	166,000	128.3	46.4	166.5	102.7
1920	36,576	110,000	85.0	30.1	108.0	120.7
1921	37,409	224,545	173.6	60.0	215.4	138.6
1922	38,243	377,305	291.6	98.7	354.3	142.7
1923	39,076	453,673	350.7	116.1	416.7	146.4
1924	39,909	442,096	341.7	110.8	397.7	151.6
1925	40,742	491,032	379.6	120.5	432.5	152.2
1926	41,575	462,208	357.3	111.2	399.1	150.7
1927	42,409	406,095	313.9	95.8	343.9	148.3
1928	43,242	388,678	300.4	89.9	322.7	144.8
1929	44,075	244,394	188.9	55.4	198.8	141.4
1930	44,908	125,315	96.9	27.9	100.1	137.5
1931	45,108	98,158	75.9	21.8	78.2	130.3
1932	45,308	27,380	21.2	6.0	21.5	116.9
1933	45,507	25,885	20.0	5.7	20.4	100.7
1934	45,709	20,952	16.2	4.6	16.5	94.4
1935	45,906	55,490	42.9	12.1	43.4	94.2
1936	46,106	113,646	87.8	24.6	88.3	96.4
1937	46,306	117,307	90.7	25.3	90.8	100.9
1938	46,505	157,008	121.4	33.8	121.3	104.1
1939	46,705	203,392	157.2	43.5	156.1	104.3
1940	46,905	220,928	170.8	47.1	169.1	104.6
1941	46,905	232,345	179.6	49.5	177.7	106.2
1942	46,905	142,628	110.2	30.4	109.1	108.5
1943	46,905	115,122	89.0	24.5	88.1	108.0
1944	46,905	63,711	49.2	13.6	48.7	108.2
1945	46,905	78,173	60.4	16.7	59.9	108.3

[1] Includes number of units for which Federal construction contracts were awarded.

[2] Population figures are actual enumerations for the 257 cities in the census years 1910, 1920, 1930, and 1940; estimates for other years prior to 1940 are straight-line interpolations of Census figures while those subsequent to 1940 are based on the 1940 Census, since no further information is available.

[3] Estimates for the period prior to 1921 are based on building-permit data made available by the building-permit survey which the Bureau of Labor Statistics conducted in cooperation with the Work Projects Administration. Data were available for 118 cities for 1910 and for a progressively greater number of cities each successive year, reaching a total of 229 cities in 1926. Since that time, all 257 cities have reported directly to the Bureau.

[4] Bureau of Labor Statistics index of rents for wage earners and lower-salaried workers in large cities.

[5] Data not available.

TABLE 8.—*Five cities leading in permit valuation*[1] *for building construction, 1921–45*

Year and city	Permit valuation
1921: New York	$442,285,248
Chicago	133,027,910
Cleveland	86,680,023
Los Angeles	82,761,386
Detroit	58,086,053
1922: New York	645,176,481
Chicago	229,853,125
Los Angeles	121,206,787
Philadelphia	114,190,525
Detroit	93,614,593
1923: New York	789,265,335
Chicago	334,164,404
Los Angeles	200,133,181
Detroit	129,719,831
Philadelphia	128,227,405
1924: New York	836,043,604
Chicago	308,911,159
Detroit	160,547,723
Los Angeles	150,147,516
Philadelphia	141,402,655
1925: New York	1,020,604,713
Chicago	373,803,571
Detroit	180,132,528
Philadelphia	171,034,280
Los Angeles	152,646,436
1926: New York	1,039,670,572
Chicago	376,808,480
Detroit	183,721,443
Philadelphia	140,093,075
Los Angeles	123,006,215
1927: New York	880,333,455
Chicago	365,065,042
Detroit	145,555,647
Los Angeles	123,027,139
Philadelphia	117,590,650
1928: New York	916,671,855
Chicago	323,509,048
Detroit	129,260,285
Philadelphia	112,225,865
Los Angeles	101,678,768
1929: New York	942,297,219
Chicago	210,797,640
Philadelphia	$104,405,545
Detroit	100,567,497
Los Angeles	93,020,160
1930: New York	410,165,789
Chicago	85,749,167
Los Angeles	75,356,715
Philadelphia	53,141,770
Washington	48,823,891
1931: New York	362,864,076
Chicago	66,693,556
Washington	52,588,151
Los Angeles	41,421,685
Philadelphia	35,265,216
1932: New York	78,851,588
Washington	59,927,302
Philadelphia	17,862,661
Los Angeles	17,785,627
San Francisco	16,465,092
1933: New York	86,554,567
San Francisco	58,198,282
Los Angeles	15,534,384
St. Louis	13,067,666
Philadelphia	12,099,056
1934: New York	100,908,487
Washington	20,928,631
Chicago	17,032,681
Los Angeles	14,981,777
Boston	10,374,194
1935: New York	167,027,932
Washington	47,101,408
Los Angeles	33,465,811
Detroit	22,218,027
Chicago	18,812,060
1936: New York	224,066,924
Los Angeles	64,104,825
Washington	51,112,826
Detroit	43,052,100
Chicago	35,911,134
1937: New York	314,604,086
Los Angeles	64,614,089
Detroit	56,543,060
Washington	43,294,632
Philadelphia	37,284,118
1938: New York	$341,360,748
Los Angeles	70,968,526
Detroit	53,471,180
Washington	51,577,522
Chicago	29,441,756
1939: New York	247,084,627
Los Angeles	74,090,818
Washington	71,436,886
Detroit	62,773,163
Chicago	54,601,244
1940: New York	249,895,957
Los Angeles	91,171,430
Detroit	88,904,018
Philadelphia	75,862,763
Chicago	66,785,392
1941: New York	214,442,061
Los Angeles	121,958,491
Detroit	108,488,952
Washington	74,997,358
Chicago	65,714,457
1942: Chicago	98,289,672
Los Angeles	92,301,676
New York	85,363,638
Washington	80,697,324
Philadelphia	72,522,457
1943: Chicago	69,775,158
Detroit	46,977,764
Los Angeles	39,590,679
San Francisco	28,432,173
New Orleans	27,663,522
1944: Los Angeles	66,295,181
New York	41,401,757
Chicago	35,751,179
Detroit	34,160,608
Oakland	24,689,185
1945: Los Angeles	91,569,739
Detroit	67,974,844
Chicago	63,080,285
Houston	45,335,871
New York	35,090,013

[1] Includes value of Federal construction contracts awarded.

New York City data are not exactly comparable throughout the years. From 1921 through 1944 figures presented here are based on applications filed rather than on permits issued. For the years 1942 through 1944 large projects which were definitely determined to represent postwar plans have been omitted. Figures for 1945 are based on inspection records and represent work actually started.

· Data for Boston are based on permit applications filed rather than building permits issued.

struction, commencing immediately after the depression low in 1933 and lasting through 1941. This was followed by a sharp decline in 1942, further decreases in 1943 and 1944, and the first signs of recovery in 1945.

Permit valuations in the 257 cities in 1944 were less than half as great as in 1942, the first war year, but were almost double the figure for 1933 when building slumped to the lowest point recorded in the 2½ decades for which data are shown. Valuations were highest in the 1920's, especially 1925 and 1926. Only in 1941 when national-defense building was in its stride has any year since 1929 even approached the level of building construction between 1922 and 1929. Except for 1935, the 1944 figure was the lowest in a decade; however, in 1945 valuations rose again by 63 percent.

Usually residential building[7] exceeds nonresidential, and in prosperous years it accounts for the major part of building activity. In the depression years 1930–35, on the other hand, and in the defense and war years 1941 and 1942, the reverse was true. In fact, new residential building valuations fell so low in 1933 and 1934 that they were considerably below those reported for additions, alterations, and repairs. In 1942 permit valuations in the 257 cities for nonresidential building were more than twice the residential, mainly because of extensive construction of military and war industry facilities and rigid curtailment under Government order of nonessential building.

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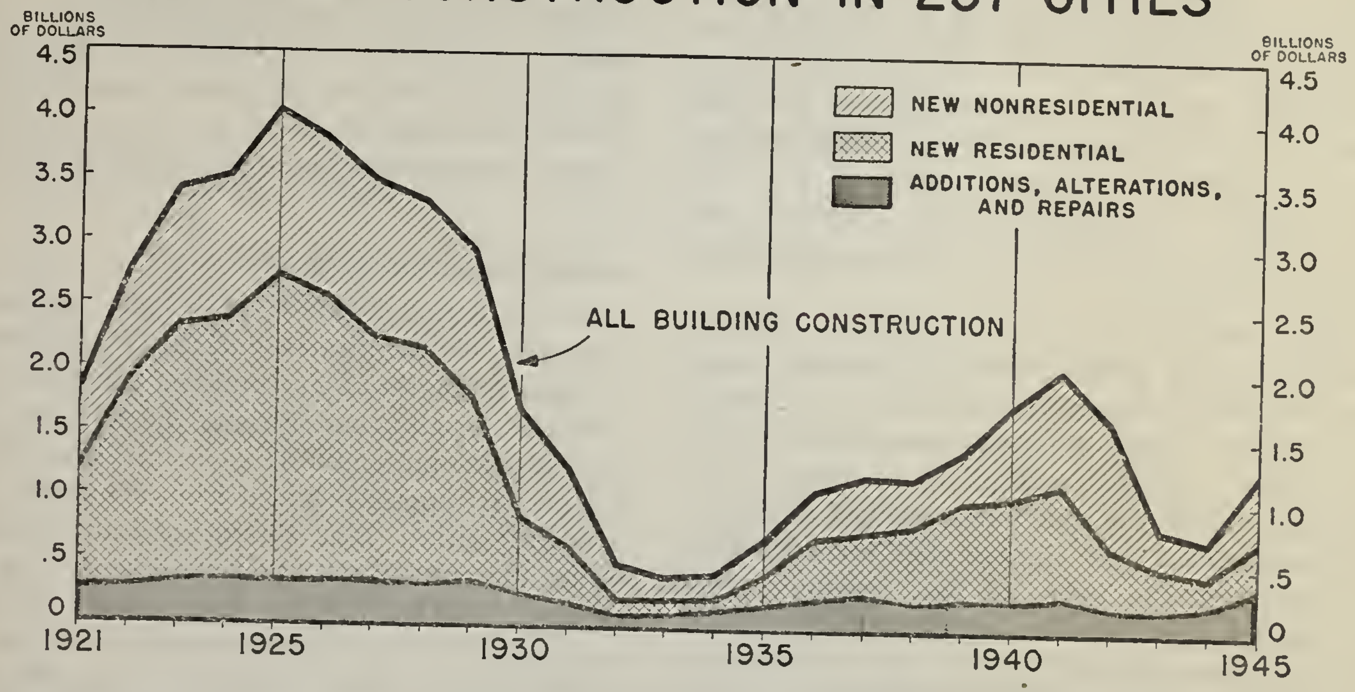
[7] Building permit data on residential construction include hotels, lodging houses, and such miscellaneous living quarters as dormitories and clubs, in addition to the housekeeping accommodations which are referred to as "new family dwelling units" in other parts of this section.

CHART 5

ESTIMATED PERMIT VALUATION OF BUILDING CONSTRUCTION IN 257 CITIES



UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS

INCLUDES VALUE OF BUILDING CONSTRUCTION IN THE 257 CITIES FOR WHICH FEDERAL CONSTRUCTION CONTRACTS WERE AWARDED

All three classes of building construction shared in the sharp decrease in activity from 1942 to 1943; additions, alterations, and repairs had the smallest decline and nonresidential building the greatest, so that again in 1943 the volume of residential building was larger than that of nonresidential. In 1944, when construction of war housing was nearly completed, residential permit valuations once more dropped below nonresidential and retained that relative position in 1945.

Five leading cities.—New York City[8] led all other cities for 21 years (1921–41) with respect to the dollar volume of permits issued for building construction. In 1942, however, New York dropped to third place, and in 1943 it did not even appear among the five leading cities. Chicago moved into the lead in 1942 and remained there in 1943; Los Angeles ranked first in 1944 and 1945.

New Orleans, Oakland, and Houston, in 1943, 1944, and 1945, respectively, were among the leading five for the first time within the 2½ decades under survey. Construction of enormous aircraft and shipbuilding facilities accounted for the greatest portion of increased activity in New Orleans and Oakland. Houston came to the fore in 1945 mainly because a huge Navy hospital building program got under way in the first part of the year and a spurt in private commercial building took place as soon as construction controls were lifted in the latter part of the year.

New dwelling units.—Estimates of the number of new dwelling units for which permits were issued in the 257 cities, each year from 1910 to 1945, are presented in table 7. This series provides a reliable measure of year-to-year fluctuations in urban residential construction during the decade which included World War I. Since that time, however, the urban population of the country has been growing at an increasingly greater rate than in the 257 cities. Other biases inherent in fixed samples have also affected this series. For the period commencing with 1920, when these biases become noticeable, more reliable estimates of fluctuations in residential construction will be found in tables 13 and 14, which show the number of new dwelling units started in all urban and rural nonfarm areas.

Permits were issued for more new dwelling units in the 257 cities in 1941 than in any other year after 1929. Although the total of the 232,000 homes shown in table 9 for 1941 was over 11 times that for the low year 1934, it was only about half the volume for each year 1923 through 1926. By 1944 the number had dropped to only a little over a fourth of the 1941 figure, but was still 3 times the 1934 volume. There was a reversal of the down-trend in 1945, particularly in the last quarter of the year when wartime restrictions on all construction were lifted. The total in 1945 was 23 percent higher than in the preceding year.

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[8] Data for New York City are not exactly comparable throughout the years. From 1921 through 1944 figures presented here are based on applications iled rather than on permits issued. For the years 1942 through 1944 large rojects which were definitely determined to represent postwar plans have een omitted. Figures for 1945 are based on inspection records and repreent work actually started.

Though the Bureau of Labor Statistics index of residential rents moves within a narrower range than the index of new dwelling units for which permits were issued, it follows approximately the same cyclical phases, except in wartime. For example, in 1942 the rent index reached a 10-year high and remained at almost that level through 1945, whereas the index of new dwelling units decreased sharply in each year from 1942 through 1944. Increased demand, coupled with curtailment of all but the most essential building, tended to push up rents. Undoubtedly, without rent control initiated with the Emergency Price Control Act of 1942, the rent indexes for that and following years would have been considerably higher.

TABLE 9.—*Estimated number of new family dwelling units for which permits were issued in 257 cities, by type of structure, 1921–45*[1]

Year	Number of new family dwelling units in—				Percent of new family dwelling units in—		
	All types of structures	1-family structures	2-family[2] structures	Multi-family[3] structures	1-family structures	2-family[2] structures	Multi-family[3] structures
1921	224,545	130,873	38,858	54,814	58.3	17.3	24.4
1922	377,305	179,364	80,252	117,689	47.5	21.3	31.2
1923	453,673	207,632	96,444	149,597	45.8	21.2	33.0
1924	442,096	209,578	94,717	137,801	47.4	21.4	31.2
1925	491,032	225,222	86,133	179,677	45.9	17.5	36.6
1926	462,208	188,074	64,131	210,003	40.7	13.9	45.4
1927	406,095	155,512	54,320	196,263	38.3	13.4	48.3
1928	388,678	136,907	43,098	208,673	35.2	11.1	53.7
1929	244,394	98,164	27,512	118,718	40.2	11.2	48.6
1930	125,315	57,311	15,145	52,859	45.7	12.1	42.2
1931	98,158	48,310	11,310	38,538	49.2	11.5	39.3
1932	27,380	19,524	3,400	4,456	71.3	12.4	16.3
1933	25,885	14,443	2,128	9,314	55.8	8.2	36.0
1934	20,952	12,570	1,446	6,936	60.0	6.9	33.1
1935	55,490	31,021	3,008	21,461	55.9	5.4	38.7
1936	113,646	59,099	5,261	49,286	52.0	4.6	43.4
1937	117,307	66,238	7,316	43,753	56.5	6.2	37.3
1938	157,008	78,582	7,759	70,667	50.1	4.9	45.0
1939	203,392	117,693	16,302	69,397	57.8	8.1	34.1
1940	220,928	140,823	21,298	58,807	63.7	9.7	26.6
1941	232,345	163,666	19,396	49,283	70.5	8.3	21.2
1942	142,628	97,050	13,416	32,162	68.0	9.4	22.6
1943	115,122	84,471	10,837	19,814	73.4	9.4	17.2
1944	63,711	48,838	7,342	7,531	76.7	11.5	11.8
1945	78,173	61,349	6,386	10,438	78.5	8.2	13.3

[1] Includes number of new family dwelling units in the 257 cities for which Federal construction contracts were awarded.

[2] Includes 1- and 2-family dwellings with stores.

[3] Includes multifamily dwellings with stores.

Single-family houses formed a higher proportion (79 percent) of the new dwellings in the 257 cities in 1945 than in any other year of active building shown in table 9. Two-family and multifamily dwellings, which were relatively popular during most of the 1920's, made up only 8 percent and 13 percent, respectively, of the total in the last war year.

All urban areas, 1942–45

For the period beginning with 1942, the first year after the United States entered World War II, detailed estimates of city building construction are available for all urban areas of the country. Prior to 1942, data presented were a compilation of building permit reports received from a number of cooperating cities. The Bureau of Labor Statistics began the regular collection of these data in 1920, at first including only the larger cities. Coverage kept expanding until (beginning in 1942) the number of cities reporting contained between 80 and 85 percent of the entire urban population, providing sufficient information to form the basis for total urban estimates.[9] At present, more than 2,500 cities cooperate.

The urban area, by Census definition, comprises all incorporated places with a population of 2,500 or more in 1940 and, by special rule, a small number of unincorporated civil divisions. Non-Federal (private, and State and local government) urban building construction is estimated from the building-permit records which are collected by the Bureau directly from local building officials in every State except Illinois, Massachusetts, New Jersey, New York, North Carolina, and Pennsylvania, where State departments of labor collect and forward the data to the Bureau. Estimates of federally financed building construction in urban areas are made from the notifications of construction contracts awarded, which are obtained by the Bureau from other Federal agencies.

Valuation figures, the basis for statements concerning value, are derived from estimates of construction cost made by prospective builders when applying for permits to build, and the value of contracts awarded by the Federal Government. No land costs are included. Unless otherwise in-

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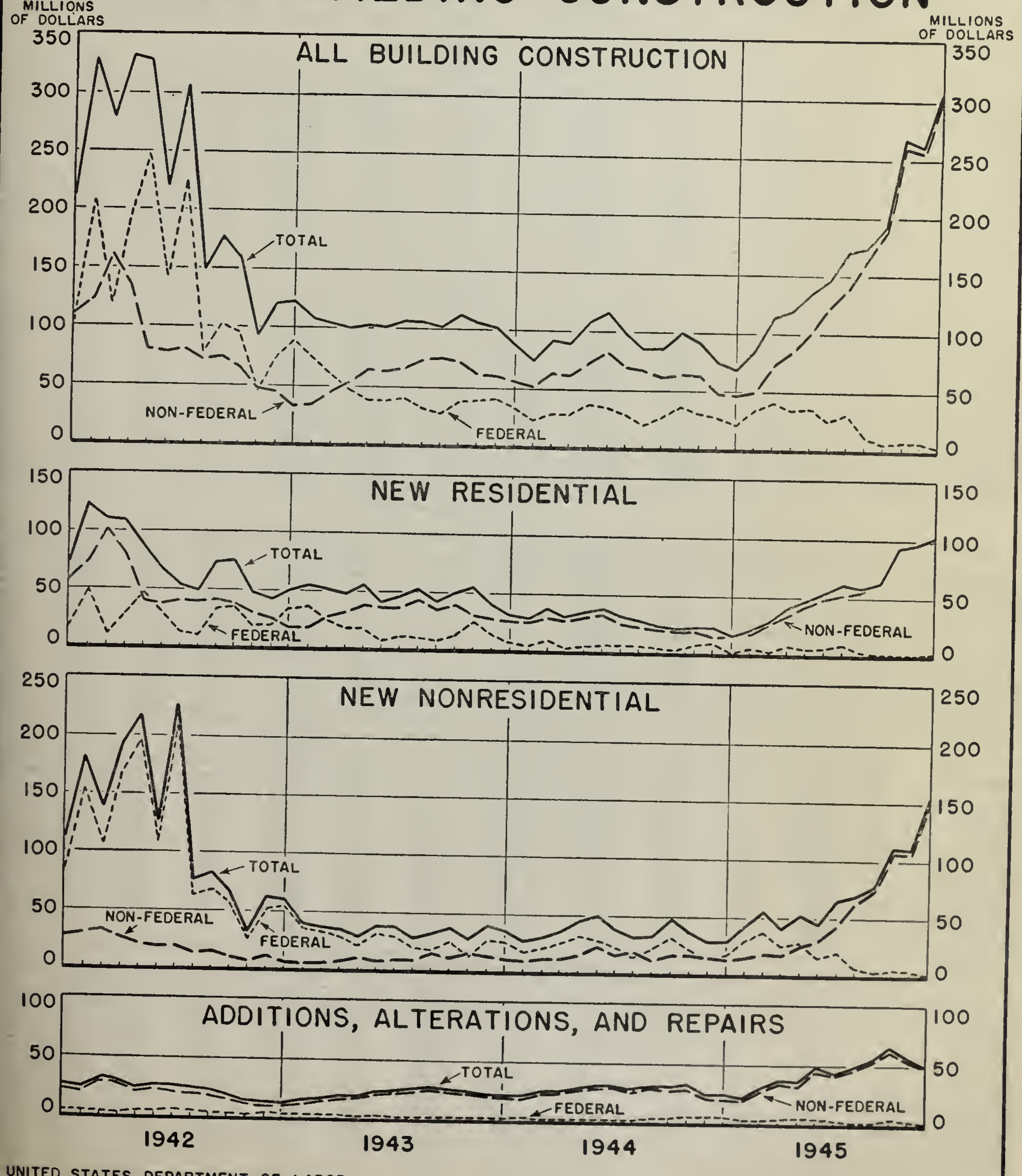
[9] The method of estimating the total urban building volume is essentially the same as that used to obtain the housing volume in all urban areas, which is explained on pp. 28 and 23.

CHART 6

ESTIMATED PERMIT VALUATION OF URBAN BUILDING CONSTRUCTION



UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS

INCLUDES VALUE OF FEDERAL CONSTRUCTION CONTRACTS AWARDED.

TABLE 10.—*Estimated valuation*[1] *of the various classes of building construction for which permits were issued in all urban areas, by source of funds and by month, 1942–45*

Month	Valuation (in thousands of dollars)											
	Total				Non-Federal				Federal			
	1945	1944	1943	1942	1945	1944	1943	1942	1945	1944	1943	1942
	All building construction											
12-month total	1,966,913	1,101,350	1,262,133	2,707,573	1,717,181	753,441	703,584	1,066,958	249,732	347,909	558,549	1,640,615
January	65,722	87,839	121,235	213,422	45,307	55,179	32,711	107,640	20,415	32,660	88,524	105,782
February	82,954	73,582	106,752	332,410	48,694	51,722	33,472	121,977	34,260	21,860	73,280	210,433
March	110,238	91,831	103,388	281,774	69.807	63,491	45,620	160,817	40,431	28,340	57,768	120,957
April	110,410	88,689	99,815	332,228	75,986	60,797	53,335	136,064	34,424	27,892	46,480	196,164
May	131,478	107,312	102,409	327,376	96,513	70,642	64,017	80,882	34,965	36.670	38,392	246,494
June	142,977	116,086	101,276	220,585	118,710	82,000	63,185	76,859	24,267	34,086	38,091	143,726
July	165,029	97,814	106,061	304,458	134,158	68,935	65,674	80,668	30,871	28,879	40,387	223,790
August	167,458	86,290	103,730	149,016	157,354	67,071	73,231	72,114	10,104	19.219	30,499	76,902
September	185,209	86,181	100,620	175,477	180 566	60,615	73,901	73,412	4,643	25,566	26.719	102,065
October	251,670	99,763	110,694	157,840	244,646	63,449	72,420	63,322	7,024	36,314	38,274	94,518
November	249,928	91,535	105,054	93,986	243,904	61,572	66,146	48,161	6,024	29,963	38,908	45,825
December	303,840	74,428	101,099	119,001	301,536	47,968	59,872	45,042	2,304	26,460	41,227	73,959
	New residential building											
12-month total	663,160	345,670	583,496	918,413	631,562	289,270	375,169	602,609	31,598	56,400	208,327	315,804
January	14,538	32,295	50,288	75,310	14,538	26,111	17.352	57,378	0	6,184	32,936	17,932
February	20,391	28,185	53,633	126,945	16 914	25,197	17,578	72,909	3,477	2,988	36,055	54,036
March	27,186	37,063	50,861	111,935	26,333	29,265	27,379	100,608	853	7,798	23,482	11,327
April	39,727	29,460	47,505	109,956	32,617	27,078	30,545	81,605	7,110	2,382	16.960	28,351
May	46,560	33,918	55,333	86,328	42,651	29,886	38,062	40,046	3.909	4,032	17,271	46,282
June	53,291	36,623	41,890	67,753	48,738	31,883	35,794	37,080	4,553	4,740	6,096	30,673
July	60,314	30,484	45,908	52,621	52,152	25,134	35,610	41,031	8,162	5,350	10,298	11,590
August	56,502	27,709	52,227	49,422	54,818	23,064	42,844	39,754	1,684	4,645	9,383	9,668
September	61,011	23,191	41,532	73,020	61,011	20,065	34,316	41,341	0	3,126	7,216	31,679
October	86,919	21,376	49,648	73,832	86,762	19,783	37,931	37,732	157	1,593	11,717	36,100
November	94,380	23,387	53,808	48,172	94,090	17,775	29,758	29,118	290	5,612	24,050	19,054
December	102,341	21,979	40,863	43,119	100,938	14,029	28,000	24,007	1,403	7,950	12,863	19,112
	New nonresidential building											
12-month total	827,614	438,909	439,131	1,510,688	639,342	169,078	106,546	222,998	188,272	269,831	332,585	1,287,690
January	27,973	35,462	59,157	111,404	11,745	10,208	5,539	27,048	16,228	25,254	53,618	84,356
February	42,182	25,624	39,625	181,383	13,563	8,825	4,609	28,193	28,619	16,799	35,016	153,190
March	54,328	30,437	37,338	138,617	17,102	10,967	4,615	31,600	37,226	19,470	32,723	107,017
April	40,792	35,618	34,796	192,764	16,341	11,100	7,028	26,267	24,451	24,518	27,768	166,497
May	51,492	46,180	29,179	216,309	23,935	14,171	9,259	20,113	27,557	32,009	19,920	196,196
June	44,475	49,953	37,607	127,063	29,165	21,801	7,115	17,776	15,310	28,152	30,492	109,287
July	62,837	37,641	37,491	226,288	42,658	15,223	8,154	19,237	20,179	22,418	29,337	207,051
August	66,973	31,630	27,553	75,910	59,856	17,725	7,689	13,133	7,117	13,905	19,864	62,777
September	74,097	33,099	32,479	81,565	70,769	12,340	14,456	13,711	3,328	20,759	18,023	67,854
October	106,488	48,132	36,812	65,515	102,361	16,232	11,421	9,340	4,127	31,900	25,391	56,175
November	103,962	36,521	28,115	31,524	100,201	16,057	14,683	5,873	3,761	20,464	13,432	25,651
December	152,015	28,612	38,979	62,346	151,646	14,429	11,978	10,707	369	14,183	27,001	51,639
	Additions, alterations, and repairs on residential buildings											
12-month total	189,205	136,432	117,631	106,867	188,375	133,195	115,626	105,996	830	3,237	2,005	871
January	7,872	9,554	4,250	8,144	7,765	9,427	4,225	8,112	107	127	25	32
February	8,477	9,045	4,648	8,790	8,243	8,877	4,648	8,758	234	168	0	32
March	12,697	11,155	5,898	12,070	12,651	10,915	5,830	12,070	46	240	68	0
April	13,338	11,081	8,082	13,297	13,267	10,942	7,894	13,297	71	139	188	0
May	14,902	13,568	9,059	9,535	14,790	13,477	9,015	9,535	112	91	44	0
June	19,250	13,861	11,618	9,202	19,196	13,602	11,550	9,148	54	259	68	54
July	17,693	12,769	12,189	9,323	17,653	12,655	12,110	9,323	40	114	79	0
August	18,453	12,319	13,366	9,102	18,397	12,148	13,251	9,083	56	171	115	19
September	19,806	11,258	13,474	8,350	19,716	10,660	13,289	8,350	90	598	185	0
October	21,080	12,290	12,956	8,507	21,067	12,158	12,835	8,007	13	132	121	500
November	19,890	11,188	11,296	6,168	19,890	10,248	10,709	6,063	0	940	587	105
December	15,747	8,344	10,795	4,379	15.740	8,086	10,270	4,250	7	258	525	129
	Additions, alterations, and repairs on nonresidential buildings											
12-month total	286,934	180,339	121,875	171,605	257,902	161,898	106,243	135,355	29,032	18,441	15,632	36,250
January	15,339	10,528	7,540	18,564	11,259	9,433	5,595	15,102	4,080	1,095	1,945	3,462
February	11,904	10,728	8,846	15,292	9,974	8,823	6,637	12,117	1,930	1,905	2,209	3,17
March	16,027	13,176	9,291	19,152	13,721	12,344	7,796	16,539	2,306	832	1,495	2,613
April	16,553	12,530	9,432	16,211	13,761	11,677	7,868	14,895	2,792	853	1,564	1,31
May	18,524	13,646	8,838	15,204	15,137	13,108	7,681	11,188	3,387	538	1,157	4,01
June	25,961	15,649	10,161	16,567	21,611	14,714	8,726	12,855	4,350	935	1,435	3,71
July	24,185	16,920	10,473	16,226	21,695	15,923	9,800	11,077	2,490	997	673	5,14
August	25,530	14,632	10,584	14,582	24,283	14,134	9,447	10,144	1,247	498	1,137	4,43
September	30,295	18,633	13,135	12,542	29,070	17,550	11,840	10,010	1,225	1,083	1,295	2,53
October	37,183	17,965	11,278	9,986	34,456	15,276	10,233	8,243	2,727	2,689	1,045	1,74
November	31,696	20,439	11,835	8,122	29,723	17,492	10,996	7,107	1,973	2,947	839	1,01
December	33,737	15,493	10,462	9,157	33,212	11,424	9,624	6,078	525	4,069	838	3,07

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[1] Includes value of building construction for which Federal contracts were awarded in urban areas.

dicated, only building construction *within the corporate limits* of cities in urban areas is included in the tabulations in this section.

Comparison by type of building.—Permits issued and contracts awarded for new buildings as against additions, alterations, and repairs, represented 90 percent of the total valuation of all urban building construction in 1942, compared with 81 percent in 1943, 71 percent in 1944, and 76 percent in 1945. In contrast to the sharp drop (58 percent) in new construction from 1942 to 1943, valuations of additions, alterations, and repairs as a whole decreased only 14 percent. From 1943 to 1944 new construction continued downward another 23 percent, while addition, alteration, and repair valuations rose 32 percent. Both categories increased from 1944 to 1945—new construction by 90 percent and additions, alterations, and repairs by 50 percent.

Separating the residential additions, alterations, and repairs from the nonresidential, it is significant that there was a rise of 10 percent in valuations in the former between 1942 and 1943, but a decrease of 29 percent in the latter. In the last 2 years of the war, however, both residential and nonresidential additions, alterations, and repairs increased. To some extent, the continued rise from year to year in valuations of residential additions, alterations, and repairs reflects increased emphasis by the National Housing Agency on using existing structures for housing in-migrant war workers. On the other hand, the decline of nonresidential addition, alteration, and repair valuations in 1943 was probably due in part to more extreme reductions for nonresidential than residential building repairs under WPB Conservation Order L–41, issued in April 1942.

In 1944, substantial increases were reported in valuations for additions, alterations, and repairs on both residential and nonresidential buildings. The cumulating volume of old buildings in need of repair, as less new construction was started, probably resulted in greater leniency in authorizing maintenance and repair work on commercial and industrial buildings. In 1945, owing to revocation of the construction limitation order in the last quarter of the year, the valuation figures rose even more sharply—39 percent for residential and 59

TABLE 11.—*Estimated valuation and number of new nonresidential buildings for which permits were issued in all urban areas, by type of building and by source of funds, 1942–45*[1]

Type of building	Total				Non-Federal				Federal			
	1945	1944	1943	1942	1945	1944	1943	1942	1945	1944	1943	1942
	Valuation (in thousands of dollars)											
All types	827,614	438,909	439,131	1,510,688	639,342	169,078	106,546	222,998	188,272	269,831	332,585	1,287,690
Percent of change from preceding year	+88.6	−0.1	−70.9		+278.1	+58.7	−52.2		−30.2	−18.9	−74.2	
Amusement buildings	15,338	12,236	8,327	5,516	14,644	4,603	1,468	4,921	694	7,633	6,859	595
Churches	16,998	5,538	1,808	6,020	16,958	4,731	1,740	5,620	40	807	68	400
Factories and workshops	258,098	159,706	258,181	961,616	210,577	67,967	45,970	99,603	47,521	91,739	212,211	862,013
Public garages	32,368	3,942	957	2,361	32,368	3,431	957	2,361	0	511	0	0
Private garages	29,672	11,005	7,790	16,498	29,672	11,002	7,775	16,498	0	3	15	0
ervice stations	8,393	1,274	817	1,871	8,393	1,272	817	1,871	0	2	0	0
nstitutions	66,268	43,147	40,418	47,113	25,557	3,615	4,112	8,753	40,711	39,532	36,306	38,360
Office buildings	29,983	5,425	2,959	11,256	29,817	4,768	2,440	11,003	166	657	519	253
Public buildings	83,954	98,937	48,882	254,042	3,698	1,689	1,415	2,732	80,256	97,248	47,467	251,310
Public works and utilities	32,286	26,264	12,832	132,607	22,551	16,155	10,572	14,298	9,735	10,109	2,260	118,309
chools and libraries	24,939	17,721	13,923	20,549	17,752	5,386	2,642	9,692	7,187	12,335	11,281	10,857
heds[2]	8,055	4,133	4,908	4,689	8,030	4,081	4,893	4,673	25	52	15	16
tores and warehouses	210,638	45,530	33,276	42,715	210,547	36,327	17,693	37,163	91	9,203	15,583	5,552
All other	10,624	4,051	4,053	3,835	8,778	4,051	4,052	3,810	1,846	0	1	25
	Number of buildings											
ll types	138,416	76,657	79,154	102,850	137,643	74,984	76,976	100,108	773	1,673	2,178	2,742
ercent of change from preceding year	+80.6	−3.2	−23.0		+83.6	−2.6	−23.1		−53.8	−23.2	−20.6	
musement buildings	880	903	564	685	869	783	371	670	11	120	193	15
hurches	1,335	809	494	667	1,334	799	492	664	1	10	2	3
actories and workshops	9,031	4,705	3,662	4,271	8,856	4,248	2,924	3,539	175	457	738	732
ublic garages	3,776	730	409	547	3,776	727	409	547	0	3	0	0
rivate garages	64,171	38,099	34,297	64,342	64,171	38,098	34,296	64,342	0	1	1	0
ervice stations	1,465	291	179	512	1,465	290	179	512	0	1	0	0
nstitutions	532	454	372	319	357	126	156	133	175	328	216	186
ffice buildings	1,964	748	531	537	1,962	740	526	530	2	8	5	7
ublic buildings	380	552	695	1,563	92	84	125	152	288	468	570	1,411
ublic works and utilities	791	643	619	871	763	584	556	638	28	59	63	233
chools and libraries	467	404	377	339	388	254	183	197	79	150	194	142
heds[2]	21,519	15,382	27,404	18,356	21,517	15,378	27,399	18,354	2	4	5	2
tores and warehouses	23,264	7,348	4,869	6,165	23,258	7,284	4,679	6,157	6	64	190	8
ll other	8,841	5,589	4,682	3,676	8,835	5,589	4,681	3,673	6	0	1	3

Includes value of new nonresidential buildings for which Federal contracts were awarded in urban areas.

[2] Includes stables and barns.

percent for nonresidential additions, alterations, and repairs.

Of the new building total in 1942, 62 percent consisted of nonresidential construction, chiefly because the federally financed industrial facilities program was then at its peak and the War Production Board drastically curtailed the volume of privately financed residential construction early in the year. By the end of 1942, the bulk of the industrial facilities program was under way; consequently, in 1943 well over half the new building valuation was for residential construction. Nonresidential building valuations maintained the same dollar volume in 1944, but residential construction continued to decline. Both types of building nearly doubled in the following year, but nonresidential comprised 56 percent of all new building valuations in both 1944 and 1945.

The valuation of urban nonresidential buildings financed with Federal funds dropped 74 percent from 1942 to 1943, and continued to decline, though not so markedly, in 1944 and 1945. Nonfederally financed building also decreased in 1943 (more than 50 percent), but the following year, it turned upward; and in 1945 the dollar volume was almost 3 times greater than in 1944.

Factory buildings, both federally and nonfederally financed, accounted for most of the fall in nonresidential valuations from the 1942 peak, and figured largely in the sharp recovery in private nonresidential building after VJ-day. Privately financed stores and warehouses, office buildings, garages and service stations, schools and libraries, and public utility buildings, followed the same general movement as all new nonresidential building financed with non-Federal funds. The valuation of institutional buildings, on the other hand, was maintained at approximately the same level throughout the war years, chiefly as a result of the hospital program of the Federal Works Agency. As a result of increased recognition of the importance of recreation facilities and community centers in crowded war production areas, amusement and recreation building was the only major type of nonresidential

TABLE 12.—*Indexes of estimated number of new family dwelling units and valuation of the various classes of building construction for which permits were issued in urban areas, 1929–45*[1]

Year and month	Indexes (monthly average 1935–39 = 100) of—				
	Number of new family dwelling units	Valuation			
		All building construction	New residential buildings	New nonresidential buildings	Additions, alterations, and repairs
1929	259.8	283.1	353.5	319.5	187.2
1930	133.4	162.0	151.1	233.3	121.8
1931	101.1	114.3	107.7	159.1	91.2
1932	27.7	41.9	26.7	64.8	44.9
1933	22.8	34.6	22.3	45.0	45.3
1934	18.9	35.4	18.9	44.6	58.4
1935	46.5	60.7	46.4	69.5	79.0
1936	86.5	96.5	91.9	101.4	99.8
1937	92.5	106.6	98.6	112.7	116.3
1938	117.0	108.3	113.9	106.3	98.1
1939	152.5	127.9	149.3	110.1	106.9
1940	180.0	150.2	167.5	146.9	106.2
1941	206.0	166.4	197.6	153.5	115.5
1942: Average	134.9	128.8	113.7	162.4	77.0
January	124.2	122.0	111.9	143.7	89.3
February	208.1	189.7	188.7	234.0	79.8
March	184.4	161.1	166.1	178.9	101.1
April	193.7	189.9	163.1	248.7	97.9
May	149.3	187.0	128.3	279.1	82.3
June	126.5	126.0	100.6	164.0	84.1
July	96.0	174.0	78.2	292.0	85.4
August	97.9	85.1	73.3	97.9	79.2
September	129.5	100.2	108.3	105.2	69.9
October	129.4	90.2	109.5	84.5	61.9
November	86.3	53.7	71.5	40.7	47.8
December	94.3	68.0	64.0	80.4	45.4
1943: Average	100.6	60.1	72.2	47.2	66.2
January	121.4	69.3	74.7	76.3	39.1
February	130.2	61.0	79.8	51.1	44.8
March	104.5	59.1	75.5	48.2	50.4
April	96.8	57.0	70.5	44.8	58.1
May	119.3	58.5	82.2	37.7	59.4
June	81.5	57.9	62.2	48.5	72.3
July	85.3	60.6	68.2	48.4	75.2
August	100.5	59.3	77.6	35.6	79.5
September	80.8	57.5	61.6	41.9	88.3
October	96.4	63.3	73.7	47.5	80.5
November	110.1	60.0	79.9	36.3	76.8
December	80.8	57.7	60.6	50.3	70.6
1944: Average	55.2	52.4	42.8	47.2	87.6
January	63.5	50.2	48.0	45.8	66.7
February	52.2	42.0	41.9	33.1	65.6
March	71.3	52.5	55.0	39.3	80.8
April	55.3	50.7	43.7	46.0	78.4
May	63.2	61.3	50.4	59.6	90.3
June	66.7	66.3	54.4	64.5	98.0
July	56.7	55.9	45.3	48.6	98.5
August	50.4	49.3	41.1	40.8	89.5
September	44.7	49.2	34.4	42.7	99.2
October	43.1	57.0	31.7	62.1	100.4
November	48.8	52.3	34.7	47.1	105.0
December	46.6	42.5	32.6	36.9	79.1
1945: Average	77.1	93.6	82.1	89.0	131.7
January	28.9	37.6	21.6	36.1	77.1
February	35.5	47.3	30.3	54.5	67.0
March	46.3	63.0	40.3	70.1	95.4
April	71.7	63.1	58.9	52.7	99.3
May	72.3	75.1	69.2	66.5	110.9
June	78.7	81.7	79.2	57.4	150.1
July	91.8	94.3	89.6	81.1	138.9
August	75.2	95.7	83.8	86.4	146.1
September	83.0	105.7	90.5	95.6	166.3
October	109.4	143.8	128.9	137.4	193.3
November	118.0	142.8	140.0	134.1	171.3
December	115.1	173.5	151.8	196.0	164.2

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[1] Includes number of new family dwelling units and value of building construction in urban areas for which Federal construction contracts were awarded. Estimates for 1929 through 1941 were derived by applying link relatives to data obtained from all reporting cities, the number of which increased steadily each year to almost 2,500 in 1941; figures for 1942 onward were derived by expanding a carefully stratified sample of approximately 3,000 reporting cities to estimate for all urban areas.

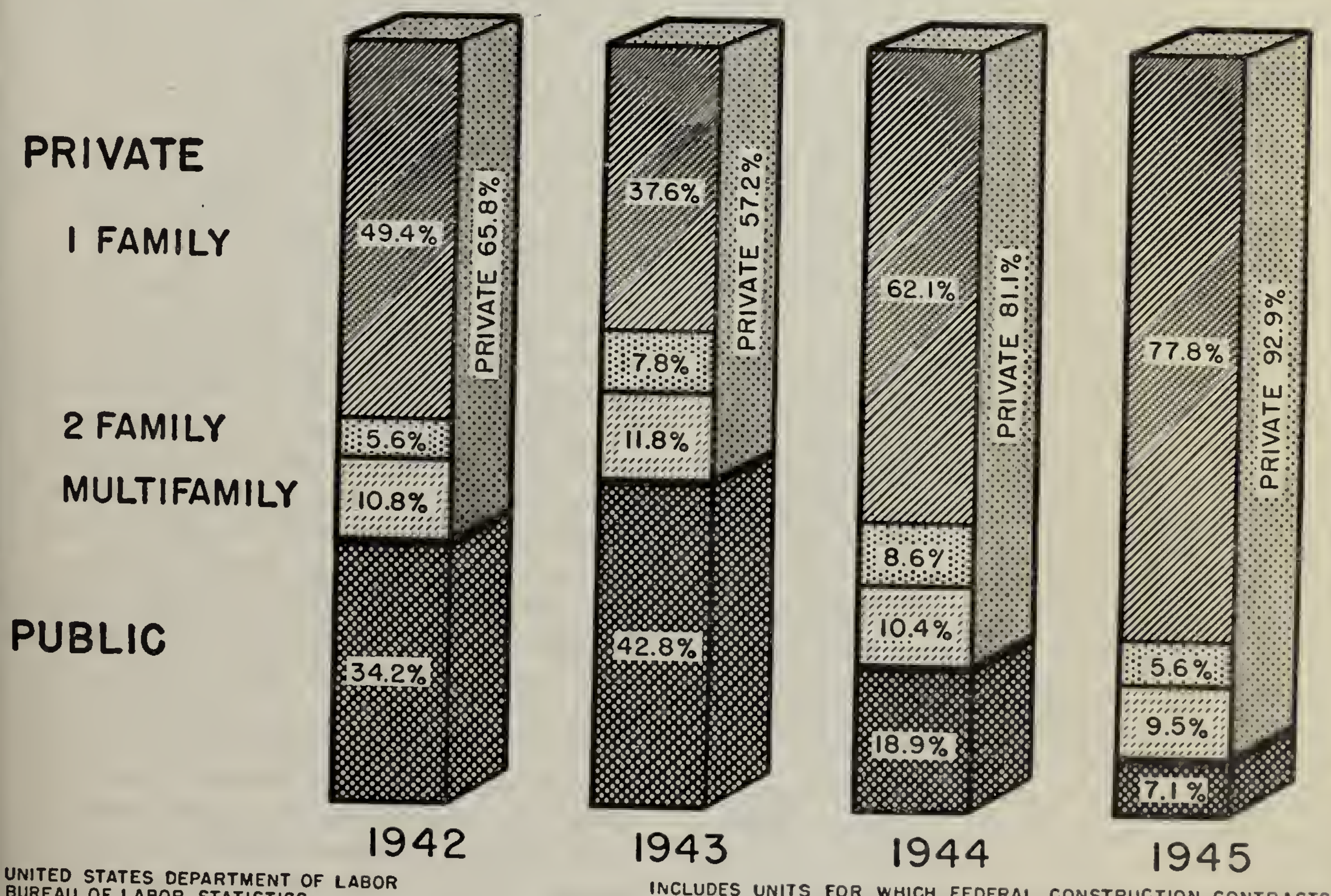
construction which showed an increase in dollar volume in each of the 4 years under discussion.

Permits were issued in urban areas for proportionately fewer private single-family homes in 1943 than in any of the other war years. (See chart 7.) This shift toward two-family and multifamily dwellings (which comprised about a third of all private units in 1943) was caused principally by increased construction of war rental housing under section 608, title VI, of the National Housing Act. Section 608 was added to the act in May 1942, and authorized the insurance of mortgages on large-scale rental projects for war workers. It made liberal financial arrangements available for multifamily rental projects, "having in mind the economies in use of critical material which generally are represented in this type of construction as compared with single-family dwellings."[10] By 1945, less than a sixth of the privately financed units were in two-amily and multifamily structures, and private ingle-family houses comprised well over three-ourths of all new units (both public and private) or which permits were issued or construction ontracts awarded in urban areas.

CHART 7

NUMBER OF NEW URBAN DWELLING UNITS FOR WHICH PERMITS WERE ISSUED

DISTRIBUTION BY SOURCE OF FUNDS AND TYPE OF STRUCTURE



UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS

INCLUDES UNITS FOR WHICH FEDERAL CONSTRUCTION CONTRACTS WERE AWARDED.

The proportion of urban dwellings which were ublicly financed was also greatest in 1943—over two-fifths. In 1945 public housing accounted for less than a tenth of the total, largely as a result of prompt action on the part of the Federal Public Housing Authority in canceling as many war housing construction contracts as possible the moment the end of the war became imminent.

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[10] Ninth annual Report of the Federal Housing Administration, for the year ending December 31, 1942 (p. 23).

Comparison by months.—The monthly volume of urban building construction, for which permits were issued or construction contracts were awarded during the years of World War II, reached its peak of 332 million dollars in February 1942. In April, when the War Production Board issued Conservation Order L-41 halting all nonessential construction, permit valuations were only slightly under the peak. By August 1942 the volume was about half the February high, and during the rest of the year and all of 1943 it remained almost constant at slightly over 100 million dollars a month. In 1944, the monthly average was a little over 90 million dollars; and January 1945 valuations of 66 million dollars were the lowest for any month during the entire war period. From that date on there was an almost continuous upward movement in monthly valuations. Seasonal influences in the earlier months of 1945; VE-day in May, with subsequent partial relaxation of controls over construction; VJ-day in August, clearing the way for total reconversion; complete removal of construction limitation orders in October—all played a part in causing urban building construction to more than quadruple by the end of the year. The December 1945 total of 304 million dollars was only 9 percent under the wartime high.

Residential construction volume varied from 127 million dollars in February 1942 to about a ninth of that amount (15 million dollars) in January 1945. Nonresidential building showed about as great a fluctuation—monthly totals ranging from a peak of 226 million dollars in July 1942 to 26 million dollars in February 1944. The volume of additions, alterations, and repairs, on the other hand, moved within a much narrower range than valuations for new buildings. From the low (12 million dollars) reported in January 1943, the rise in addition, alteration, and repair work was almost constant, except for seasonal variations, and reached the peak (58 million dollars) for the 4 years in October 1945.

The relative importance of the Federal war construction program in the monthly volume of urban building construction was considerably less after 1942. In 1942 Federal valuations accounted for more than half the urban total, in each of 9 months, and in May and July they were much more than twice the non-Federal valuations. In contrast, from April 1943 on, the non-Federal exceeded Federal figures. By December 1945, Federal building valuations (2 million dollars) were only a very small fraction of non-Federal valuations (302 million dollars).

New Housing Units in Nonfarm Areas

Estimates of new housing construction—ordinarily comprising the largest segment of total building construction (discussed in the preceding section) —are made by the Bureau of Labor Statistics for the entire nonfarm area. The dwelling units covered are housekeeping units in new structures. Units provided by conversion of existing structures at the original site, or nonhousekeeping units such as those in dormitories, barracks, rooming houses, or hotels, are excluded.

Estimating dwellings started

The "nonfarm area" consists of all urban and rural nonfarm places. The urban designation, as previously stated, is applied to all incorporated places with a population of 2,500 or more in 1940, and by special rule, to a small number of unincorporated civil divisions. Rural nonfarm housing construction includes all but farm homes in unincorporated areas and incorporated places of less than 2,500 population.

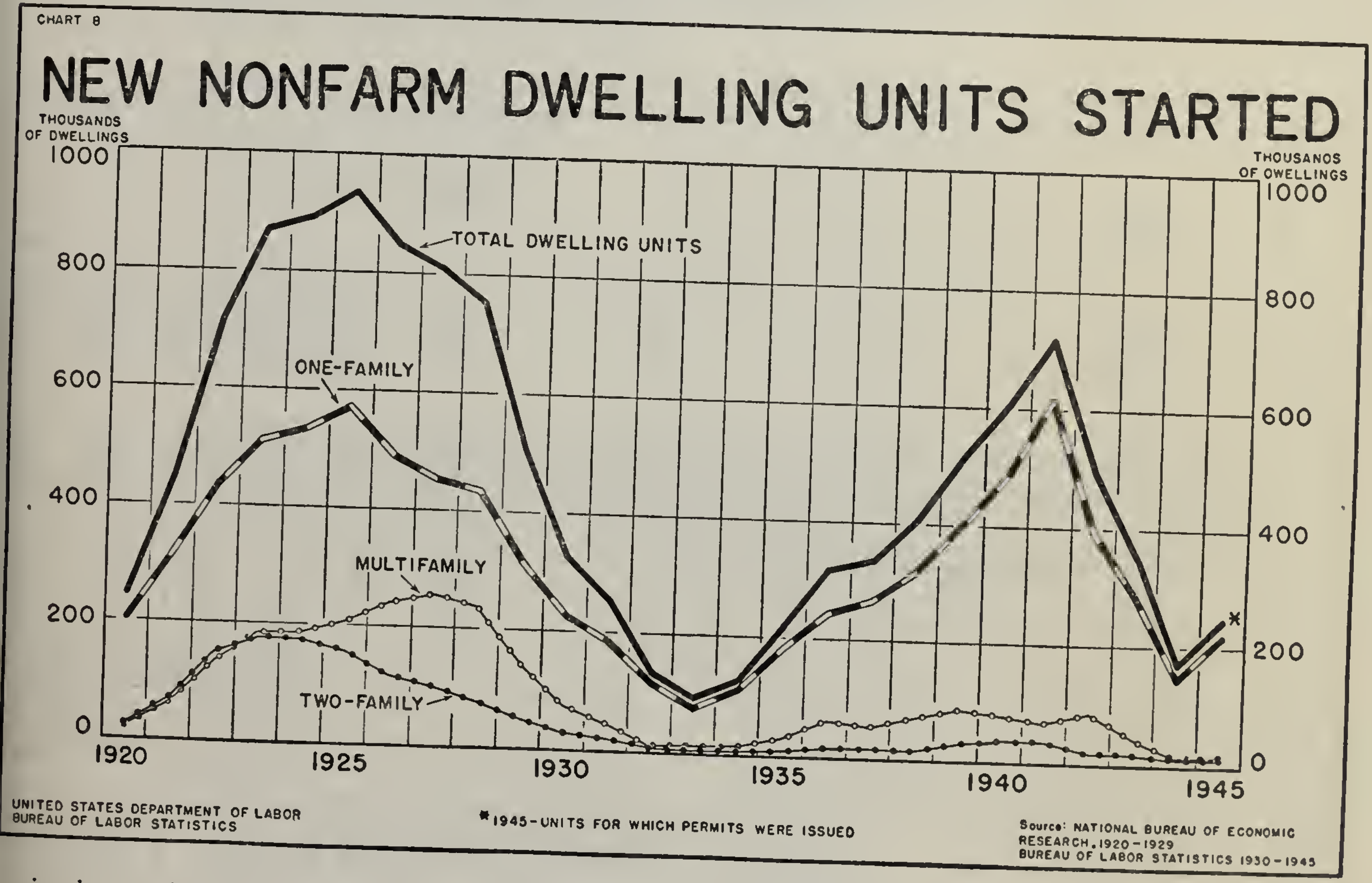
A permit to build is required in the majority of cities and in many rural incorporated and a few unincorporated areas. The size, and the builder's estimate of the cost, of the proposed structure are usually recorded on these permits, thereby providing a clear indication of the volume of building to be carried on in the locality. The Bureau receives summaries of building-permit records not only from the cooperating cities previously mentioned, but also from 1,700 rural incorporated places, and about 350 unincorporated areas—that is, from practically every place in the Nation that requires a permit to build.

Using the building-permit reports as a basis, an estimate of the monthly volume of privately financed housing in urban areas is made first and then combined with a similar estimate for rural nonfarm places. To derive the urban estimate, the cities reporting building-permit data to the Bureau are arrayed by State, population-size group, and location inside or outside a metropolitan district; the volume and value of residential building during the month is summarized for each class of place. The estimate for all urban areas in the country is prepared by the simple method of applying to the volume of housing reported for each type of place, the ratio of the total number of such places in the country to the number reporting that month. The ratio is usually 1 for places of 25,000 population or over, because reports are received monthly from virtually all of these. For places of 5,000 to 25,000 population the number of reports is great enough so that the multiplying figure is seldom over 3, and for places of 2,500 to 5,000 population it is rarely over 8.

The estimates are further adjusted for lapsed building permits and time lag between issuance of permits and start of construction, beginning with 1945, when these influences became really significant. Prior to 1945, the issuance of a building permit was almost assuredly a sign that construction would be started immediately. Information on lapse and lag in building permits is derived from periodic surveys in representative areas over the entire country.

The volume of rural-nonfarm housing started prior to 1945 was determined with the use of a bench-mark estimate for each geographic division as of the last quarter of 1939, and a ratio of rural-nonfarm to urban residential building, as derived from detailed housing enumerations made by the Bureau between 1940 and 1942 in 138 defense areas. The bench mark and ratio were used, together with trend information revealed by the volume of hous-

CHART 8



NEW NONFARM DWELLING UNITS STARTED

UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS

*1945-UNITS FOR WHICH PERMITS WERE ISSUED

Source: NATIONAL BUREAU OF ECONOMIC RESEARCH, 1920-1929
BUREAU OF LABOR STATISTICS 1930-1945

ng in the rural-type places reporting building per- nit data to the Bureau each month, to derive the stimate of rural-nonfarm housing started.

The current method of determining the amount f rural-nonfarm housing started, beginning with 945 data, is to apply to the estimate for all urban laces the ratio of the number of units started in ie rural-nonfarm areas to the number in urban aces in a carefully selected group of 90 repre- ntative areas. The rural-nonfarm estimate is ien added to the urban estimate to obtain the gure for the entire nonfarm area.

Data on publicly financed units are enumerations rather than estimates. The number and location of public units started are reported to the Bureau monthly by the agencies awarding the contracts or performing the work, and are added to the estimates for privately financed units to obtain a total of all nonfarm housing started during the month.

Monthly estimates of the number of new family dwelling units started in all urban and rural-nonfarm areas are available for the period beginning with 1939 (table 15); annual figures for the nonfarm area as a whole date from 1910 (table 13).

Trends from 1910 through 1945

The wide range over which construction of new nonfarm housing has varied in the 36-year period from 1910 through 1945 is shown in table 13. The annual volume dropped from a total of 475,000 units started in 1910 to 120,000 in the war year 1918, increased to 937,000 in 1925, the highest level recorded to date, declined again to the depression low of only 93,000 units in 1933, and recovered to a total of 715,000 in 1941, just before the United States entered World War II. The 1944 total (169,000) was the low point for the war years, but by 1945 the annual volume had increased again to 226,000.

Another indication of the year-to-year variations in the amount of new housing started in nonfarm areas may be seen in chart 9. During 1925, for example, the rate of construction was so high that 11¼ dwellings were started for each 1,000 of population, compared with only 1 in 1933, 7 in 1941, and 2¼ in 1945.

World Wars I and II had similar effects on the number of dwellings started in nonfarm areas. In 1917, as in 1942, the volume of new units declined sharply and continued to decline through the second year of the United States' active participation in the war, as strict priority controls were applied to conserve scarce labor and materials. The rate of decline was much greater, however, in 1917–18 than in 1942–43. The reason for this was that during the Second World War, there were larger numbers of dislocated people, because of vastly greater production needs, more drastic shifts in industry distribution, and more extensive mushrooming of new war plants in nonindustrial areas. Thus, construction of a considerable volume of new homes was required to house war workers, and the Federal Government was obliged to participate actively in providing emergency housing. Well over a third of all new units started during World War II were federally financed, whereas very little housing was federally financed during World War I. The urgent need for war housing and Federal participation in the program resulted in a less marked decline in residential construction during World War II than many had anticipated.

In fact, housing units financed with public funds—most of which were defense or war housing of a temporary nature—increased more rapidly than private housing from 1939 to 1942. In 1939, 57,000 units, or only about a tenth of the new dwellings in

TABLE 13.—*Estimated number of new family dwelling units started in nonfarm areas, by type of area and by type of structure, 1910–45*[1]

Year	Total nonfarm dwelling units	Number of dwelling units by—				
		Type of area[2]		Type of structure		
		Urban	Rural nonfarm	1-family	2-family[3]	Multi-family[4]
1910	475,000	...	...	...	...	...
1911	480,000	...	...	...	...	...
1912	490,000	...	...	...	...	...
1913	455,000	...	...	...	...	...
1914	445,000	...	...	...	...	...
1915	475,000	...	...	...	...	...
1916	480,000	...	...	...	...	...
1917	230,000	...	...	...	...	...
1918	120,000	...	...	...	...	...
1919	330,000	...	...	...	...	...
1920	247,000	196,000	51,000	202,000	24,000	21,000
1921	449,000	359,000	90,000	316,000	70,000	63,000
1922	716,000	574,000	142,000	437,000	146,000	133,000
1923	871,000	698,000	173,000	513,000	175,000	183,000
1924	893,000	716,000	177,000	534,000	173,000	186,000
1925	937,000	752,000	185,000	572,000	157,000	208,000
1926	849,000	681,000	168,000	491,000	117,000	241,000
1927	810,000	643,000	167,000	454,000	99,000	257,000
1928	753,000	594,000	159,000	436,000	78,000	239,000
1929	509,000	400,000	109,000	316,000	51,000	142,000
1930	330,000	236,000	94,000	227,000	29,000	74,000
1931	254,000	174,000	80,000	187,000	22,000	45,000
1932	134,000	64,000	70,000	118,000	7,000	9,000
1933	93,000	45,000	48,000	76,000	5,000	12,000
1934	126,000	49,000	77,000	109,000	5,000	12,000
1935	221,000	117,000	104,000	183,000	8,000	30,000
1936	319,000	211,000	108,000	244,000	14,000	61,000
1937	336,000	218,000	118,000	267,000	16,000	53,000
1938	406,000	262,000	144,000	317,000	18,000	71,000
1939	515,000	359,000	156,000	399,000	29,000	87,000
1940	603,000	397,000	206,000	486,000	37,000	80,000
1941	715,000	440,000	275,000	613,000	34,000	68,000
1942	497,000	281,000	216,000	391,000	20,000	86,000
1943	350,000	209,000	141,000	286,000	18,000	46,000
1944	169,000	115,000	54,000	145,000	11,000	13,000
1945[5]	226,000	144,000	82,000	...	...	...
1945 (unadjusted)[6]	245,000	161,000	84,000	219,000	10,000	16,000

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[1] Data for 1920–29 are from National Bureau of Economic Research; data for 1910–19 and 1930–45 are from Bureau of Labor Statistics and are based primarily on building permits issued and Federal construction contracts awarded. No breakdowns are available from 1910–19.

[2] Urban and rural nonfarm classifications for years 1920–29 are based on 1930 Census; for years 1930–45, on 1940 Census.

[3] Includes 1- and 2-family dwellings with stores.

[4] Includes multifamily dwellings with stores.

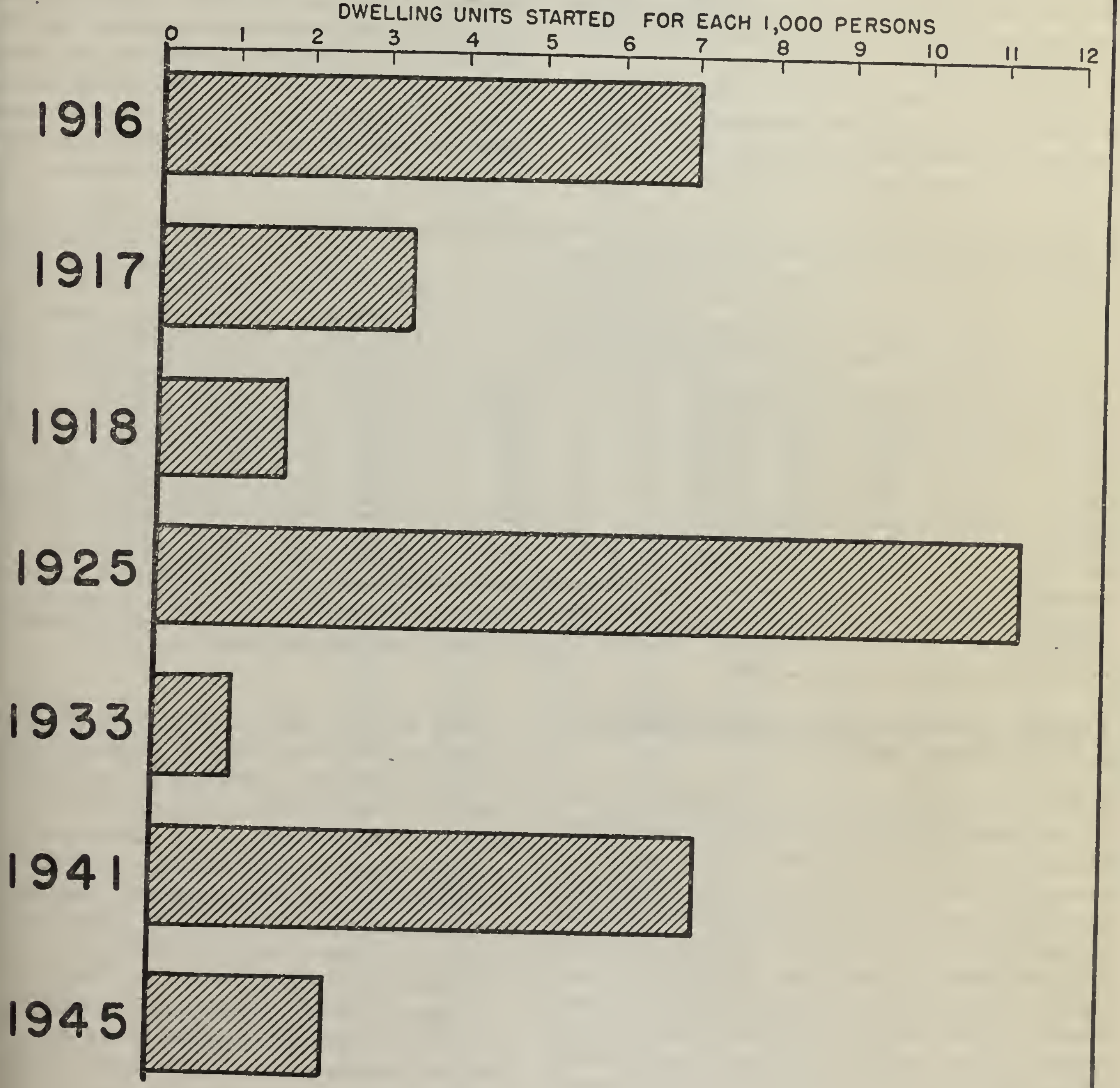
[5] In 1945, in order to determine the number of dwelling units actually started, adjustments were made for lapsed building permits and time lag between issuance of permits and start of construction. Such adjustments were not necessary in previous years, since lag and lapse in building permits were not significant then. Adjusted 1945 figures not available for dwelling units by type of structure.

[6] Unadjusted figures for 1945 represent the estimated number of dwelling units for which permits were issued and Federal construction contracts awarded. Compare with tables 26, 29, and 33.

CHART 9

NONFARM HOUSING IN RELATION TO POPULATION

SELECTED YEARS



UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS

Source: BUREAU OF CENSUS ESTIMATES FOR 1944 AND 1945 CIVILIAN POPULATION; OTHER YEARS, STRAIGHT-LINE INTERPOLATION OF CENSUS FIGURES.

nonfarm areas, were publicly financed; by 1943, the proportion was nearly half the total. During the 5-year period 1939–43, over half a million new units were started with public funds, nearly 200,000 of which were begun in 1942 alone. After that, the need for war housing in critical areas declined, and construction of new public units fell off until, in 1944, less than a fifth (18 percent) of all new dwellings were publicly financed. In 1945, the proportion was only 8 percent, or 18,000 units.

In spite of the large Federal program to provide war housing, private builders started the bulk of the residential building in the defense and war years. In the 5 years between July 1940 (when housing was first coordinated with defense activities) and August 1945 (the end of the war) 1,625,000 privately financed units were put under construction, compared with 557,000 public units. Of the private units, 619,000 were started in 1941—the best home-building year since the boom of the 1920's.

The volume of private dwellings dropped rapidly during the following 3 years, because of acute shortages of both building materials and labor. By 1944, the annual total was only 139,000 units, less than a fourth of the 1941 figure and the smallest annual volume in a decade. In 1945, however, there was a 50-percent rise over the previous year in new private housing, and 208,000 such units were started.

TABLE 14.—*Estimated number and construction cost of new family dwelling units started in nonfarm areas, by source of funds, 1920–45*

Year	Total nonfarm		Privately financed		Publicly financed	
	Number of dwelling units	Construction cost (in thousands)	Number of dwelling units	Construction cost (in thousands)[1]	Number of dwelling units	Construction cost (in thousands)[2]
1920	247,000	$1,068,000	247,000	$1,068,000	0	0
1921	449,000	1,771,000	449,000	1,771,000	0	0
1922	716,000	2,957,000	716,000	2,957,000	0	0
1923	871,000	3,775,000	871,000	3,775,000	0	0
1924	893,000	4,065,000	893,000	4,065,000	0	0
1925	937,000	4,475.000	937,000	4,475,000	0	0
1926	849,000	4,112,000	849,000	4,112,000	0	0
1927	810,000	3,910,000	810,000	3,910,000	0	0
1928	753,000	3.613,000	753,000	3,613.000	0	0
1929	509,000	2,453,000	509,000	2,453,000	0	0
1930	330,000	1,494,488	330,000	1,494,488	0	0
1931	254,000	1,104,600	254,000	1,104,600	0	0
1932	134,000	407,040	134,000	407,040	0	0
1933	93,000	$285,446	93,000	$285,446	0	0
1934	126,000	368,483	126,000	368,483	0	0
1935	221,000	757,397	215,705	732,522	5,295	$24,875
1936	319,000	1,271,039	304,225	1,193,733	14,775	77,306
1937	336,000	1,382,360	332,406	1,365,791	3,594	16,569
1938	406,000	1,583,936	399,294	1,561,610	6,706	22,326
1939	515,000	1,948,340	458,458	1,763,932	56,542	184,408
1940	602,600	2,299,447	529,571	2,072,155	73,029	227,292
1941	715,200	2,852,778	619,460	2,530,765	95,740	322,013
1942	496,600	1,716,091	301,193	1,133,846	195,407	582,245
1943	350,100	1,016,422	183,660	660,459	166,440	355,963
1944	169,400	560,715	138.779	483,231	30,621	77,484
1945[3]	225,700	1,005,327	208,118	959,251	17,582	46,076

[1] Based on permit valuations adjusted for understatement of construction costs. Excludes land and other nonconstruction items commonly included in selling prices.

[2] Value of Federal construction contracts awarded.

[3] Estimates for 1945 have been adjusted to allow for lapsed building permits and time lag between issuance of permits and actual start of construction. It is believed these influences were negligible prior to 1945.

Monthly variations; influencing legislation and regulations, 1939–45[11]

The rise in housing construction which followed the depression years in the 1930's continued after the outbreak of war in Europe, as a result of the increased demand for emergency housing in defense areas and easier financing through the Federal Housing Administration, together with generally improved economic conditions. In 1939, the number of new family dwelling units started in nonfarm areas averaged about 43,000 per month. The monthly figure continued gradually upward in the succeeding year and a half, except for seasonal fluctuations, until it reached over 77,000 in June 1941.

From the high point of 190,800 in the second quarter of 1941, the number of privately financed units started showed a small decline of only 4 percent in the third quarter. The sharp decline (33 percent) from the third to the fourth quarter is explained in part by normal seasonal tendencies and in part by the fact that the growing shortages of strategic materials influenced some builders against starting new construction until Government policy and the supply situation became clarified.

In order to assist private builders operating in areas of acute housing shortage, the Office of Production Management (later the War Production Board) began on September 22, 1941, to grant priorities assistance in obtaining necessary materials. The real need for this type of assistance at that time is shown by the fact that priorities assistance was extended to an estimated 40 percent of al new units started during the first 3 months of 1942

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[11] For discussion of developments during the first 6 months of 1946, see Monthly Labor Review, January 1947 (pp. 11-23): Trends in Housing During the War and Postwar Periods.

The growing shortages in critical materials, however, foreshadowed the halting of all nonessential residential construction. On April 9, 1942, the War Production Board issued Conservation Order L–41, prohibiting builders to start, without priorities, any new residential construction costing $500 or more (later reduced to $200) during any continuous 12-month period. No priorities were necessary to replace structures "destroyed after December 31, 1941, by fire, flood, tornado, earthquake, act of God, or the public enemy." In addition, priority assistance was restricted to units with a sales price not to exceed $6,000 or a shelter rental not in excess of $50 per month. The location of any such construction was also restricted to sites within 2 miles either of the war industry to be served or of adequate public transportation.

Shortly after the start of the defense program, it was recognized that because of the unusual risks involved, private builders would require encouragement in supplying homes for defense workers in many areas. Consequently, Congress in March 1941 added title VI to the National Housing Act, which governs the operations of the Federal Housing Administration. This amendment allowed liberal mortgage insurance terms to builders who would provide low-cost housing to war workers in specific areas designated by the President.

During 1941 only an estimated 27,800 of the estimated 220,400 FHA insured units on which construction was started were insured under title VI. During 1942, however, private builders took full advantage of the liberal terms offered, with the result that an estimated 118,900 units, or 72 percent of the 165,700 FHA units started, were under title VI (114,600 under section 603, the March 1941 enactment, and 4,300 under sec. 608, added to the title in May 1942 to provide insured financing of war rental housing). Housing insured under title VI reached peak in 1943 when 145,500 units, or almost all of the FHA starts, came under that title (125,500 under sec. 603, and 20,000 under sec. 608). Insured under titles I and II were 192,600 units started during 1941, 46,800 units started in 1942, and less than 700 in 1943. In 1944, all but 200 of the 93,300 units started were insured under title VI,

TABLE 15.—*Estimated number of new family dwelling units started in nonfarm areas, by source of funds and by months, 1939–45*[1]

Year and month	Number of dwelling units								
	Total			Privately financed			Publicly financed		
	Nonfarm	Urban	Rural nonfarm	Nonfarm	Urban	Rural nonfarm	Nonfarm	Urban	Rural nonfarm
1939	515,000	359,000	156,000	458,458	303,547	154,911	56,542	55,453	1,089
January	32,300	23,230	9,070	29,696	20,626	9,070	2,604	2,604	0
February	30,700	21,648	9,052	29,585	20,533	9,052	1,115	1,115	0
March	42,900	30,143	12,757	41,803	29,046	12,757	1,097	1,097	0
April	42,900	28,605	14,295	41,935	27,640	14,295	965	965	0
May	53,300	38,202	15,098	44,191	29,093	15,098	9,109	9,109	0
June	45,900	31,788	14,112	41,253	27,141	14,112	4,647	4,647	0
July	44,200	29,835	14,365	37,878	24,120	13,758	6,322	5,715	607
August	51,200	35,495	15,705	42,833	27,310	15,523	8,367	8,185	182
September	42,400	28,244	14,156	39,163	25,007	14,156	3,237	3,237	0
October	42,900	28,688	14,212	41,384	27,472	13,912	1,516	1,216	300
November	45,100	32,294	12,806	38,027	25,221	12,806	7,073	7,073	0
December	41,200	30,828	10,372	30,710	20,338	10,372	10,490	10,490	0
1940	602,600	396,612	205,988	529,571	333,166	196,405	73,029	63,446	9,583
January	27,022	18,916	8,106	24,087	15,981	8,106	2,935	2,935	0
February	34,862	24,891	9,971	30,945	20,974	9,971	3,917	3,917	0
March	46,762	31,572	15,190	43,703	28,513	15,190	3,059	3,059	0
April	56,551	38,324	18,227	52,421	34,194	18,227	4,130	4,130	0
May	57,737	37,941	19,796	53,033	33,237	19,796	4,704	4,704	0
June	49,972	29,861	20,111	47,805	27,694	20,111	2,167	2,167	0
July	57,393	36,631	20,762	52,342	31,580	20,762	5,051	5,051	0
August	56,483	36,918	19,565	51,195	31,630	19,565	5,288	5,288	0
September	57,762	38,481	19,281	50,363	31,082	19,281	7,399	7,399	0
October	65,960	43,099	22,861	51,920	33,157	18,763	14,040	9,942	4,098
November	48,533	31,126	17,407	38,237	23,475	14,762	10,296	7,651	2,645
December	43,563	28,852	14,711	33,520	21,649	11,871	10,043	7,203	2,840
941	715,200	439,582	275,618	619,460	369,465	249,995	95,740	70,117	25,623
January	41,198	27,505	13,693	36,480	24,361	12,119	4,718	3,144	1,571
February	43,765	28,094	15,671	35,196	21,795	13,401	8,569	6,299	2,270
March	60,172	36,171	24,001	51,162	31,838	19,324	9,010	4,333	4,677
April	75,159	48,045	27,114	61,544	38,316	23,228	13,615	9,729	3,886
May	70,690	43,885	26,805	65,097	39,405	25,692	5,593	4,480	1,113
June	77,203	47,994	29,209	64,153	37,302	26,851	13,050	10,692	2,358
July	74,610	45,025	29,585	68,122	40,474	27,648	6,488	4,551	1,937
August	69,750	41,622	28,128	61,162	34,029	27,133	8,588	7,593	995
September	67,046	40,389	26,657	53,795	30,801	22,994	13,251	9,588	3,663
October	56,179	33,646	22,533	50,972	29,709	21,263	5,207	3,937	1,270
November	46,651	27,868	18,783	41,815	24,337	17,478	4,836	3,531	1,305
December	32,777	19,338	13,439	29,962	17,098	12,864	2,815	2,240	575

See footnotes at end of table.

TABLE 15.—*Estimated number of new family dwelling units started in nonfarm areas, by source of funds and by months, 1939–45*[1]—*Continued.*

Year and month	Number of dwelling units								
	Total			Privately financed			Publicly financed		
	Nonfarm	Urban	Rural nonfarm	Nonfarm	Urban	Rural nonfarm	Nonfarm	Urban	Rural nonfarm
1942	496,600	280,838	215,762	301,193	184,892	116,301	195,407	95,946	99,461
January	34,500	21,552	12,948	27,838	16,956	10,882	6,662	4,596	2,066
February	51,300	36,071	15,229	35,469	21,599	13,870	15,831	14,472	1,359
March	52,700	31,970	20,730	47,718	28,988	18,730	4,982	2,982	2,000
April	59,700	33,336	26,364	42,014	25,422	16,592	17,686	7,914	9,772
May	60,600	26,091	34,509	20,378	12,363	8,015	40,222	13,728	26,494
June	46,300	21,998	24,302	18,729	11,362	7,367	27,571	10,636	16,935
July	26,700	16,636	10,064	20,743	12,838	7,905	5,957	3,798	2,159
August	27,500	16,975	10,525	21,632	13,397	8,235	5,868	3,578	2,290
September	40,400	22,479	17,921	21,513	13,312	8,201	18,887	9,167	9,720
October	32,200	22,431	9,769	18,191	11,518	6,673	14,009	10,913	3,096
November	30,400	14,954	15,446	14,406	9,144	5,262	15,994	5,810	10,184
December	34,300	16,345	17,955	12,562	7,993	4,569	21,738	8,352	13,386
1943	350,100	209,418	140,682	183,660	119,714	63,946	166,440	89,704	76,736
January	45,000	21,054	23,946	9,386	5,870	3,516	35,614	15,184	20,430
February	40,100	22,578	17,522	9,789	6,115	3,674	30,311	16,463	13,848
March	33,100	18,118	14,982	14,900	9,299	5,601	18,200	8,819	9,381
April	26,700	16,779	9,921	15,148	9,868	5,280	11,552	6,911	4,641
May	33,600	20,682	12,918	18,943	12,346	6,597	14,657	8,336	6,321
June	21,800	14,132	7,668	17,590	11,422	6,168	4,210	2,710	1,500
July	24,200	14,798	9,402	16,626	11,086	5,540	7,574	3,712	3,862
August	27,600	17,430	10,170	19,625	13,088	6,537	7,975	4,342	3,633
September	24,300	14,016	10,284	16,288	10,906	5,382	8,012	3,110	4,902
October	28,100	16,724	11,376	18,043	11,840	6,203	10,057	4,884	5,173
November	26,100	19,100	7,000	14,367	9,412	4,955	11,733	9,688	2,045
December	19,500	14,007	5,493	12,955	8,462	4,493	6,545	5,545	1,000
1944	169,400	114,875	54,525	138,779	93,173	45,606	30,621	21,702	8,919
January	17,300	11,016	6,284	12,195	8,222	3,973	5,105	2,794	2,311
February	13,500	9,050	4,150	11,678	7,860	3,818	1,822	1,190	632
March	18,100	12,359	5,741	13,435	9,020	4,415	4,665	3,339	1,326
April	14,300	9,592	4,708	12,824	8,528	4,296	1,476	1,064	412
May	16,500	10,967	5,533	14,673	9,743	4,930	1,827	1,224	603
June	17,500	11,558	5,942	15,043	9,973	5,070	2,457	1,585	872
July	14,500	9,830	4,670	12,392	8,114	4,278	2,108	1,716	392
August	12,800	8,738	4,062	11,097	7,273	3,824	1,703	1,465	238
September	11,300	7,758	3,542	9,438	6,228	3,210	1,862	1,530	332
October	11,100	7,469	3,631	9,721	6,884	2,837	1,379	585	794
November	11,600	8,460	3,140	9,087	6,362	2,725	2,513	2,098	415
December	10,900	8,078	2,822	7,196	4,966	2,230	3,704	3,112	592
1945	225,700	144,052	81,648	208,118	132,725	75,393	17,582	11,327	6,255
January	7,400	4,794	2,606	7,002	4,794	2,208	398	0	398
February	8,300	5,997	2,303	7,460	5,157	2,303	840	840	0
March	12,200	7,336	4,864	10,615	7,264	3,351	1,585	72	1,513
April	18,200	11,687	6,513	12,356	8,678	3,678	5,844	3,009	2,835
May	16,800	11,307	5,493	14,635	9,879	4,756	2,165	1,428	737
June	20,200	12,352	7,848	18,312	10,714	7,598	1,888	1,638	250
July	20,000	13,692	6,308	16,648	10,735	5,913	3,352	2,957	395
August	17,300	11,169	6,131	17,054	11,025	6,029	246	144	102
September	20,100	12,693	7,407	20,100	12,693	7,407	0	0	0
October	25,800	16,186	9,614	25,575	15,986	9,589	259	234	25
November	29,600	18,388	11,212	29,261	18,049	11,212	355	355	0
December	29,800	18,451	11,349	29,100	17,751	11,349	650	650	0

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[1] Estimates are based upon building permits issued and Federal construction contracts awarded. Data for 1945 have been adjusted to allow for lapsed building permits and time lag between issuance of permits and start of construction. It is believed these influences were negligible prior to 1945.

and by 1945, the estimated 41,200 starts were divided more equally—17,300 under title I and II; 23,900 under title VI.

Notwithstanding that private builders began to curtail their operations late in 1941, their activity was not seriously affected until the second quarter of 1942 when Conservation Order L–41 was issued. The 81,100 private units started during that quarter were about 25 percent less than during the preceding 3 months and almost 60 percent less than during the corresponding quarter of 1941. Private activity continued to decline thereafter, reaching a low of 26,000 units in the last quarter of 1944.

Although the number of privately financed dwellings started dropped substantially in the second quarter of 1942, the total nonfarm volume actually increased (from 138,500 units in the first quarter to 166,600) because public housing was at peak. In fact, the 85,500 publicly financed units started in the second quarter of 1942 exceeded the private volume. Public housing was fairly well sustained throughout 1943, but it too dwindled in 1944. The low point was reached in September 1945.

Early in 1940, when the possibility of housing shortages began to threaten the defense program, Congress acted to utilize the organization of the United States Housing Authority to avert this danger by authorizing it to provide homes for military personnel and defense workers (Pub. L. 671, 76th Cong.). As the war housing program grew in magnitude, other agencies, notably the Federal Works Agency which was charged with dministration of funds appropriated under the anham Act, entered this field of activity. By ebruary 1942, there were 16 different Federal gencies concerned with war housing construction, nd on February 24, 1942, the National Housing gency was created by Executive order, in order to onsolidate these activities. The Federal Public ousing Authority of the National Housing Agency ecame responsible for the construction of all ederally financed nonfarm housing except that uilt on military reservations. For various reasons some projects were assigned for construction to other agencies, but most projects were constructed under the direct supervision of the Federal Public Housing Authority or of local housing authorities.

Funds for publicly financed war housing were authorized through six major acts and by transfer of funds authorized by the Congress from other branches of the Government.

The principal sources of these funds were (1) the Lanham Act, as amended (Pub. L. 849, 76th Cong.), which authorized the National Housing Administration to provide war housing and authorized funds to be appropriated for this purpose; (2) the temporary shelter acts (Pub. L. No. 9, No. 73, and No. 353, 76th Cong.) which appropriated money specifically for temporary housing; (3) USHA efense Amendment (Pub. L. 671, 76th Cong.) hich authorized use of funds available to the nited States Housing Authority for war rental using; (4) Defense Homes Corporation, loans btained from the RFC to build permanent housing r use of war personnel during the emergency, with e intention of selling as expeditiously as possible; d (5) the Army-Navy appropriation measure ub. L. 781, 76th Cong.) which appropriated funds provide rental housing for families of personnel Army and Navy bases.

TABLE 16.—*Estimated number of new family dwelling units started in nonfarm areas, by source of funds and by quarter, 1935–45*[1]

Year and quarter	Number of dwelling units				
	Total nonfarm	Privately financed	Publicly financed		
			Total	Permanent	Temporary and demountable
35	221,000	215,705	5,295	5,295	0
36	319,000	304,225	14,775	14,775	0
37	336,000	332,406	3,594	3,594	0
38	406,000	399,294	6,706	6,706	0
39	515,000	458,458	56,542	56,542	0
40	602,600	529,571	73,029	73,029	0
41	715,200	619,460	95,740	86,589	9,151
42	496,600	301,193	195,407	54,809	140,598
First quarter	138,500	111,025	27,475	24,654	2,821
Second quarter	166,600	81,121	85,479	16,628	68,851
Third quarter	94,600	63,888	30,712	4,618	26,094
Fourth quarter	96,900	45,159	51,741	8,909	42,832
43	350,100	183,660	166,440	7,297	159,143
First quarter	118,200	34,075	84,125	3,021	81,104
1943—continued					
Second quarter	82,100	51,681	30,419	936	29,483
Third quarter	76,100	52,539	23,561	1,400	22,161
Fourth quarter	73,700	45,365	28,335	1,940	26,395
1944	169,400	138,779	30,621	3,108	27,513
First quarter	48,900	37,308	11,592	732	10,860
Second quarter	48,300	42,540	5,760	1,050	4,710
Third quarter	38,600	32,927	5,673	1,166	4,507
Fourth quarter	33,600	26,004	7,596	160	7,436
1945	225,700	208,118	17,582	1,241	16,341
First quarter	27,900	25,077	2,823	440	2,383
Second quarter	55,200	45,303	9,897	319	9,578
Third quarter	57,400	53,802	3,598	482	3,116
Fourth quarter	85,200	83,936	1,264	....	1,264

At the close of 1944, $2,340,712,028 had been mmitted or allotted for war housing from the tal public funds ($2,355,348,894) made available, ving $14,636,866 to carry on the program.

On April 25, 1945, and prior to the termination of hostilities, the Congress appropriated $84,373,000 for war housing to be constructed under the provisions of title I of the Lanham Act. However, the suspension of war housing projects after VJ-day affected savings totaling $77,727,000.

Title V was added to the Lanham Act by Public Law 87, approved June 23, 1945. This law authorized the Federal Works Administrator to provide housing for distressed families of servicemen and for veterans and their families who were affected by evictions or other unusual hardships in those areas where their needs could not be met through utilization of the existing housing supply. Title I funds were made available for title V purposes.

Additional funds for carrying out the provisions of title V of the Lanham Act were provided by

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stimates are based upon building permits issued and Federal construction ntracts awarded. Data for 1945 have been adjusted to allow for lapsed building permits and time lag between issuance of permits and start of construction. It is believed these influences were negligible prior to 1945.

Congress in December 1945 through two measures; the Mead-Lanham resolution, Public Law 292, which authorized appropriations of $160,000,000, and the first deficiency appropriation for the fiscal year 1946 (Public Law 269), which appropriated $191,900,000 for veterans housing.

No new permanent housing could be constructed under title V as amended. Temporary housing only could be provided by moving existing temporary housing from areas where the war need had passed to areas where such housing was needed for veterans, or by converting surplus Federal structures or facilities into temporary housing for veterans. Stimulated by the initiation of this program, the monthly volume of publicly financed dwellings started, began to recover slightly in the closing months of 1945.

From a peak of 59,600 in 1941, the monthly average of total nonfarm starts dropped to 41,400 in 1942 and to 29,200 in 1943, reaching a low of 14,100 in 1944. By 1944 the war housing program for in-migrant war workers (H–1 housing) had passed its peak. To meet general civilian needs and to establish the pattern for the expected transition period, the National Housing Agency initiated two new programs: H–2 housing, which permitted construction of dwelling units of up to $8,000 valuation under certain conditions of community hardship; and the H–3 program, which was designed to relieve individual hardship cases.

The H–2 program, however, was brought up short at the start of 1945 by further demands of war. After the German counter attack in December 1944, the Area Production Urgency Committees of the War Production Board turned down most applications to start H–2 housing. It was feared that the Nation did not have the manpower to build houses and also to keep war production going at top speed. H–3 housing went forward under blanket authorization granted by most APUC's, up to $10,000 construction cost.

With the defeat of Germany in May 1945 the tempo of housing activity under the H–2 and H–3 programs was stepped up, and the number of nonfarm dwelling units started advanced from 27,900 in the first quarter to 55,200 in the second quarter of 1945. These transitional programs also paved the way in the period immediately following Japan's surrender; third quarter starts were sustained at about the same level (57,400).

The lifting of all wartime controls in October resulted in an unprecedented increase in home building, almost all of which was privately financed. Contrary to the usual seasonal slump during the fall and winter months, the total number of nonfarm dwelling units started reached 85,200 in the fourth quarter, an increase of 48 percent over the preceding 3 months.

Trends in Private Building Construction Costs

The Bureau of Labor Statistics does not compile a comprehensive index of construction costs. It makes a composite index of average hourly earnings on private building construction and of wholesale construction material prices, which, while incomplete, gives an approximation of changes in construction costs. The composite index measures only reported changes in labor and material costs and does not reflect construction cost changes resulting from variations in the efficiency of labor and management, in competitive markets, in overhead costs, nor does it reflect the payment of black-market prices.

Further indications of fluctuations in construction costs (of residential building only) may be obtained from two other series, one showing the average permit valuation of all types of family dwellings in 257 cities, and the other showing the average "estimated construction cost" for private single-family dwelling units in nonfarm areas.

The permit valuation figure is simply an average of the estimated construction cost data recorded on the building-permit reports received by the Bureau together with the value of the Federal construction contracts awarded in the 257 cities.

For a number of reasons the estimates of construction costs which are given by builders when applying for building permits generally understate actual costs. The results of a prewar study mad by the Bureau indicate that actual costs (i.e., cos of labor, material, and the builder's overhead and profit chargeable directly to the constructio project, but excluding cost of land and site improvements) averaged 15.5 percent more than the value ations entered on permit records. More recent surveys revealed that in the period September-December 1945 the understatement of permit valuations was around 25 percent. Consequently, to obtain the "average estimated construction cost" series, the valuation figures recorded on the building permit reports for years prior to 1941 were increased by 15.5 percent. From 1941 on the percentage added to the permit valuation was gradually increased, on practically a straight-line basis, until it reached 25 percent in September 1945.

In interpreting both of these series of averages, it should be noted that they do not represent fluctuations in the cost of building identical units of housing, but show fluctuations only in the estimated construction costs of all those units for which permits were issued.

Composite Index

Construction costs for privately financed buildings, as measured by the composite index of average hourly earnings and wholesale prices of building materials, rose 40 percent between 1934 and 1943. After remaining on a comparatively even keel during the 3-year period 1934–36, sharp rises in 1937 in both labor and material charges resulted in a 10-percent increase in costs. Although union wage rates, which had gradually increased after 1934, rose 9 percent between 1937 and 1938, average hourly earnings remained virtually unchanged. This was caused primarily by a decline of almost one-third in the volume of private nonresidential building on which higher wage rates generally prevail. Furthermore, as a result of a 5-percent decrease in material prices in 1938 the composite index was 3 percent lower than in 1937.

TABLE 17.—*Indexes of construction costs and expenditures for new private building, 1934–45*

Year	Index numbers (average 1935-39 = 100)						
	Union hourly wage rates in building trades	Average hourly earnings on private building	Wholesale prices of building materials	Composite of earnings and prices[1]	Expenditures for new private building		
					Total	Residential	Nonresidential
1934	88.8	90.8	96.2	94.1	38.4	26.6	59.5
1935	89.8	93.0	95.2	94.4	53.6	48.9	61.8
1936	93.1	94.1	96.8	95.8	86.8	83.2	93.2
1937	99.5	103.1	106.2	105.0	115.9	101.0	142.4
1938	108.4	103.7	100.8	101.9	107.2	111.2	100.0
1939	109.1	106.4	101.0	103.1	136.6	155.6	102.7
1940	110.8	109.4	105.8	107.2	159.4	173.3	134.5
1941	114.9	115.3	115.2	115.2	200.3	203.5	194.5
1942	122.0	131.1	123.0	126.1	91.9	96.8	83.1
1943	123.0	142.9	124.3	131.5	41.5	47.8	30.4
1944	123.9	150.6	128.9	137.3	41.7	39.4	45.8
1945	126.5	157.4	131.5	141.5	79.3	49.3	132.7

[1] Based on average hourly earnings in private building construction and wholesale prices of building materials. In 1939 labor constituted 38.6 percent and material 61.4 percent of the composite average. Changes in construction costs resulting from variations in the efficiency of labor and management, in competitive markets, and in overhead costs are not reflected in this index.

Increases in both basic wage rates and the relative amount of overtime worked at premium rates, in addition to rising material prices, notably for lumber, resulted in an increase of 24 percent in construction costs between 1938 and 1942. Brisk competition for construction workers from publicly financed war construction projects, coupled with the demands from war industries and the military services, caused virtually all private builders to pay wages and overtime penalties equivalent to those required under union agreements. Some measure of the extent to which increased overtime and the shift to the equivalent of basic union wage rates affected building costs between 1940 and 1942 may be seen by comparing the 10-percent increase in union wage rates with the 20-percent rise in average hourly earnings.

TABLE 18.—*Average hourly and weekly earnings and weekly hours worked on private building construction, and index numbers, 1934–45*

Year	Average			Index (average 1935-39 = 100)		
	Hourly earnings	Hours worked per week	Weekly earnings	Hourly earnings	Hours worked per week	Weekly earnings
1934	$0.795	28.9	$22.97	90.8	89.8	81.3
1935	.815	30.1	24.51	93.0	93.5	86.8
1936	.824	32.8	27.01	94.1	101.9	95.6
1937	.903	33.4	30.14	103.1	103.7	106.7
1938	.908	32.1	29.19	103.7	99.7	103.3
1939	.932	32.6	30.39	106.4	101.2	107.6
1940	.958	33.1	31.70	109.4	102.8	112.2
1941	1.010	34.8	35.14	115.3	108.1	124.4
1942	1.148	36.4	41.80	131.1	113.0	148.0
1943	1.252	38.4	48.13	142.9	119.3	170.4
1944	1.319	39.6	52.19	150.6	123.0	184.7
1945	1.379	39.0	53.73	157.4	121.1	190.2

The composite index rose 7 percent between 1940 and 1941 and over 9 percent between 1941 and 1942. In both 1943 and 1944, however, the annual rate of increase was down to 4 percent, partly because wage and price controls were put into effect less than a year after the war started. In 1945 the index was only 3 percent higher than in 1944, owing in part to reductions in overtime work and retention of wage and price controls after VJ-day.

The wholesale prices of building materials rose far less in World War II than during World War I. Comparable figures show a 92-percent rise in wholesale prices of building materials from July 1914 to

TABLE 19.—*Average hourly and weekly earnings and weekly hours worked on private building construction, by selected types of work, specified months, 1940–45*[1]

Year and month	All types of building work	General building	Special building trades									
			All types	Plumbing, heating, air conditioning	Painting, paper-hanging, decorating	Electrical wiring	Masonry work	Plastering, lathing, stucco work	Carpentering	Roofing and sheet-metal	Excavating, grading, foundation	All other types
	Average hourly earnings											
1940: January	$0.971	$0.923	$1.036	$0.968	$1.006	$1.183	$0.992	$1.335	$0.960	$0.880	$1.037	$1.191
April	.958	.919	1.023	.954	1.006	1.225	.963	1.283	.949	.901	.928	1.139
July	.947	.906	1.006	.948	1.018	1.180	1.011	1.285	.924	.878	.815	1.126
October	.957	.924	.998	.943	1.038	1.213	.972	1.263	.930	.853	.790	1.128
1941: January	.986	.946	1.025	.955	1.062	1.184	1.012	1.287	.974	.910	.820	1.153
April	.989	.950	1.027	.983	1.041	1.188	1.033	1.183	.950	.946	.832	1.155
July	1.000	.949	1.048	1.003	1.071	1.218	1.070	1.238	.974	.938	.833	1.185
October	1.023	.980	1.062	1.015	1.103	1.245	1.059	1.235	.998	.940	.831	1.208
1942: January	1.090	1.056	1.118	1.061	1.131	1.308	1.110	1.246	1.037	1.005	.876	1.245
April	1.105	1.047	1.156	1.102	1.163	1.377	1.100	1.301	1.071	1.027	.890	1.289
July	1.157	1.117	1.191	1.139	1.192	1.400	1.111	1.326	1.069	1.078	.955	1.333
October	1.198	1.145	1.236	1.174	1.232	1.490	1.131	1.285	1.102	1.116	1.029	1.340
1943: January	1.240	1.185	1.276	1.218	1.277	1.538	1.168	1.349	1.165	1.156	1.076	1.297
April	1.235	1.182	1.273	1.225	1.277	1.524	1.188	1.388	1.166	1.166	1.048	1.303
July	1.231	1.194	1.255	1.212	1.286	1.482	1.250	1.380	1.186	1.135	1.100	1.291
October	1.273	1.238	1.296	1.249	1.318	1.506	1.264	1.362	1.228	1.189	1.132	1.388
1944: January	1.295	1.244	1.330	1.292	1.326	1.499	1.290	1.477	1.269	1.240	1.179	1.392
April	1.297	1.239	1.337	1.289	1.326	1.511	1.361	1.459	1.266	1.278	1.181	1.388
July	1.302	1.247	1.343	1.308	1.376	1.503	1.322	1.469	1.278	1.273	1.175	1.406
October	1.343	1.285	1.385	1.348	1.404	1.547	1.322	1.537	1.326	1.322	1.243	1.410
1945: January	1.364	1.310	1.401	1.356	1.398	1.562	1.357	1.519	1.327	1.342	1.220	1.428
April	1.361	1.304	1.401	1.360	1.392	1.565	1.359	1.494	1.359	1.340	1.229	1.456
July	1.387	1.321	1.432	1.383	1.474	1.543	1.449	1.535	1.390	1.380	1.312	1.470
October	1.392	1.327	1.443	1.417	1.477	1.581	1.403	1.537	1.403	1.356	1.332	1.506
	Average hours worked per week											
1940: January	30.8	30.6	30.6	33.2	29.6	32.9	24.2	27.1	28.7	28.6	26.2	30.3
April	31.8	31.8	31.3	32.7	32.9	32.9	28.3	28.2	32.9	29.9	28.3	30.6
July	33.6	33.7	33.2	34.4	33.2	35.6	32.5	29.2	34.7	33.0	32.7	31.6
October	35.4	36.2	34.8	36.9	33.9	36.0	32.4	31.0	35.3	34.2	34.1	32.6
1941: January	32.6	32.7	32.6	35.8	29.7	36.5	25.3	27.5	31.2	30.3	29.1	32.5
April	34.4	34.2	34.6	35.7	34.4	36.8	32.2	28.9	35.2	33.7	34.2	34.4
July	35.4	34.8	36.0	37.5	35.1	38.0	32.6	30.9	37.4	35.4	34.9	35.4
October	35.7	34.7	36.7	38.8	35.9	39.0	32.4	30.6	36.2	35.7	34.6	36.8
1942: January	34.2	33.0	35.3	38.2	32.1	39.8	27.0	28.4	34.1	32.7	30.7	35.1
April	35.4	34.6	36.1	37.9	35.4	40.5	30.8	29.2	33.8	34.0	32.9	36.7
July	37.5	37.4	37.7	39.6	36.1	41.0	32.5	30.7	37.9	36.5	36.0	38.3
October	37.9	36.9	38.6	40.4	36.6	42.4	35.8	30.3	37.5	36.9	33.9	40.5
1943: January	37.1	36.5	38.6	39.8	34.2	42.7	31.6	29.5	36.5	34.0	33.3	39.4
April	38.1	38.1	38.0	39.2	37.1	40.8	31.5	31.5	38.4	35.4	33.9	42.4
July	39.0	38.2	39.5	39.9	38.5	40.8	35.6	33.1	40.5	38.8	36.6	43.7
October	39.7	39.0	40.2	41.3	39.7	42.5	37.6	33.8	39.8	39.4	37.0	41.8
1944: January	38.5	38.2	38.7	40.6	37.0	41.5	30.2	31.0	38.0	36.8	33.2	41.9
April	38.7	38.1	39.0	39.8	38.9	41.1	31.4	34.0	39.5	36.1	37.0	42.7
July	40.6	40.5	40.6	41.5	39.9	43.0	36.5	36.1	41.0	39.7	39.2	43.8
October	40.7	40.3	41.0	41.9	39.4	42.3	37.1	37.1	40.6	41.0	38.3	43.1
1945: January	38.8	38.2	39.2	41.4	37.9	42.7	29.4	33.7	38.3	35.6	35.7	40.8
April	40.0	39.3	40.4	41.0	40.7	42.5	37.5	35.0	40.2	39.3	38.9	40.9
July	40.1	39.0	40.8	41.7	40.8	44.1	39.4	35.0	40.7	39.1	39.7	40.4
October	38.7	37.6	39.6	41.2	39.0	40.3	38.3	36.5	40.4	38.0	39.6	40.0
	Average weekly earnings[2]											
1940: January	$29.90	$28.26	$31.70	$32.11	$29.84	$38.87	$23.99	$36.19	$27.59	$25.14	$27.21	$36.10
April	30.44	29.22	32.07	31.20	33.05	40.37	27.43	36.16	31.27	26.96	26.30	34.86
July	31.84	30.53	33.42	32.56	33.83	40.75	32.89	37.53	32.06	28.98	36.68	35.59
October	32.92	33.43	34.70	34.82	35.21	43.64	31.46	39.19	32.81	29.19	26.90	36.76
1941: January	32.18	30.10	33.42	34.16	31.49	43.18	25.66	35.36	30.40	27.60	23.86	37.53
April	34.01	32.52	35.52	35.03	35.86	43.76	33.24	34.11	33.39	31.91	28.42	39.72
July	35.38	33.03	37.69	37.64	37.59	46.31	34.87	38.23	36.40	33.23	29.05	41.98
October	36.50	33.98	38.97	39.38	39.59	48.62	34.32	37.74	36.14	33.58	28.77	44.49
1942: January	37.27	34.86	39.41	40.56	36.27	52.02	30.03	35.34	35.35	32.86	26.90	43.73
April	39.10	36.27	41.70	41.77	31.17	55.81	33.87	38.05	36.74	34.97	29.26	47.29
July	43.22	41.73	44.87	45.07	43.07	57.38	36.15	40.71	40.50	39.33	34.87	51.07
October	45.36	42.30	47.68	47.45	45.12	63.16	40.51	38.89	41.33	41.16	34.87	54.33
1943: January	46.03	43.20	48.00	48.27	43.63	65.65	36.96	39.77	42.57	39.30	35.84	51.02
April	47.00	45.00	48.45	48.02	47.33	62.12	37.36	43.71	44.75	41.30	35.50	55.28
July	47.97	45.64	49.54	48.32	49.48	60.45	44.51	45.69	48.08	44.02	40.22	56.49
October	50.54	48.23	52.18	51.59	51.96	63.94	47.50	46.04	48.85	46.90	41.92	58.08
1944: January	49.83	47.48	51.49	52.52	49.06	62.24	38.97	45.72	48.22	45.66	39.15	58.38
April	50.18	47.21	52.09	51.34	51.65	62.04	42.70	49.63	48.43	46.11	43.69	59.26
July	52.81	50.48	54.58	54.32	54.92	64.58	48.31	53.08	52.35	50.52	46.02	61.51
October	54.62	51.71	56.76	56.55	55.32	65.46	49.06	57.01	53.77	54.20	47.56	60.76
1945: January	52.98	50.05	55.24	56.12	52.93	66.69	39.84	51.24	50.87	47.74	43.60	58.31
April	54.42	51.21	56.68	55.74	56.68	66.48	50.91	52.33	54.60	52.71	47.80	59.50
July	55.57	51.50	58.44	57.61	60.16	68.01	57.01	53.69	56.60	53.98	52.03	59.39
October	53.87	49.84	57.11	58.40	57.57	63.70	53.73	56.04	56.68	51.50	52.71	60.21

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[1] Includes all firms reporting during the months shown, but not necessarily identical establishments. Data cover all workers carried on the construction-site payroll—skilled, semiskilled, and unskilled; superintendents, time clerks, etc.

[2] Hourly earnings when multiplied by weekly hours of work may not exactly equal weekly earnings because of rounding.

TABLE 20.—*Average hourly and weekly earnings and weekly hours worked on Federal construction projects,[1] and index numbers, by type of project, 1935–45*

Year	Annual average[2]			Index number (Average 1935–39 = 100)			Annual average[2]			Index number (Average 1935–39 = 100)		
	Hourly earnings	Hours worked per week	Weekly earnings[3]	Hourly earnings	Hours worked per week	Weekly earnings[3]	Hourly earnings	Hours worked per week	Weekly earnings[3]	Hourly earnings	Hours worked per week	Weekly earnings[3]
	All projects						Reclamation					
1935	$0.662	22.3	$14.76	91.2	81.7	74.2	$0.678	34.4	$23.31	87.7	97.2	84.9
1936	.713	26.3	18.74	98.2	96.3	94.2	.724	34.3	24.85	93.7	96.9	90.6
1937	.729	29.1	21.20	100.6	106.6	106.6	.768	35.8	27.50	99.4	101.1	100.2
1938	.725	30.1	21.83	99.9	110.3	109.8	.824	36.5	30.07	106.6	103.1	109.6
1939	.797	28.8	22.94	109.9	105.5	115.3	.874	36.0	31.45	113.1	101.7	114.6
1940	.835	31.6	26.38	115.2	115.8	132.6	.898	37.2	33.42	116.1	105.1	121.8
1941	.943	37.0	34.90	130.1	135.5	175.5	.911	40.4	36.81	117.9	114.1	134.1
1942	1.077	39.1	42.13	148.7	143.2	211.8	.951	43.6	41.45	123.0	123.2	151.1
1943	1.154	38.8	44.76	159.2	142.1	225.0	1.031	43.1	44.45	133.3	121.8	162.0
1944	1.211	38.5	46.65	167.0	141.0	234.5	1.175	43.3	50.88	152.0	122.3	185.4
1945	1.299	39.0	50.67	179.4	142.9	254.8	1.263	41.6	52.52	163.4	117.5	191.3
	Residential building						River, harbor, and flood control					
1935	0.646	26.9	17.38	71.5	95.1	67.6	0.645	29.7	19.16	97.0	83.9	81.3
1936	.785	28.4	22.29	86.7	100.4	86.7	.669	35.4	23.70	100.6	100.0	100.5
1937	.983	29.2	28.69	108.6	103.2	111.6	.672	37.3	25.08	101.1	105.4	106.4
1938	1.071	28.0	29.98	118.6	98.9	116.7	.668	36.9	24.66	100.5	104.2	104.6
1939	1.034	29.2	30.18	114.4	103.2	117.4	.667	37.9	25.29	100.3	107.1	107.3
1940	.969	28.8	27.90	107.2	101.8	108.6	.719	37.7	27.10	108.1	106.5	114.9
1941	1.000	30.9	30.89	110.6	109.2	120.2	.765	38.1	29.13	115.0	107.6	123.5
1942	1.131	34.4	38.92	125.1	121.6	151.4	.900	40.8	36.71	135.3	115.3	155.7
1943	1.276	35.0	44.65	141.2	123.7	173.7	.964	44.0	42.43	145.0	124.3	179.9
1944	1.356	35.7	48.36	150.0	126.1	188.2	1.032	43.4	44.73	155.2	122.6	189.7
1945	1.452	36.3	52.70	160.8	128.3	205.0	1.088	42.1	45.81	163.6	118.9	194.4
	Nonresidential building						Water and sewerage					
1935	0.872	20.5	17.88	97.0	88.7	86.0	0.744	21.8	16.22	95.1	83.8	79.5
1936	.834	22.8	19.01	92.8	98.7	91.4	.755	25.3	19.09	96.5	97.3	93.6
1937	.915	23.7	21.69	101.8	102.6	104.3	.820	27.1	22.22	104.9	104.2	109.0
1938	.927	24.6	22.81	103.1	106.5	109.7	.807	27.3	22.03	103.2	105.0	108.0
1939	.951	23.7	22.55	105.8	102.6	108.5	.785	28.5	22.37	100.4	109.6	109.7
1940	.947	29.8	28.23	105.3	129.0	135.8	.950	29.8	28.32	121.5	114.6	138.9
1941	.998	38.6	38.52	111.0	167.1	185.3	.892	35.8	31.93	114.1	137.7	156.6
1942	1.135	39.5	44.82	126.3	171.0	215.6	.933	34.7	32.36	119.3	133.5	158.7
1943	1.196	39.2	46.89	133.0	169.7	225.5	1.017	33.1	33.66	130.1	127.3	165.1
1944	1.257	38.4	48.29	139.8	166.2	232.3	1.070	34.2	36.54	136.8	131.5	179.2
1945	1.343	39.3	52.79	149.4	170.1	253.9	1.129	34.7	39.19	144.4	133.5	192.1
	Streets and roads						Miscellaneous projects					
1935	0.535	18.7	10.00	93.0	67.8	62.6	0.633	29.9	18.93	91.6	104.2	95.3
1936	.557	26.9	14.99	96.9	97.5	93.8	.648	25.9	16.78	93.8	90.2	84.4
1937	.566	30.2	17.09	98.4	109.4	106.9	.696	27.8	19.34	100.7	96.9	97.3
1938	.584	31.1	18.16	101.6	112.7	113.6	.693	29.9	20.72	100.3	104.2	104.3
1939	.630	31.2	19.66	109.6	113.0	123.0	.786	30.0	23.58	113.7	104.5	118.7
1940	.663	32.2	21.36	115.3	116.7	133.7	.844	28.9	24.40	122.1	100.7	122.8
1941	.682	34.3	23.39	118.6	124.3	146.4	.871	34.5	30.04	126.0	120.2	151.2
1942	.863	36.5	31.51	150.1	132.2	197.2	.923	38.1	33.21	133.6	132.8	167.1
1943	1.009	38.1	38.45	175.5	138.0	240.6	1.037	38.0	39.40	150.1	132.4	198.3
1944	1.082	38.6	41.78	188.2	139.9	261.5	1.134	37.0	41.99	164.1	128.9	211.3
1945	1.162	36.8	42.76	202.1	133.3	267.8	1.299	36.1	46.89	187.8	125.8	236.1

[1] Includes the following programs: (1) Programs from regular Federal appropriations, (2) Public Works Administration, (3) United States Housing Authority, (4) Defense Plant Corporation, (5) War Public Works (Lanham Act projects), (6) Rural Electrification Administration (loans).

[2] Computed by dividing reported annual pay rolls and number of man-hours worked during the year by 52. This method is used primarily because hours and earnings on Federal construction projects are reported by accounting months, rather than by calendar months. Thus all contractors do not report for uniform pay periods during any given month; some may include data for 4 weeks and others for 5. In addition, averages in a given month are affected substantially by shifts in the geographic distribution of projects under way, especially when the number of projects in a category is small. Consequently, average hours and earnings cannot be computed accurately on a current weekly basis. Most of the bias resulting from both the reporting procedures and the project location, however, is removed when data for the year as a whole are used to obtain averages.

[3] Hourly earnings when multiplied by weekly hours of work may not exactly equal weekly earnings because of rounding.

November 1918 against a 31-percent increase between August 1939 and August 1945. The effectiveness of price control during World War II may be judged from the fact that, although average prices or all building material rose 23 percent from August 939 to March 1942, the rise in prices from March 942 to the end of hostilities under operation of the General Maximum Price Regulation[12] was only 7 percent.

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[12] See Monthly Labor Review, March 1944 (p. 640): Market Prices of Building Materials in Two Wars. The General Maximum Price Regulation was issued by the Office of Price Administration on April 28, 1942, and provided that, with certain exceptions, manufacturers', wholesalers', and retailers' prices were to go no higher than the highest price which the respective commodities brought in March 1942.

TABLE 21.—*Average union hourly wage rates in selected building trades, 1934–45*[1]

Trade	Average hourly rate[2]											
	1945	1944	1943	1942	1941	1940	1939	1938	1937	1936	1935	1934
All trades[3]	$1.512	$1.480	$1.414	$1.405	$1.322	$1.275	$1.256	$1.247	$1.146	$1.071	$1.033	$1.022
All journeymen[3]	1.615	1.590	1.563	1.553	1.471	1.421	1.401	1.392	1.281	1.198	1.160	1.147
Bricklayer	1.814	1.814	1.788	1.781	1.719	1.680	1.644	1.636	1.480	1.384	1.376	1.381
Carpenter	1.539	1.532	1.495	1.491	1.394	1.363	1.329	1.327	1.218	1.144	1.088	1.074
Cement finisher	1.546	1.531	1.523	1.507	1.420	1.372	1.359	1.355	1.240	1.156	1.127	1.121
Electrical (inside wire man)	1.754	1.707	1.671	1.668	1.563	1.494	1.469	1.462	1.326	1.271	1.239	1.182
Lather	1.729	1.660	1.689	1.688	1.616	1.558	1.547	1.498	1.353	1.269	1.237	1.224
Painter	1.553	1.534	1.519	1.493	1.444	1.354	1.351	1.341	1.257	1.172	1.116	1.112
Plasterer	1.737	1.707	1.749	1.746	1.699	1.662	1.648	1.474	1.337	1.329	1.329	1.314
Plumber and gas fitter	1.747	1.661	1.649	1.643	1.576	1.510	1.487	1.474	1.315	1.247	1.216	1.197
Roofer (composition)	1.465	1.440	1.403	1.397	1.282	1.232	1.204	1.200	1.084	1.005	.999	.972
Sheet-metal worker	1.619	1.599	1.570	1.565	1.437	1.374	1.349	1.330	1.209	1.127	1.105	1.096
Steam and sprinkler fitter	1.709	1.642	1.643	1.634	1.546	1.500	1.496	1.485	1.317	1.249	1.209	1.189
Structural-iron worker[4]	1.715	1.684	1.650	1.643	1.590	1.517	1.512	1.494	1.384	1.268	1.236	1.227
Tile layer	1.593	1.534	1.511	1.489	1.420	1.400	1.397	1.396	1.274	1.190	1.168	1.158
All helpers and laborers[3]	.997	.939	.876	.865	.787	.751	.736	.731	.664	.611	.577	.574
Building laborer	.933	.875	.826	.814	.732	.691	.680	.676	.631	.576	.531	.523
Bricklayer's tender (hod carrier)	1.086	1.033	.984	.979	.908	.878	.846	.843	.766	.712	.676	.698
Plasterer's laborer	1.197	1.114	1.075	1.068	.994	.972	.970	.962	.853	.783	.767	.755
Steam and sprinkler fitter's helper	1.084	1.262	1.204	1.164	1.121	1.103	1.096	1.090	.895	.834	.832	823

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[1] Rates for 1943–45 are actual averages computed from a sample of quotations of union wage rates. The Bureau's sample of union wage-rate quotations for early years was heavily weighted by quotations from larger cities. However, cities added from time to time have been smaller and of different geographic distribution and thus current figures more accurately represent union wage rates for the country as a whole. Consequently, rates for years before 1943 shown in this table are estimates from an index of union wage rates in which year-to-year changes have been measured using quotations from identical local unions for each pair of years. These estimates for 1934 to 1942 are lower than those based on the Bureau's changing sample of quotations as published annually in "Union Wages and Hours in the Building Trades."

[2] Representative of rates effective in midsummer.

[3] Average includes selected trades plus others not shown in this table. For other trades and years, see annual Bureau publication "Union Wages and Hours in the Building Trades."

[4] Includes rodmen prior to 1940.

TABLE 22.—*Union wage scales for selected building trades in 75 cities, June 1, 1940, July 1, 1942, and July 1, 1945*[1]

City	Rate per hour														
	Bricklayers			Carpenters			Electricians			Painters			Plumbers		
	July 1, 1945	July 1, 1942	June 1, 1940	July 1, 1945	July 1, 1942	June 1, 1940	July 1, 1945	July 1, 1942	June 1, 1940	July 1, 1945	July 1, 1942	June 1, 1940	July 1, 1945	July 1, 1942	June 1, 1940
Atlanta, Ga.	$1.580	$1.500	$1.250	$1.250	$1.250	$1.000	$1.500	(2)	$1.250	$1.250	$1.250	$1.000	$1.550	$1.500	$1.375
Baltimore, Md.	1.750	1.625	1.500	1.438	1.375	1.250	1.650	$1.650	1.375	1.300	1.250	1.125	1.650	1.650	1.375
Binghamton, N. Y.	1.650	1.650	1.500	1.375	1.250	1.125	1.375	1.375	1.100	1.125	1.125	1.000	1.500	1.600	1.200
Birmingham, Ala.	1.750	1.750	1.500	1.250	1.250	1.125	1.650	1.650	1.250	1.375	1.375	1.250	1.750	1.750	1.500
Boston, Mass.	1.725	1.625	1.500	1.500	1.500	1.375	1.725	1.650	1.500	1.438	1.375	1.250	1.675	1.650	1.500
Buffalo, N. Y.	1.750	1.750	1.500	1.600	1.500	1.300	1.750	1.750	1.375	1.500	1.500	1.250	1.750	1.750	1.375
Butte, Mont.	1.850	1.625	1.625	1.500	1.500	1.500	1.833	1.833	1.667	1.500	1.375	1.375	2.083	2.000	2.000
Charleston, S. C.	....	1.500	1.000	1.250	1.250	1.000	....	1.500	1.000	1.125	1.000	1.000	1.750	1.750	1.250
Charleston, W. Va.	1.750	1.750	1.500	1.500	1.500	1.125	1.625	1.625	1.375	1.500	1.250	1.000	1.625	1.625	1.250
Charlotte, N. C.	1.375	1.250	1.100	1.000	1.000	.875	1.250	1.250	1.000	1.035	1.000	.750	1.500	1.500	1.250
Chicago, Ill.	1.900	1.750	1.700	1.775	1.700	1.625	1.850	1.700	1.700	1.725	1.725	1.667	1.850	1.700	1.700
Cincinnati, Ohio	1.825	1.750	1.625	1.600	1.500	1.450	1.725	1.650	1.500	1.550	1.500	1.350	1.725	1.650	1.500
Cleveland, Ohio	1.875	1.750	1.625	1.575	1.500	1.375	1.875	1.750	1.650	1.550	1.525	1.350	1.725	1.625	1.500
Columbus, Ohio	1.750	1.750	1.563	1.375	1.375	1.150	1.500	1.500	1.250	1.375	1.375	1.150	1.580	1.500	1.375
Dallas, Tex.	1.725	1.625	1.500	1.250	1.250	1.125	1.625	1.625	1.375	1.250	1.250	1.000	1.625	1.625	1.500
Dayton, Ohio	1.850	1.750	1.650	1.575	1.500	1.375	1.825	1.750	1.650	1.500	1.500	1.250	1.650	1.650	1.400
Denver, Colo.	1.800	1.650	1.650	1.500	1.500	1.430	1.650	1.500	1.500	1.430	1.430	1.250	1.650	1.500	1.430
Des Moines, Iowa	1.725	1.625	1.600	1.375	1.375	1.250	1.500	1.500	1.375	1.325	1.200	1.200	1.550	1.500	1.375
Detroit, Mich.	1.725	1.675	1.500	1.500	1.500	1.250	1.850	1.850	1.650	1.500	1.500	1.250	1.750	1.750	1.500
Duluth, Minn.	1.500	1.375	1.250	1.295	1.275	1.125	1.400	1.400	1.125	1.250	1.125	1.000	1.375	1.375	1.250
El Paso, Tex.	1.625	1.500	1.500	1.250	1.250	1.125	1.500	1.500	1.250	1.250	1.125	1.000	1.625	1.500	1.500
Erie, Pa.	1.750	1.750	1.500	1.375	1.375	1.150	1.500	1.500	1.250	1.275	1.275	1.050	1.500	1.500	1.250
Grand Rapids, Mich.	1.650	1.500	1.500	1.250	1.250	1.000	1.750	(3)	1.250	1.150	1.100	1.000	1.500	1.500	1.250
Houston, Tex.	1.725	1.625	1.500	1.375	1.375	1.250	1.625	1.625	1.500	1.250	1.250	1.125	1.625	1.625	1.500
Indianapolis, Ind.	1.675	1.675	1.600	1.425	1.425	1.250	1.700	1.625	1.500	1.425	1.425	1.250	1.625	1.625	1.500
Jackson, Miss.	1.625	1.500	1.500	1.150	1.000	1.000	1.375	1.375	1.250	1.000	1.000	.900	1.500	1.500	1.250
Jacksonville, Fla.	1.500	1.500	1.250	1.125	1.125	1.000	1.500	1.500	1.375	1.250	1.250	1.000	1.500	1.500	1.250
Kansas City, Mo.	1.750	1.650	1.625	1.500	1.500	1.375	1.650	1.650	1.375	1.575	1.375	1.375	1.700	1.650	1.500
Little Rock, Ark.	1.625	1.625	1.500	1.250	1.250	1.000	1.375	1.375	1.000	1.250	1.250	.875	1.500	1.500	1.000
Los Angeles, Calif.	1.500	1.500	1.250	1.350	1.350	1.100	1.700	1.700	1.250	1.250	1.250	1.000	1.750	1.500	1.250
Louisville, Ky.	1.675	1.675	1.500	1.500	1.425	1.250	1.625	1.625	1.313	1.250	1.250	1.125	1.625	1.625	1.375
Madison, Wis.	1.580	1.500	1.375	1.250	1.250	1.100	1.500	(4)	1.380	1.250	1.250	1.050	1.500	1.500	1.375
Manchester, N. H.	1.750	1.750	1.500	1.150	1.150	1.000	1.250	1.125	1.000	1.000	1.100	.900	1.500	1.375	1.250
Memphis, Tenn.	1.725	1.625	1.625	1.300	1.250	1.125	1.580	1.500	1.375	1.375	1.375	1.125	1.500	1.500	1.375
Milwaukee, Wis.	1.668	1.600	1.450	1.425	1.425	1.200	1.500	1.500	1.300	1.300	1.250	1.125	1.550	1.550	1.350
Minneapolis, Minn.	1.625	1.500	1.375	1.440	1.375	1.250	1.650	1.500	1.375	1.440	1.350	1.250	1.550	1.500	1.375

See footnotes at end of table.

TABLE 22.—*Union wage scales for selected building trades in 75 cities, June 1, 1940, July 1, 1942, and July 1, 1945*[1]—*Continued.*

City	Rate per hour														
	Bricklayers			Carpenters			Electricians			Painters			Plumbers		
	July 1, 1945	July 1, 1942	June 1, 1940	July 1, 1945	July 1, 1942	June 1, 1940	July 1, 1945	July 1, 1942	June 1, 1940	July 1, 1945	July 1, 1942	June 1, 1940	July 1, 1945	July 1, 1942	June 1, 1940
Mobile, Ala.	$1.625	$1.625	$1.500	$1.375	$1.375	$1.000	$1.500	$1.500	$1.250	$1.250	$1.125	$.900	$1.750	$1.750	$1.250
Nashville, Tenn.	1.725	1.625	1.500	1.320	1.250	1.150	1.500	1.500	1.250	1.250	1.125	1.000	1.580	1.500	1.375
Newark, N. J.	2.000	2.000	1.850	2.000	2.000	1.750	2.000	2.000	1.750	1.714	1.571	1.250	1.750	1.750	1.500
New Haven, Conn.	1.650	1.650	1.375	1.375	1.375	1.150	1.500	1.500	1.250	1.375	1.375	1.100	1.500	1.500	1.250
New Orleans, La.	1.625	1.500	1.500	1.375	1.250	1.250	1.625	1.500	1.450	1.150	1.125	.875	1.580	1.500	1.375
New York, N. Y.	2.000	2.000	2.000	1.850	1.850	1.850	2.000	2.000	2.000	1.800	1.600	1.500	2.000	2.000	2.000
Norfolk, Va.	1.675	1.500	1.375	1.150	1.125	.950	1.500	1.500	1.000	1.250	1.250	.825	1.500	1.500	1.125
Oklahoma City, Okla.	1.675	1.625	1.500	1.438	1.375	1.250	1.500	1.500	1.250	1.300	1.250	1.125	1.500	1.500	1.250
Omaha, Nebr.	1.575	1.575	1.450	1.375	1.375	1.200	1.500	1.500	1.250	1.200	1.200	1.000	1.580	1.500	1.250
Peoria, Ill.	1.750	1.750	1.625	1.500	1.500	1.375	1.625	1.625	1.375	1.450	1.375	1.250	1.625	1.625	1.375
Philadelphia, Pa.	2.000	1.900	1.700	1.580	1.500	1.400	1.875	1.875	1.625	1.500	1.450	1.250	1.750	1.700	1.440
Phoenix, Ariz.	1.650	1.650	1.500	1.350	1.250	1.125	1.500	1.500	1.125	1.300	1.250	1.000	1.500	1.500	1.250
Pittsburgh, Pa.	2.000	1.900	1.750	1.750	1.750	1.500	1.875	1.750	1.650	1.625	1.500	1.500	1.750	1.750	1.700
Portland, Maine	1.600	1.500	1.250	1.160	1.160	.800	1.350	1.350	1.000	1.100	1.000	.700	1.500	1.500	1.250
Portland, Oreg.	1.725	1.625	1.500	1.375	1.350	1.125	1.580	1.500	1.375	1.375	1.320	1.100	1.725	1.625	1.500
Providence, R. I.	1.650	1.650	1.500	1.350	1.350	1.175	1.500	1.375	1.250	1.250	1.250	1.000	1.550	1.500	1.350
Reading, Pa.	1.583	1.500	1.375	1.375	1.200	1.200	(5)	(6)	1.000	1.320	1.250	1.250	1.500	1.500	1.200
Richmond, Va.	1.650	1.625	1.500	1.150	1.125	1.000	1.500	1.500	1.000	1.100	1.100	.800	1.500	1.500	1.000
Rochester, N. Y.	1.725	1.675	1.500	1.535	1.500	1.335	1.700	1.700	1.500	1.450	1.375	1.200	1.650	1.650	1.375
Rock Island (Ill.) district[7]	1.725	1.725	1.500	1.425	1.425	1.200	1.580	1.500	1.325	1.375	1.375	1.150	1.500	1.500	1.375
St. Louis, Mo.	1.900	1.750	1.500	1.700	1.500	1.500	1.750	1.750	1.650	1.563	1.500	1.500	1.750	1.625	1.625
St. Paul, Minn.	1.625	1.500	1.375	1.440	1.375	1.250	1.650	1.500	1.350	1.440	1.350	1.200	1.550	1.500	1.250
Salt Lake City, Utah	1.580	1.500	1.375	1.375	1.375	1.125	1.500	1.500	1.150	1.250	1 250	1.000	1.500	1.500	1.200
San Antonio, Tex.	1.725	1.650	1.500	1.250	1.250	1.125	1.500	1.500	1.250	1.125	1.125	1.000	1.625	1.500	1.500
San Francisco, Calif.	1.875	1.875	1.750	1.500	1.440	1.250	1.700	1.700	1.375	1.500	1.500	1.250	1.700	1.700	1.400
Scranton, Pa.	1.650	1.500	1.500	1.300	1.125	1.125	1.500	1.500	1.250	1.250	1.250	1.125	1.375	1.250	1.200
Seattle, Wash.	1.845	1.715	1.600	1.545	1.415	1.250	1.745	1.615	1.500	1.545	1.415	1.250	1.745	1.615	1.500
South Bend, Ind.	1.750	1.750	1.500	1.500	1.500	1.250	1.625	(8)	1.250	1.300	1.300	1.000	1.625	(9)	1.250
Spokane, Wash.	1.750	1.750	1.500	1.440	1.400	1.250	1.550	1.550	1.375	1.450	1.400	1.250	1.650	1.550	1.400
Springfield, Mass.	1.750	1.625	1.625	1.500	1.500	1.250	1.580	1.500	1.375	1.375	1.375	1.125	1.580	1.500	1.375
Tampa, Fla.	1.500	1.500	1.250	1.150	1.125	1.000	1.500	1.500	1.250	1.200	1.200	.925	1.500	1.500	1.250
Toledo, Ohio	1.800	1.750	1.625	1.580	1.475	1.375	1.750	1.750	1.650	1.500	1.425	1.300	1.725	1.625	1.500
Washington, D. C.	1.900	1.750	1.750	1.775	1.625	1.625	2.000	2.000	1.800	1.775	1.714	1.571	1.875	1.750	1.650
Wichita, Kans.	1.580	1.500	1.375	1.250	1.125	1.000	1.500	(10)	1.000	1.125	1.000	.750	1.500	1.500	1.000
Worcester, Mass.	1.675	1.625	....	1.350	1.250	1.175	1.500	1.500	1.250	1.150	1.125	1.000	1.500	1.500	1.200
York, Pa.	1.440	1.375	1.000	1.150	1.000	.900	1.350	1.125	1.000	1.000	1.000	.700	1.375	1.125	.950
Youngstown, Ohio	1.750	1.750	1.500	1.475	1.475	1.250	1.650	1.650	1.500	1.438	1.400	1.250	1.650	1.625	1.500

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[1] These data represent the minimum wage rates agreed upon through collective bargaining between employers and trade unions. Rates shown are those applicable to most types of work. For many cities and trades, agreements provide for lower rates on residential and speculative projects and higher rates for the more hazardous work such as bricklayers on sewer and tunnel work, and painters on bridge, structural steel, and spray jobs, etc. See the Bureau's annual publication "Union Wages and Hours in the Building Trades" for details concerning rates for each occupation.

[2] Jobs over $2,000, $1.375; under $2,000, $1.250.

[3] Jobs of over 1,500 man-hours, $1.750; jobs of under 1,500 man-hours, $1.500.

[4] Contracts under $1,000, $1.380; contracts over $1,000, $1.500.

[5] Contracts under $20,000, $1.375; $20,000 or over, $1.750.

[6] Over $20,000, $1.750; under $20,000, $1.250.

[7] Covers Rock Island and Moline, Ill., and Davenport, Iowa.

[8] Contracts under $15,000, $1.500; contracts over $15,000, $1.625.

[9] Contracts under $20,000, $1.500; contracts over $20,000, $1.625.

[10] Contracts over $3,000, $1.500; contracts under $3,000, $1.250.

Residential construction costs

In response to a general rise in prices, the average construction cost of privately financed single-family dwelling units rose gradually from $3,973 in the first quarter of 1940 to $4,303 in the third quarter of 1941 (table 24). No cost limitation for private war housing prevailed prior to the establishment of the priority system in September 1941, but the limitation of a sales price of $6,000 or an equivalent shelter rent not to exceed $50 a month was established at that time by the Office of Production Management and the Division of Defense Housing Coordination. Immediately after the initiation of this priority system, the average estimated construction cost figure began to drop slightly—to $4,226 in the final quarter of 1941 and to $4,011 in the first 3 months of 1942.

Conservation Order L–41 was issued in April 1942, restricting home building to $500 (later $200), with exceptions, unless priorities were granted. In addition, priorities were issued only where the sales price of a unit did not exceed $6,000. The effects of this order were to force home construction still more into the lower-cost brackets and to decrease further the "average cost" figure to $3,762 in the third quarter of 1942.

Undoubtedly some homes continued to be built in the higher-cost brackets. There are, however, several explanations for this. Homes built to replace those destroyed by fire, tornado, etc., were exempted from L–41. Evasion of priority regulations was present to some degree. Instances are known in which less responsible speculative builders sold basic houses at the maximum price permitted,

TABLE 23.—*Weighted indexes of wholesale prices of building materials, 1934–45*

Year	Index numbers (average 1935–39 = 100)			
	All building materials	Brick and tile	Cement	Lumber
1934	96.2	99.3	102.2	94.1
1935	95.2	98.5	101.8	91.1
1936	96.8	97.7	101.2	96.9
1937	106.2	103.0	97.7	111.0
1938	100.8	100.2	99.1	97.3
1939	101.0	100.7	100.2	103.8
1940	105.8	99.7	99.7	114.6
1941	115.2	103.2	101.0	136.4
1942	123.0	107.9	103.2	148.1
1943	124.3	109.1	103.0	157.4
1944	128.9	112.0	105.2	170.7
1945	131.5	123.8	109.1	172.7

Year	Index numbers (average 1935–39 = 100)			
	Paint and paint materials	Plumbing and heating	Structural steel[1]	Other building materials
1934	97.5	95.4	87.6	97.6
1935	97.9	90.5	88.7	97.4
1936	98.3	98.6	91.6	97.5
1937	102.3	103.5	109.2	107.1
1938	99.8	103.2	107.0	100.2
1939	101.6	104.1	103.5	97.6
1940	105.2	105.7	103.5	100.9
1941	112.1	111.4	103.5	106.3
1942	123.1	125.4	103.5	111.9
1943	125.5	119.2	103.5	110.3
1944	129.1	121.2	103.5	111.5
1945	131.2	122.7	103.5	112.9

[1] Base price.

making an extra charge for such essential items as connection to the public water system, but the extent of such practices is not known. Nevertheless, after April 1942, the trend in construction costs was generally downward, indicating the increasing effectiveness of administrative control of housing priorities. The low point was reached in the fourth quarter of 1944 when construction cost averaged $3,223.

In May 1945, construction controls were eased by amendment to L–41; the limitation of $200 on residential building that could be started without permission of the War Production Board was raised to $1,000 in the case of 1-family houses. In addition, more housing was being started in the first part of 1945 under the H–2 and H–3 programs. H–2 housing had a sales limit of $8,000 (compared with $6,000 for H–1 housing, which had predominated previously), and there was no cost limit under the H–3 program. These events influenced average construction cost estimates, resulting in a 17-percent rise between the first and second quarters of 1945 (from $3,554 to $4,167).

Hostilities ended in the third quarter of 1945. Schedules I and II to WPB Order P-55-C (which imposed materials limitations and restrictions on building sizes of approved housing construction) were revoked in September. The withdrawal of L–41 in October automatically removed price ceilings on dwellings which had been built under that order. It also removed price limits for dwellings started thereafter. Home builders were in competition for the limited supply of labor and material available in the housing market. The estimated construction cost per private 1-family dwelling unit, jumped another 18 percent, to $5,307, from VJ-day to the final quarter of 1945.

TABLE 24.—*Change in estimated construction cost of new private 1-family nonfarm dwellings, quarterly, 1940–45*[1]

Year and quarter	Private 1-family dwellings	
	Estimated construction cost per unit	Percent of change from preceding quarter
1940	$4,065	------
First quarter	3,973	------
Second quarter	4,052	+2.0
Third quarter	4,070	+0.4
Fourth quarter	4,145	+1.8
1941	4,249	------
First quarter	4,147	(2)
Second quarter	4,273	+3.0
Third quarter[3]	4,303	+0.7
Fourth quarter	4,226	−1.8
1942	3,894	------
First quarter	4,011	−5.1
Second quarter[4]	3,858	−3.8
Third quarter	3,762	−2.5
Fourth quarter	3,848	+2.3
1943	3,674	------
First quarter	3,520	−8.5
Second quarter	3,774	+7.2
Third quarter	3,670	−2.8
Fourth quarter	3,686	+0.4
1944	3,439	------
First quarter	3,665	−0.6
Second quarter	3,369	−8.1
Third quarter	3,441	+2.1
Fourth quarter	3,223	−6.3
1945	4,654	------
First quarter	3,554	+10.3
Second quarter[5]	4,167	+17.2
Third quarter[6]	4,562	+ 9.5
Fourth quarter[7]	5,307	+16.3

[1] These figures are based upon builders' estimates of construction cost, exclusive of land and improvements. They do not show change in cost of erecting identical buildings, but reflect the change in estimated costs of all buildings to be erected. Estimates of construction costs should not be confused with market or selling price.

[2] Less than .05 percent.

[3] OPM established system of priority control on residential construction.

[4] Construction Control Order L–41 issued; wage and price controls instituted.

[5] VE-day; construction controls eased by amendment to L–41.

[6] VJ-day; Schedules I and II to P-55-C revoked.

[7] P–55 and L–41 revoked.

Some idea of variations over the years in the cost of erecting residential buildings may be obtained also from table 25. Average permit valuations pe new dwelling unit in 257 cities declined steadil from the 1920's to the depression year 1933, an recovered somewhat in the late 1930's. During th war years, the average valuations of 1-family dwellings followed the same general movement already described for estimated construction costs. In the case of all types of structures, the average permit valuation figure decreased steadily from 1939 to 1943, when it reached the lowest amount recorded within the 25-year period 1921–45. The average valuations for 1-family dwellings decreased more sharply in 1943 than those for 2-family and multifamily dwellings. This was caused largely by the construction of many temporary row-type single-family dwellings under the programs of the Federal Public Housing Authority. By 1945, the average valuation figures for each type of structure, except multifamily, exceeded those for the recovery years 1936–37.

TABLE 25.—*Estimated permit valuation*[1] *per new family dwelling unit in 257 cities, by type of structure, 1921–45*[2]

Year	Permit valuation per new family dwelling unit in—				Indexes (average 1935–39 = 100) of permit valuations per new dwelling unit in—			
	All types of structures	1-family structures	2-family[3] structures	Multifamily[4] structures	All types of structures	1-family structures	2-family[3] structures	Multifamily[4] structures
1921	$3,947	$3,972	$3,762	$4,019	103.3	94.5	126.7	117.2
1922	4,016	4,259	3,568	3,950	105.1	101.4	120.1	115.2
1923	4,127	4,189	4,185	4,004	108.0	99.7	140.9	116.8
1924	4,361	4,342	4,350	4,395	114.1	103.3	146.5	128.2
1925	4,445	4,593	4,422	4,271	116.3	109.3	148.9	124.6
1926	4,422	4,763	4,465	4,103	115.7	113.4	150.3	119.7
1927	4,449	4,830	4,368	4,170	116.4	114.9	147.1	121.6
1928	4,407	4,937	4,064	4,129	115.3	117.5	136.8	120.4
1929	4,565	4,919	4,011	4,400	119.5	117.1	135.1	128.4
1930	4,385	4,994	3,924	3,857	114.8	118.8	132.1	112.5
1931	4,226	4,836	3,607	3,644	110.6	115.1	121.4	106.3
1932	3,705	3,943	3,250	3,010	97.0	93.8	109.4	87.8
1933	3,495	3,845	3,112	3,040	91.5	91.5	104.8	88.7
1934	3,572	4,071	3,338	2,716	93.5	96.9	112.4	79.2
1935	3,779	4,228	2,953	3,245	98.9	100.6	99.4	94.7
1936	4,002	4,355	3,058	3,679	104.7	103.6	103.0	107.3
1937	4,009	4,352	3,110	3,641	104.9	103.6	104.7	106.2
1938	3,644	4,105	2,862	3,217	95.4	97.7	96.4	93.8
1939	3,673	3,970	2,868	3,359	96.1	94.5	96.6	98.0
1940	3,564	3,890	2,760	3,075	93.3	92.6	92.9	89.7
1941	3,691	3,975	2,774	3,108	96.6	94.6	93.4	90.7
1942	3,263	3,510	2,874	2,680	85.4	83.5	96.8	78.2
1943	2,819	2,878	2,778	2,589	73.8	68.5	93.5	75.5
1944	3,216	3,292	3,067	2,869	84.2	78.3	103.3	83.7
1945	4,374	4,629	3,510	3,462	114.5	110.2	118.2	101.0

[1] Includes value of new family dwelling units in 257 cities for which Federal construction contracts were awarded.

[2] This table does not show change in cost of erecting identical buildings, but reflects the change in estimated costs of all buildings to be erected. Land and improvement costs are excluded.

[3] Includes 1- and 2-family dwellings with stores.

[4] Includes multifamily dwellings with stores.

Shifts in Location of Construction Activity in Wartime

The location as well as the volume of construction activity was sharply altered during the war period. Locality changes consisted chiefly of two general types: (1) shifts from densely to more sparsely populated places, and (2) movements from one section of the country to another.

Flow Between Large and Small Places

Urban-rural movements

Housing trends are an indicator of the urban-rural flow of building activity in the war years. Thousands of new homes were built near military or essential industrial establishments, many of which were of necessity located outside of urban areas.

About 39 percent of the new nonfarm houses started in 1941 were located in rural areas, whereas, in 1942 the proportion of rural-nonfarm to all housing had increased to 43 percent. By 1943 it had decreased again to 40 percent. The shift from urban to rural in 1942 and from rural to urban in 1943 reflects mainly the effects of the public war housing program. In 1942, several extremely large projects, notably the Vanport City (Oreg.) project containing almost 10,000 units, were put under construction contract. The large tracts of vacant land necessary for such projects are seldom available in urban areas. Also, the construction of entire communities to serve isolated war activities contributed to the urban-to-rural shift in 1942. Such projects were less prominent in 1943, and it was possible to utilize small vacant tracts in urban areas to a greater extent than in 1942.

In 1944, the proportion of all nonfarm housing to be started in rural areas was down to 32 percent, but there was a slight increase to 36 percent in 1945. Since nine out of ten homes in 1945 were to be

TABLE 26.—*Estimated number and valuation of new family dwelling units for which permits were issued in nonfarm areas, by type of area, size of city, and source of funds, 1942–45*[1]

Type of area and size of city (1940 census)	All new family dwellings				Privately financed dwellings				Publicly financed dwellings			
	1945	1944	1943	1942	1945	1944	1943	1942	1945	1944	1943	1942
	Number of units											
All nonfarm areas	244,900	169,400	350,100	496,600	227,318	138,779	183,660	301,193	17,582	30,621	166,440	195,407
Percent change from preceding year	+44.6	−51.6	−29.5		+63.8	−24.4	−39.0		−42.6	−81.6	−14.8	
Urban (cities)	160,526	114,875	209,418	280,838	149,199	93,173	119,714	184,892	11,327	21,702	89,704	95,946
500,000 and over	29,500	27,078	38,546	58,102	26,420	21,029	23,755	41,541	3,080	6,049	14,791	16,561
100,000 to 500,000	39,134	30,633	52,772	59,555	35,844	25,837	31,301	39,916	3,290	4,796	21,471	19,639
50,000 to 100,000	14,870	9,125	23,587	32,847	14,208	7,934	11,525	19,684	662	1,191	12,062	13,163
25,000 to 50,000	15,645	9,928	20,407	26,665	14,968	7,322	10,952	19,864	677	2,606	9,455	6,801
10,000 to 25,000	27,714	17,215	39,419	59,792	25,229	14,149	19,552	30,194	2,485	3,066	19,867	29,598
5,000 to 10,000	19,677	11,895	21,716	28,403	19,075	9,363	13,391	20,531	602	2,532	8,325	7,872
2,500 to 5,000	13,986	9,001	12,971	15,474	13,455	7,539	9,238	13,162	531	1,462	3,733	2,312
Rural nonfarm areas	84,374	54,525	140,682	215,762	78,119	45,606	63,946	116,301	6,255	8,919	76,736	99,461
	Valuation (in thousands)											
All nonfarm areas	$882,918	$468,803	$895,625	$1,530,606	$836,843	$391,318	$539,662	$948,360	$46,075	$77,485	$355,963	$582,246
Percent change from preceding year	+88.3	−47.7	−41.5		+113.9	−27.5	−43.1		−40.5	−78.2	−38.9	
Urban (cities)	646,739	341,607	570,630	895,503	617,560	287,195	374,261	598,570	29,179	54,412	196,369	296,933
500,000 and over	146,750	93,562	126,990	207,532	137,385	78,914	86,346	144,151	9,365	14,648	40,644	63,381
100,000 to 500,000	154,459	92,646	141,968	180,378	145,542	80,341	95,430	125,024	8,917	12,305	46,538	55,354
50,000 to 100,000	59,635	27,558	59,453	106,439	58,373	34,226	35,117	61,834	1,262	3,332	24,336	44,605
25,000 to 50,000	61,207	28,619	52,587	91,572	59,636	20,847	32,238	67,044	1,571	7,772	20,349	24,528
10,000 to 25,000	101,335	45,259	101,252	185,120	95,461	38,283	58,789	93,586	5,874	6,976	42,463	91,534
5,000 to 10,000	73,161	30,498	54,289	76,983	72,085	24,578	39,283	65,757	1,076	5,920	15,006	11,226
2,500 to 5,000	50,192	23,465	34,091	47,479	49,078	20,006	27,058	41,174	1,114	3,459	7,033	6,305
Rural nonfarm areas	236,179	127,196	324,995	635,103	219,283	104,123	165,401	349,790	16,896	23,073	159,594	285,313

[1] Includes number and value of dwelling units in nonfarm areas for which Federal contracts were awarded, and estimates of the number and valuation of dwelling units in non-permit-issuing (urban and rural-nonfarm) places.

TABLE 27.—*Estimated number and valuation of privately financed new family dwelling units for which permits were issued in nonfarm areas, by type of area, size of city, and by type of structure, 1942–45*[1]

Type of area and size of city (1940 census)	1-family structures				2-family structures[2]				Multifamily structures[3]			
	1945	1944	1943	1942	1945	1944	1943	1942	1945	1944	1943	1942
	Number of dwelling units											
All nonfarm areas	201,672	114,615	136,264	252,323	9,649	10,626	17,766	17,463	15,997	13,538	29,630	31,407
Percent change from preceding year	+76.0	−15.9	−46.0		−9.2	−40.2	+1.7		+18.2	−54.3	−5.7	
Urban (cities)	124,830	71,278	78,750	138,908	9,050	9,908	16,234	15,747	15,319	11,987	24,730	30,237
500,000 and over	19,388	14,688	12,374	22,759	2,253	2,636	4,251	4,448	4,779	3,705	7,130	14,334
100,000 to 500,000	27,529	18,457	20,335	31,239	3,577	3,669	5,220	4,373	4,738	3,711	5,746	4,304
50,000 to 100,000	11,984	5,884	6,215	13,855	726	1,084	1,371	2,049	1,498	966	3,939	3,780
25,000 to 50,000	12,980	5,314	7,257	14,119	479	419	1,291	1,691	1,509	1,589	2,404	4,054
10,000 to 25,000	22,515	11,640	14,088	26,749	1,083	1,363	2,319	1,517	1,631	1,146	3,145	1,928
5,000 to 10,000	17,763	8,144	10,078	17,973	634	518	1,315	1,188	678	701	1,998	1,370
2,500 to 5,000	12,671	7,151	8,403	12,214	298	219	467	481	486	169	368	467
Rural nonfarm areas	76,842	43,337	57,514	113,415	599	718	1,532	1,716	678	1,551	4,900	1,170
	Valuation (in thousands)											
All nonfarm areas	$751,785	$319,040	$409,290	$822,050	$32,608	$33,573	$49,034	$46,882	$56,853	$38,705	$81,338	$79,428
Percent change from preceding year	+135.6	−22.1	−50.2		−2.9	−31.5	+4.6		+46.9	−52.4	+2.4	
Urban (cities)	536,010	220,175	260,155	478,658	31,067	32,134	45,560	42,629	54,885	34,886	68,546	77,283
500,000 and over	111,065	57,773	52,554	93,509	9,367	9,555	13,307	13,889	21,355	11,586	20,485	36,753
100,000 to 500,000	120,494	60,562	67,856	104,299	11,040	9,949	12,363	10,819	14,008	9,830	15,211	9,906
50,000 to 100,000	51,209	17,526	19,987	48,240	2,459	3,892	4,035	4,820	4,705	2,808	11,095	8,774
25,000 to 50,000	52,317	14,660	22,044	49,361	1,575	1,298	3,567	4,642	5,744	4,889	6,627	13,041
10,000 to 25,000	85,630	29,347	42,326	84,938	3,754	5,339	7,130	4,061	6,077	3,597	9,333	4,587
5,000 to 10,000	68,150	21,161	30,556	59,360	2,015	1,523	3,823	3,255	1,920	1,894	4,904	3,142
2,500 to 5,000	47,145	19,146	24,832	38,951	857	578	1,335	1,143	1,076	282	891	1,080
Rural nonfarm areas	215,775	98,865	149,135	343,392	1,541	1,439	3,474	4,253	1,968	3,819	12,792	2,145

[1] Includes estimates of the number and valuation of dwelling units in non-permit-issuing (urban and rural-nonfarm) places.

[2] Includes 1- and 2-family dwellings with stores.

[3] Includes multifamily dwellings with stores.

financed from private funds, it appears that more private owners, too, were tending to build outside city limits. One explanation of this growing trend[13] is that land prices are more reasonable in outlying areas. The increasing development of well-planned neighborhoods with nearby community centers, together with greater availability of quick transportation to downtown districts, is making suburban living more and more attractive.

Size-of-city shifts

Within the urban area also, there were similar movements in building activity between large and small places during the war years. In 1942, 29 percent of the urban building permit valuation figure was reported for cities of 2,500 to 25,000 population;[14] cities in the 25,000 to 100,000 population group accounted for 23 percent and those with more than 100,000 population for 48 percent of the total. The proportions in 1944 for the respective city-size groups were 25, 20, and 55 percent. This shift in building activity from small to large cities is explained partly by the fact that a great part of Federal wartime construction, even within city limits, was near army camps, powder plants, or other war establishments necessarily located in sparsely populated sections of the country. Consequently, the greater proportion of Federal money put into urban building in 1942 influenced the flow of construction in that year away from the larger cities to the smaller places. The reverse was true, of course, in 1944 when most war construction was completed. In 1942 over 60 percent of the dollar volume of urban building was for Federal construction, compared with 32 percent in 1944.

Another cause for shifts between different city-size groups is the varying proportion from one year to another in the types of building construction for which permits are issued. For example, in 1942 only a tenth of urban permit valuations were for additions, alterations, and repair work; whereas, in 1944 this category comprised almost three-tenths of the total. Well over half of all such valuations were, in each year under discussion, reported for cities of 100,000 or more population. Consequently, in a year (like 1944) when the proportion of additions, alterations, and repairs is high relative to the volume of new building undertaken, there is a tendency for the largest cities to be responsible for the greater share of permits issued.

In 1945, when additions, alterations, and repairs accounted for a fourth of all urban building activity and 53 percent of the work was being done in cities of over 100,000 population, those cities reported 49 percent of the total dollar volume of building permits granted. Cities with population from 25,000 to 100,000 reported 22 percent, and those in the 2,500 to 25,000 population group, 29 percent of the total.

Geographic Shifts

Between States

Analysis of the amount of new housing put under construction during the period 1940–45, in comparison with the number of homes already standing in 1940 in each State, gives a clear indication of interstate shifts in residential building in the defense and war years.

The estimated number of new nonfarm family dwelling units for which permits were issued or construction contracts were awarded in the years 1940–45 totaled 2,580,000, about 9 percent of the 29,683,000 units standing in April 1940.[15] Home building during this 6-year period tended to concentrate along the eastern and western seaboards, the Great Lakes, and in the Southwest. These regions were the leading centers of residential construction for two important reasons—(1) they accommodated most of the war activities requiring workers from outside areas, and (2) some of them already accounted for a large portion of existing housing, which made replacement demand greater there than in other localities.

The concentration is shown in chart 10 on page 41. From map' 'A" it is readily apparent that California outranked all other States with respect to the number of new family dwelling units for which permits were issued during 1940–45. California alone was responsible for 419,100 units—16 percent of the total. Texas followed with 175,500 units, or 7 percent. The 10 leading States (California, Texas, Michigan, New York, Ohio, Pennsylvania, Virginia, Washington, Illinois, and Florida) accounted for almost 60 percent of the total, or 1,513,000 units. Of these States, all except Florida, Virginia, and Washington were also among

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[13] Preliminary results of a survey conducted in 1946 in 90 representative areas bear out the conclusion that there is an increasing tendency to build a greater proportion of nonfarm housing in rural than in urban areas.

[14] Population figures used for grouping cities based on 1940 Census.

[15] Source of data on number of existing units: Census of Housing (1940). Bureau of the Census, U. S. Department of Commerce.

TABLE 28.—*Estimated valuation*[1] *of the various classes of building construction for which permits were issued in all urban areas, by size of city and by source of funds, 1942–45*

Size of city (1940 census) and year	All building construction			New residential buildings			New nonresidential buildings			Additions, alterations, and repairs		
	Total	Non-Federal	Federal	Total	Non-Federal	Federal	Total	Non-Federal	Federal	Total	Non-Federal	Federal
	Valuation (in thousands)											
All urban areas												
1942	$2,707,573	$1,066,958	$1,640,615	$918,413	$602,609	$315,804	$1,510,688	$222,998	$1,287,690	$278,472	$241,351	$37,121
1943	1,262,133	703,584	558,549	583,496	375,169	208,327	439,131	106,546	332,585	239,506	221,869	17,637
1944	1,101,350	753,441	347,909	345,670	289,270	56,400	438,909	169,078	269,831	316,771	295,093	21,678
1945	1,966,913	1,717,181	249,732	663,160	631,562	31,598	827,614	639,342	188,272	476,139	446,277	29,862
500,000 and over												
1942	722,465	271,661	450,804	219,148	146,453	72,695	424,983	62,756	362,227	78,334	62,452	15,882
1943	318,215	169,439	148,776	127,648	86,376	41,272	132,515	30,488	102,027	58,052	52,575	5,477
1944	299,291	204,814	94,477	94,773	79,159	15,614	113,657	40,532	73,125	90,861	85,123	5,738
1945	423,727	372,191	51,536	150,350	140,987	9,363	162,843	128,887	33,956	110,534	102,317	8,217
100,000 and under 500,000												
1942	576,450	227,295	349,155	180,569	125,148	55,421	327,784	42,662	285,122	68,097	59,485	8,612
1943	340,302	186,402	153,900	144,443	95,580	48,863	124,804	24,467	100,337	71,055	66,355	4,700
1944	305,892	208,170	97,722	93,361	80,886	12,475	123,835	42,659	81,176	88,696	84,625	4,071
1945	529,823	459,139	70,684	156,848	147,733	9,115	231,985	179,332	52,653	140,990	132,074	8,916
50,000 and under 100,000												
1942	343,375	125,610	217,765	111,827	62,473	49,354	198,645	33,011	165,634	32,903	30,126	2,777
1943	128,541	74,775	53,766	60,052	35,272	24,780	38,553	11,585	26,968	29,936	27,918	2,018
1944	97,654	76,331	21,323	27,681	24,349	3,332	33,394	18,070	15,324	36,579	33,912	2,667
1945	226,318	201,430	24,888	63,046	61,645	1,401	104,191	82,613	21,578	59,081	57,172	1,909
25,000 and under 50,000												
1942	286,587	125,395	161,192	91,844	67,219	24,625	157,793	25,071	132,722	36,950	33,105	3,845
1943	127,516	72,655	54,861	53,293	32,306	20,987	42,957	10,397	32,560	31,266	29,952	1,314
1944	127,891	76,156	51,735	29,058	21,158	7,900	63,310	20,861	42,449	35,523	34,137	1,386
1945	211,144	190,811	20,333	62,743	61,172	1,571	90,038	75,385	14,653	58,363	54,254	4,109
10,000 and under 25,000												
1942	444,308	147,978	296,330	188,493	93,985	94,508	223,108	25,385	197,723	32,707	28,608	4,099
1943	184,696	93,604	91,092	108,188	58,892	49,296	50,410	10,830	39,580	26,098	23,882	2,216
1944	138,408	94,518	43,890	46,043	38,923	7,120	57,979	25,226	32,753	34,386	30,369	4,017
1945	286,265	239,845	46,420	104,250	96,854	7,396	123,564	87,491	36,073	58,451	55,500	2,951
5,000 and under 10,000												
1942	212,433	96,687	115,746	77,700	65,982	11,718	118,247	15,638	102,609	16,486	15,067	1,419
1943	100,361	63,326	37,035	55,510	39,587	15,923	31,226	11,350	19,876	13,625	12,389	1,236
1944	80,684	54,677	26,007	30,827	24,739	6,088	30,660	13,177	17,483	19,197	16,761	2,436
1945	175,699	151,709	23,990	74,224	73,135	1,089	72,189	51,860	20,329	29,286	26,714	2,572
2,500 and under 5,000												
1942	121,955	72,332	49,623	48,832	41,349	7,483	60,128	18,475	41,653	12,995	12,508	487
1943	62,502	43,383	19,119	34,362	27,156	7,206	18,666	7,429	11,237	9,474	8,798	676
1944	51,530	38,775	12,755	23,927	20,056	3,871	16,074	8,553	7,521	11,529	10,166	1,363
1945	113,937	102,056	11,881	51,699	50,036	1,663	42,804	33,774	9,030	19,434	18,246	1,188
	Percent of change from preceding year											
All urban areas												
1943	−53.4	−34.1	−66.0	−36.5	−37.7	−34.0	−70.9	−52.2	−74.2	−14.0	−8.1	−52.5
1944	−12.7	+ 7.1	−37.7	−40.8	−22.9	−72.9	(2)	+58.7	−18.9	+32.3	+33.0	+22.9
1945	+78.6	+127.9	−28.2	+96.8	+118.3	−44.0	+88.6	+278.1	−30.2	+50.3	+51.2	+37.8
500,000 and over												
1943	−56.0	−37.6	−67.0	−41.8	−41.0	−43.2	−68.8	−51.4	−71.8	−25.9	−15.8	−65.5
1944	− 6.0	+20.9	−36.5	−25.8	− 8.4	−62.2	−14.2	+32.9	−28.3	+56.5	+61.9	+ 4.8
1945	+41.6	+81.7	−45.5	+58.6	+78.1	−40.0	+43.3	+218.0	−53.6	+21.7	+20.2	+43.2
100,000 and under 500,000												
1943	−41.0	−18.0	−55.9	−20.0	−23.6	−11.8	−61.9	−42.6	−64.8	+ 4.3	+11.5	−45.4
1944	−10.1	+11.7	−36.5	−35.4	−15.4	−74.5	− 0.8	+74.4	−19.1	+24.8	+27.5	−13.4
1945	+73.2	+120.6	−27.7	+68.0.	+82.6	−26.9	+87.3	+320.4	−35.1	+59.0	+56.1	+119.0
50,000 and under 100,000												
1943	−62.6	−40.5	−75.3	−46.3	−43.5	−49.8	−80.6	−64.9	−83.7	− 9.0	− 7.3	−27.3
1944	−24.0	+ 2.1	−60.4	−53.9	−31.0	−86.6	−13.4	+56.0	−43.2	+22.2	+21.5	+32.2
1945	+131.8	+163.9	+16.7	+127.8	+153.2	−58.0	+212.0	+357.2	+40.8	+61.5	+68.6	−28.4
25,000 and under 50,000												
1943	−55.5	−42.1	−66.0	−42.0	−51.9	−14.8	−72.8	−58.5	−75.5	−15.4	− 9.5	−65.8
1944	+ 0.3	+ 4.8	− 5.7	−45.5	−34.5	−62.4	+47.4	+100.6	+30.4	+13.6	+14.0	+ 5.5
1945	+65.1	+150.6	−60.7	+115.9	+189.1	−80.1	+42.2	+261.4	−65.5	+64.3	+58.9	+196.5
10,000 and under 25,000												
1943	−58.4	−36.7	−69.3	−42.6	−37.3	−47.8	−77.4	−57.3	−80.0	−20.2	−16.5	−45.9
1944	−25.1	+ 1.0	−51.8	−57.4	−33.9	−85.6	+15.0	+132.9	−17.3	+31.8	+27.2	+81.3
1945	+106.8	+153.8	+ 5.8	+126.4	+148.8	+ 3.9	+113.1	+246.8	+10.1	+70.0	+82.8	−26.5
5,000 and under 10,000												
1943	−52.8	−34.5	−68.0	−28.6	−40.0	−35.9	−73.6	−27.4	−80.6	−17.4	−17.8	−12.9
1944	−19.6	−13.7	−29.8	−44.5	−37.5	−61.8	− 1.8	+16.1	−12.0	+40.9	+35.9	+97.1
1945	+117.8	+177.5	− 7.8	+140.8	+195.6	−82.1	+135.5	+293.6	+16.3	+52.6	+59.4	+ 5.6
2,500 and under 5,000												
1943	−48.7	−40.0	−61.5	−29.6	−34.3	− 3.7	−69.0	−59.8	−73.0	−27.1	−29.7	+38.8
1944	−17.6	−10.6	−33.3	−30.4	−26.1	−46.3	−13.9	+15.1	−33.1	+21.7	+15.5	+101.6
1945	+121.1	+163.2	− 6.9	+116.1	+149.5	−57.0	+166.3	+294.9	+20.1	+68.6	+79.5	−12.8

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[1] Includes value of building construction in urban areas for which Federal contracts were awarded.

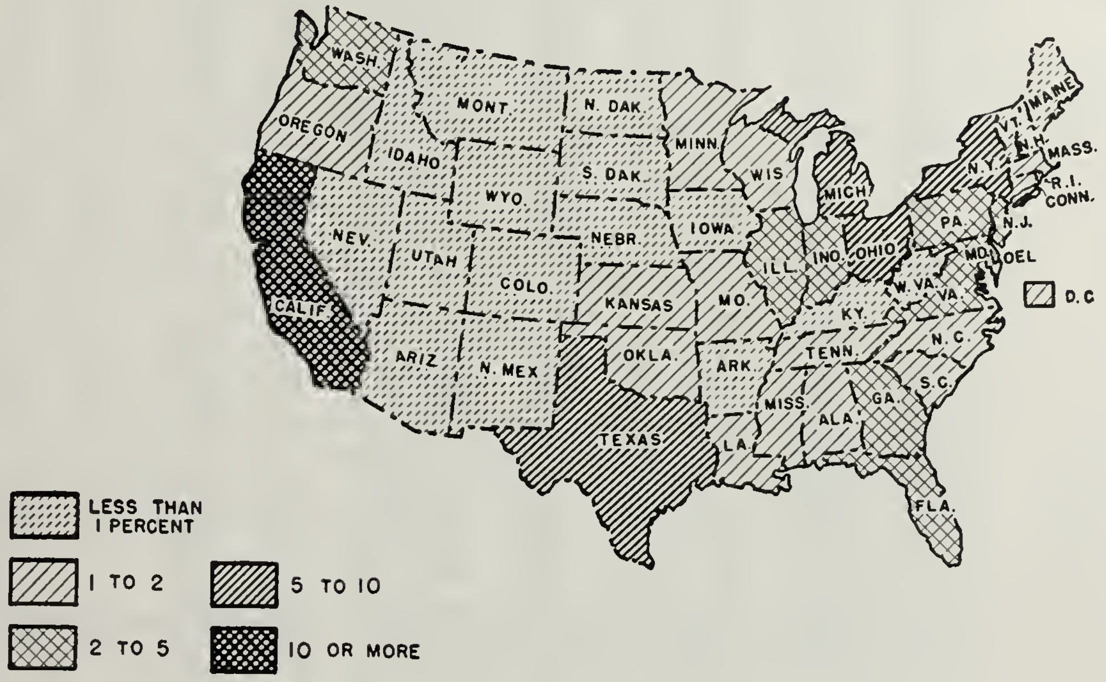
[2] Less than one-tenth of 1 percent.

CHART 10

WAR SHIFT IN NEW NONFARM HOUSING

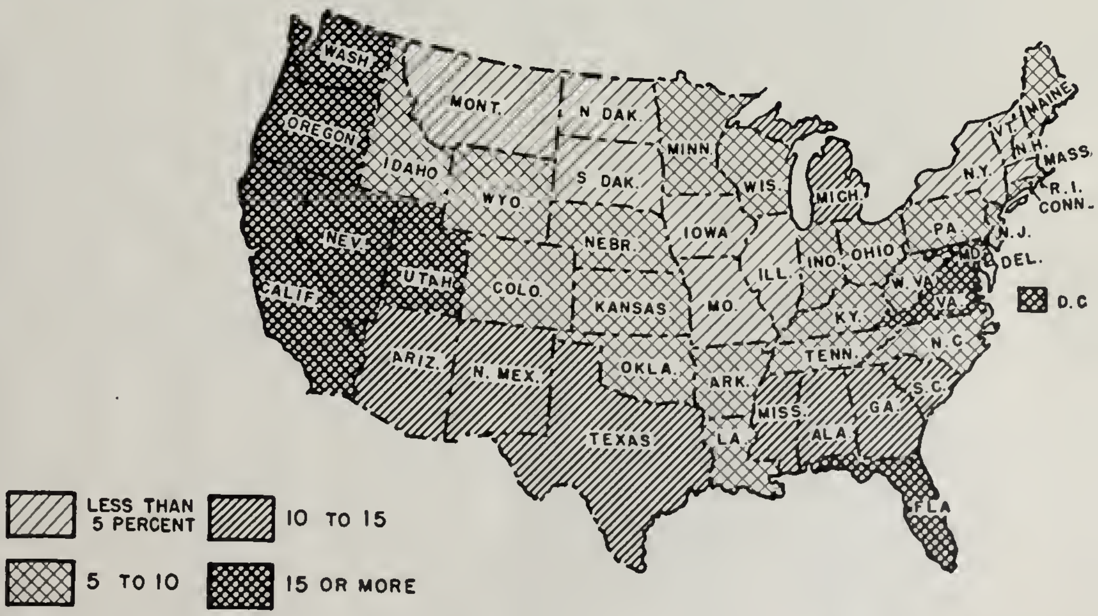
A.

PERCENTAGE DISTRIBUTION OF DWELLING UNITS FOR WHICH PERMITS WERE ISSUED IN 1940–1945, BY STATES



B.

DWELLING UNITS FOR WHICH PERMITS WERE ISSUED 1940–1945 AS A PERCENT OF NUMBER STANDING APRIL 1940, BY STATES



UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS

SOURCE U. S. BUREAU OF CENSUS AND
U. S. BUREAU OF LABOR STATISTICS

TABLE 29.—*Estimated number of new family dwelling units for which permits were issued in nonfarm areas, by geographic division, by State, and by source of funds, 1940–45*[1]

Geographic division and State	Number of new family dwelling units											
	1945		1944		1943		1942		1941		1940	
	Total (including public)	Public	Total (including public)	Public	Total (including public)	Public	Total (including public)	Public	Total (including public)	Public	Total (including public)	Public
All nonfarm areas	244,900	17,582	169,400	30,621	350,100	166,440	496,600	195,407	715,200	95,740	602,600	73,029
Percent change from preceding year	+44.6		−51.6		−29.5		−30.6		+18.7			
New England	5,500	0	2,000	40	11,000	4,337	22,300	9,367	39,200	10,916	30,400	6,361
Percent change from preceding year	+175.0		−81.8		−50.7		−43.1		+28.9			
Connecticut	1,000	0	1,200	0	6,100	2,721	11,500	5,737	14,900	5,525	10,200	2,599
Maine	400	0	200	40	2,300	780	3,800	2,082	3,500	350	2,700	600
Massachusetts	2,800	0	500	0	2,300	666	5,100	863	13,700	2,202	12,000	1,752
New Hampshire	300	0	(2)	0	(2)	0	300	85	2,500	959	1,300	0
Rhode Island	900	0	100	0	200	105	1,200	300	3,700	1,880	3,500	1,410
Vermont	100	0	(2)	0	100	65	400	300	900	0	700	0
Middle Atlantic	16,400	335	7,100	841	30,100	12,307	61,400	15,794	118,600	19,519	100,000	11,030
Percent change from preceding year	+131.0		−76.4		−51.0		−48.2		+18.6			
New Jersey	4,500	335	1,900	0	8,300	3,475	15,600	1,453	24,000	3,949	17,900	2,559
New York	6,900	0	900	147	3,600	844	21,000	7,999	48,900	2,327	55,600	6,249
Pennsylvania	5,000	0	4,300	694	18,200	7,988	24,800	6,342	45,700	13,243	26,500	2,222
East North Central	41,600	2,332	30,200	5,413	61,200	24,365	81,200	18,375	137,200	14,279	106,300	11,295
Percent change from preceding year	+37.7		−50.7		−24.6		−40.8		+29.1			
Illinois	12.100	922	7,900	970	8,700	1,879	15,100	4,055	28,300	3,679	21,500	1,801
Indiana	4,800	746	2,700	508	4,000	2,000	14,500	4,430	17,200	2,381	12,100	1,307
Michigan	10,400	64	10,600	3,385	25,900	11,239	23,300	3,046	40,500	976	34,000	3,545
Ohio	10,300	350	7,300	200	20,200	8,877	23,100	5,341	39,300	6,843	29.200	4,642
Wisconsin	4,000	250	1,700	350	2,400	370	5,200	1,503	11,900	400	9,500	0
West North Central	12,100	450	5,800	1,070	10,400	5,033	24,200	6,599	44,800	4,265	39,000	397
Percent change from preceding year	+108.6		−44.2		−57.0		−46.0		+14.9			
Iowa	1,500	50	400	80	200	0	2,400	400	7,500	575	6,600	0
Kansas	1,900	270	1,600	380	5,000	1,896	10,900	5,400	8,000	1,390	5,300	125
Minnesota	4,500	0	800	0	100	15	3,000	0	11,300	0	11,300	0
Missouri	2,200	100	1,700	250	800	417	5,400	374	12,500	2,265	10,600	0
Nebraska	900	0	1,200	300	3,600	2,245	1,700	0	3,000	0	2,800	272
North Dakota	600	0	(2)	0	0	0	100	0	1,200	0	1,100	0
South Dakota	500	30	100	60	700	460	700	425	1,300	35	1,300	0
South Atlantic	43,500	2,360	27,900	5,815	68,500	25,500	95,400	43,417	130,100	21,680	112,900	19,233
Percent change from preceding year	+55.9		−59.3		−28.2		−26.7		+15.2			
Delaware	300	0	200	0	3,500	1,688	1,700	722	1,300	0	1,200	20
District of Columbia	3,300	440	2,500	487	5,200	608	9,700	3,746	10,700	969	8,700	1,430
Florida	17,500	1,770	8,700	1.540	8,800	3,234	7,200	3,794	21,600	3,414	22,000	2,606
Georgia	4,600	0	5,000	1,340	13,000	5,969	10,000	3,969	14,900	2,081	15,400	3,490
Maryland	5,000	0	5,700	1,650	13,700	3,455	16,400	4,748	23,200	5,268	15,900	3,353
North Carolina	3,300	0	1,200	200	5,800	4,168	5,200	2,716	16,800	3,314	13,300	629
South Carolina	1,400	0	700	50	2,600	1,010	7,400	4,252	9,200	1,878	7,400	1,049
Virginia	7,100	150	3,600	548	15,300	5,368	35,600	18,620	23,100	4,261	20,700	5,694
West Virginia	1,000	0	300	0	600	0	2,200	850	9,300	495	8,300	962
East South Central	10,700	44	9,000	1,410	14,000	5,929	27,000	12,571	38,600	4,139	33,800	6,289
Percent change from preceding year	+18.9		−35.7		−48.1		−30.1		+14.2			
Alabama	3,600	44	2,500	140	5,600	2,186	15,000	8,782	11,600	1,700	10.000	2,510
Kentucky	1,100	0	600	120	1,100	180	3,800	652	8,100	768	7,700	992
Mississippi	2,200	0	1,500	180	4,900	3,147	4,200	2,420	6,600	437	6,700	1,409
Tennessee	3,800	0	4,400	970	2,400	416	4,000	717	12,300	1,234	9,400	1.37
West South Central	35,800	983	27,500	2,566	42,800	19,115	45,300	12,094	63,100	5,933	54,000	9,64
Percent change from preceding year	+30.2		−35.7		−5.5		−28.2		+16.9			
Arkansas	2,000	100	1,100	150	3,100	2,043	6,400	3,432	4,900	263	3,800	14
Louisiana	4,400	0	7,300	1,506	5,700	660	4,900	338	10,300	1,319	8,600	2,49
Oklahoma	2,900	20	1,500	0	4,100	562	7,100	565	8,400	150	6,500	[illegible]
Texas	26,500	863	17,600	910	29,900	15,850	26,900	7,759	39,500	4,201	35,100	7.00
Mountain	11,100	1,400	5,800	1,239	20,400	13,667	14,600	6,943	21,700	1,351	21,600	1,37
Percent change from preceding year	+91.4		−71.6		+39.7		−32.7		+0.5			
Arizona	2,100	500	1,000	313	4,400	3,629	2,300	1,484	3,000	339	3,100	53
Colorado	3,200	0	900	0	1,300	698	1,500	120	6,200	473	5,800	39
Idaho	1,000	105	500	60	1,200	940	500	300	2,300	184	2,200	[illegible]
Montana	500	10	300	120	200	100	400	200	2,300	80	2,400	29
Nevada	1,100	302	400	314	2,200	1,607	3,400	1,721	1,200	125	900	5
New Mexico	1,400	407	900	338	2,500	2,011	1,100	234	2,600	0	2,700	1
Utah	1,300	76	1,400	34	7,400	3,907	5,200	2,884	3,600	150	3,500	[illegible]
Wyoming	500	0	400	60	1,200	775	200	0	1,100	0	1,000	[illegible]
Pacific	68,200	9,678	54,100	12,227	91,700	56,187	125,200	70,247	121,900	13,658	104,600	7,3
Percent change from preceding year	+26.1		−41.0		−26.8		+2.7		+16.5			
California	53,800	6,075	46,600	11,290	58,100	32,482	77,400	32,468	97,900	9,946	85,400	6,6
Oregon	4,800	503	2,700	280	8,300	5,134	18,600	15,649	7,100	185	6,600	[illegible]
Washington	9,600	3,100	4,800	657	25,300	18,571	29,200	22,130	16,900	3,527	12,600	7

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[1] Includes number of new family dwellings in nonfarm areas for which Federal construction contracts were awarded, and estimates of the number of dwelling units in non-permit-issuing (urban and rural-nonfarm) place

[2] Less than 50 units.

TABLE 30.—*Estimated number and valuation of privately financed new family dwelling units for which permits were issued in nonfarm areas, by State and by type of structure, 1940–45*[1]

State and year	All private dwellings		1-family structures		2-family structures[2]		Multifamily structures[3]	
	Number of dwelling units	Valuation (in thousands)	Number of dwelling units	Valuation (in thousands)	Number of dwelling units	Valuation (in thousands)	Number of dwelling units	Valuation (in thousands)
All nonfarm areas:								
1940	529,571	$1,794,074	447,571	$1,575,176	25,577	$60,290	56,423	$158,608
1941	619,460	2,180,805	533,185	1,952,003	28,393	69,429	57,882	159,373
1942	301,193	948,360	252,323	822,050	17,463	46.882	31,407	79,428
1943	183,660	539,662	136,264	409,290	17,766	49,034	29,630	81,338
1944	138,779	391,318	114,615	319,040	10,626	33,573	13,538	38,705
1945	227,318	836,843	201,672	751,785	9,649	32,608	15,997	52,450
Alabama:								
1940	7,490	14,735	6,357	13,545	760	665	373	525
1941	9,900	19,967	8,368	18,303	975	672	557	992
1942	6,218	10,766	5,607	10,126	365	278	246	362
1943	3,414	4,553	3,103	3,975	73	99	238	479
1944	2,360	3,016	2,238	2,806	91	124	31	86
1945	3,556	6,225	3,450	6,103	72	90	34	32
Arizona:								
1940	2,564	6,883	2,429	6,678	57	91	78	114
1941	2,661	7,744	2,413	7,326	67	123	181	295
1942	816	1,993	740	1,858	5	7	71	128
1943	771	1,593	634	1,304	39	84	98	205
1944	687	1,752	645	1,598	18	66	24	88
1945	1,600	6,437	1,427	5,859	48	154	125	424
Arkansas:								
1940	3,652	8,978	3,330	8,416	222	347	100	215
1941	4,637	11,312	4,250	10,667	251	363	136	282
1942	2,968	6,071	2,855	5,886	110	181	3	4
1943	1,057	670	974	572	83	98	0	0
1944	950	837	941	828	3	3	6	6
1945	1,900	3,524	1,758	3,129	61	127	81	268
California:								
1940	78,754	248,354	65,953	219,329	4,383	10,231	8,418	18,794
1941	87,954	295,184	71,083	252,710	4,124	9,723	12,747	32,751
1942	44,932	135,146	35,836	113,239	1,280	2,986	7,816	18,921
1943	25,618	71,781	18,347	54,597	2,981	7,330	4,290	9,854
1944	35,310	106,137	28,838	88,244	2,349	6,781	4,123	11,112
1945	47,725	191,679	40,859	169,883	3,018	10,680	3,848	11,116
Colorado:								
1940	5,404	15,757	4,682	13,976	221	539	501	1,242
1941	5,727	16,250	4,919	14,714	237	547	571	989
1942	1,380	3,513	1,258	3,298	30	69	92	146
1943	602	1,536	377	1,041	34	68	191	427
1944	900	2,192	668	1,571	18	47	214	574
1945	3,200	11,823	2,441	9,723	71	221	688	1,879
Connecticut:								
1940	7,601	36,983	6,961	35,180	309	1,050	331	753
1941	9,375	46,371	8,756	44,380	370	1,295	249	696
1942	5,763	23,875	5,485	23,053	152	559	126	263
1943	3,379	14,529	2,554	12,062	226	633	599	1,834
1944	1,200	5,118	1,055	4,689	9	22	136	407
1945	1,000	5,570	917	5,284	22	82	61	204
Delaware:								
1940	1,180	4,756	978	4,035	21	75	181	646
1941	1,300	5,653	1,275	5,581	14	43	11	29
1942	978	4,213	958	4,172	16	33	4	8
1943	1,812	6,168	1,536	5,427	276	741	0	0
1944	200	547	124	339	76	208	0	0
1945	300	1,179	290	1,133	2	1	8	45
District of Columbia:								
1940	7,250	25,559	2,606	15,343	0	0	4,644	10,216
1941	9,721	31,694	2,483	14,110	0	0	7,238	17,584
1942	5,886	14,107	641	2,220	0	0	5,245	11,887
1943	4,626	13,113	218	926	0	0	4,408	12,187
1944	2,013	6,294	629	2,613	0	0	1,384	3,681
1945	2,860	9,628	1,119	5,091	0	0	1,741	4,537
Florida:								
1940	19,414	63,313	14,225	52,173	1,534	2,951	3,655	8,189
1941	18,196	60,839	14,552	53,202	1,320	2,506	2,324	5,131
1942	3,474	8,857	3,136	8,289	216	359	122	209
1943	5,532	11,526	4,793	10,140	122	293	617	1,093
1944	7,160	14,269	6,647	12,991	201	333	312	945
1945	15,730	46,994	13,978	41,068	553	1,555	1,199	4,371
Georgia:								
1940	11,910	24,902	10,799	23,640	783	819	328	443
1941	12,819	24,743	11,816	23,397	668	960	335	386
1942	6,031	12,178	5,834	11,922	117	147	80	109
1943	7,031	16,244	4,548	10,176	1,213	3,066	1,270	3,002
1944	3,660	6,407	3,406	5,804	130	242	124	361
1945	4,600	10,192	4,407	9,796	79	235	114	161
Idaho:								
1940	2,200	5,315	2,065	5,099	47	114	88	102
1941	1,816	4,875	1,655	4,539	60	142	101	194
1942	200	369	196	360	4	9	0	0
1943	260	719	228	648	11	42	21	29
1944	440	926	426	891	10	19	4	16
1945	895	3,067	862	2,970	14	44	19	53

See footnotes at end of table.

TABLE 30.—*Estimated number and valuation of privately financed new family dwelling units for which permits were issued in nonfarm areas, by State and by type of structure, 1940–45[1]—Continued*

State and year	All private dwellings		1-family structures		2-family structures[2]		Multifamily structures[3]	
	Number of dwelling units	Valuation (in thousands)	Number of dwelling units	Valuation (in thousands)	Number of dwelling units	Valuation (in thousands)	Number of dwelling units	Valuation (in thousands)
Illinois:								
1940	19,699	$91,630	19,020	$88,916	460	$2,093	219	$621
1941	24,621	120,274	23,621	116,530	554	2,448	446	1,296
1942	11,045	44,265	9,756	39,179	653	2,589	636	2,497
1943	6,821	27,325	4,853	19,902	1,172	4,515	796	2,908
1944	6,930	29,347	5,549	24,091	644	2,629	737	2,627
1945	11,178	57,923	10,008	52,775	226	1,154	944	3,994
Indiana:								
1940	10,793	35,384	9,969	33,003	503	1,437	321	944
1941	14,819	50,147	14,077	48,132	609	1,473	133	542
1942	10,070	31,278	8,404	27,558	1,055	2,630	611	1,090
1943	2,000	5,244	1,360	3,811	444	1,116	196	317
1944	2,192	8,113	2,012	7,590	140	440	40	83
1945	4,054	15,869	3,807	15,209	144	456	103	204
Iowa:								
1940	6,600	22,354	6,257	21,446	66	208	277	700
1941	6,925	25,375	6,707	24,861	111	269	107	245
1942	2,000	6,444	1,951	6,328	38	98	11	18
1943	200	543	200	543	0	0	0	0
1944	320	1,091	310	1,080	2	5	8	6
1945	1,450	4,896	1,379	4,727	27	84	44	85
Kansas:								
1940	5,175	12,513	4,907	12,108	134	231	134	174
1941	6,610	14,400	6,177	13,635	178	351	255	414
1942	5,500	14,055	4,326	11,712	321	724	853	1,619
1943	3,104	6,992	1,624	4,015	853	1,715	627	1,262
1944	1,220	3,085	784	1,745	65	100	371	1,240
1945	1,630	4,239	1,545	4,106	59	103	26	30
Kentucky:								
1940	6,708	15,913	6,267	15,172	223	342	218	399
1941	7,332	19,751	7,119	19,352	99	144	114	255
1942	3,148	7,674	3,085	7,568	25	38	38	68
1943	920	1,768	742	1,442	21	52	157	274
1944	480	829	424	700	4	11	52	118
1945	1,100	3,353	1,010	3,128	13	28	77	197
Louisiana:								
1940	6,102	17,029	5,327	15,448	683	1,317	92	264
1941	8,981	26,642	6,202	18,438	819	1,503	1,960	6,701
1942	4,562	12,078	4,182	11,169	361	868	19	41
1943	5,040	7,739	4,664	6,860	96	195	280	684
1944	5,794	12,357	3,151	6,000	2,011	5,017	632	1,340
1945	4,400	8,301	3,075	5,980	934	1,797	391	524
Maine:								
1940	2,100	6,841	1,978	6,536	56	140	66	165
1941	3,150	10,185	3,070	9,948	21	61	59	176
1942	1,718	5,418	1,429	4,722	6	21	283	675
1943	1,520	4,927	1,114	4,132	4	17	402	778
1944	160	501	143	436	0	0	17	65
1945	400	1,481	374	1,321	0	0	26	160
Maryland:								
1940	12,547	31,426	11,414	28,973	180	404	953	2,049
1941	17,932	50,445	15,218	46,302	1,496	2,460	1,218	1,683
1942	11,652	29,168	9,469	24,695	1,491	2,954	692	1,519
1943	10,245	25,378	6,599	16,706	1,654	3,567	1,992	5,105
1944	4,050	8,769	3,564	7,592	466	1,108	20	69
1945	5,000	15,082	4,775	14,672	102	348	123	62
Massachusetts:								
1940	10,248	42,357	8,562	37,766	595	1,842	1,091	2,749
1941	11,498	50,510	10,244	46,570	470	1,649	784	2,291
1942	4,237	15,965	3,472	13,564	163	523	602	1,878
1943	1,634	5,845	972	3,784	34	107	628	1,954
1944	500	1,606	495	1,589	5	17	0	0
1945	2,800	13,607	2,405	12,087	145	579	250	941
Michigan:								
1940	30,455	121,748	29,125	117,189	1,000	3,534	330	1,025
1941	39,524	163,329	38,510	159,624	913	3,467	101	238
1942	20,254	83,189	19,034	78,640	1,078	4,206	142	343
1943	14,661	64,676	13,467	59,793	1,029	4,480	165	403
1944	7,215	31,831	6,512	28,836	395	1,816	308	1,179
1945	10,336	55,481	9,867	53,318	201	1,153	268	1,010
Minnesota:								
1940	11,300	40,098	10,908	38,903	220	684	172	511
1941	11,300	45,373	10,893	44,182	191	628	216	563
1942	3,000	11,098	2,877	10,659	62	233	61	206
1943	85	118	83	113	2	5	0	0
1944	800	3,077	773	2,979	23	85	4	13
1945	4,500	20,597	4,260	19,694	202	822	38	81
Mississippi:								
1940	5,291	8,615	4,182	7,112	936	1,273	173	230
1941	6,163	9,864	5,089	8,384	907	1,255	167	225
1942	1,780	2,024	1,506	1,784	216	182	58	58
1943	1,753	1,817	1,558	1,504	86	154	109	159
1944	1,320	1,435	1,275	1,419	34	11	11	5
1945	2,200	3,037	2,093	2,891	71	89	36	57

See footnotes at end of table.

TABLE 30.—*Estimated number and valuation of privately financed new family dwelling units for which permits were issued in nonfarm areas, by State and by type of structure, 1940–45*[1]*—Continued*

State and year	All private dwellings		1-family structures		2-family structures[2]		Multifamily structures[3]	
	Number of dwelling units	Valuation (in thousands)	Number of dwelling units	Valuation (in thousands)	Number of dwelling units	Valuation (in thousands)	Number of dwelling units	Valuation (in thousands)
Missouri:								
1940	10,600	$33,361	9,731	$31,076	318	$867	551	$1,418
1941	10,235	33,775	9,295	30,682	347	939	593	2,154
1942	5,026	14,860	4,393	13,532	87	171	546	1,157
1943	383	580	291	441	92	139	0	0
1944	1,450	2,944	1,048	1,939	68	224	334	781
1945	2,100	7,037	1,825	6,093	148	522	127	422
Montana:								
1940	2,103	5,196	1,859	4,716	119	284	125	196
1941	1,920	5,495	1,827	5,303	39	85	54	107
1942	200	473	200	473	0	0	0	0
1943	100	243	38	100	16	41	46	102
1944	180	665	173	651	4	2	3	12
1945	490	1,323	455	1,249	10	29	25	45
Nebraska:								
1940	2,528	8,251	2,274	7,697	120	264	134	290
1941	3,000	10,106	2,869	9,729	75	242	56	135
1942	1,700	5,057	1,584	4,769	94	239	22	49
1943	1,355	4,461	1,131	3,881	124	353	100	227
1944	900	3,317	779	2,953	25	84	96	280
1945	900	3,389	856	3,195	16	101	28	93
Nevada:								
1940	850	2,959	716	2,745	56	109	78	105
1941	1,075	4,161	823	3,685	161	353	91	123
1942	1,679	4,768	1,433	4,350	119	221	127	197
1943	593	1,764	460	1,388	129	374	4	2
1944	86	122	61	98	10	14	15	10
1945	798	2,917	777	2,872	16	25	5	20
New Hampshire:								
1940	1,300	4,626	1,248	4,481	39	109	13	36
1941	1,541	6,234	1,492	6,123	40	96	9	15
1942	215	529	206	512	5	11	4	6
1943	10	11	10	11	0	0	0	0
1944	0	0	0	0	0	0	0	0
1945	300	1,483	293	1,467	7	16	0	0
New Jersey:								
1940	15,341	63,683	13,641	58,411	367	1,164	1,333	4,108
1941	20,051	83,258	18,734	79,588	510	1,524	807	2,146
1942	14,147	48,660	9,104	34,877	3,121	9,143	1,922	4,640
1943	4,825	14,090	2,393	7,370	1,186	3,590	1,246	3,130
1944	1,900	5,938	992	3,436	43	143	865	2,359
1945	4,165	17,928	3,405	15,311	108	399	652	2,218
New Mexico:								
1940	2,600	5,898	2,365	5,474	156	278	79	146
1941	2,600	6,427	2,350	5,989	126	252	124	186
1942	866	2,282	818	2,182	33	67	15	33
1943	489	856	421	757	11	10	57	89
1944	562	900	542	895	8	3	12	2
1945	993	1,654	941	1,585	24	46	28	23
New York:								
1940	49,351	194,864	23,129	104,658	3,367	9,828	22,855	80,378
1941	46,573	194,626	26,693	126,104	4,555	14,630	15,325	53,892
1942	13,001	46,981	8,959	34,156	1,869	6,060	2,173	6,765
1943	2,756	9,453	1,398	5,155	672	1,879	686	2,419
1944	753	2,282	530	1,602	161	466	62	214
1945	6,900	32,968	5,729	27,746	280	1,146	891	4,076
North Carolina:								
1940	12,671	31,628	10,685	28,880	1,277	1,562	709	1,186
1941	13,486	33,990	12,117	31,869	906	1,287	463	834
1942	2,484	6,538	2,196	5,930	148	352	140	256
1943	1,632	4,002	1,187	2,801	39	92	406	1,109
1944	1,000	1,003	971	987	13	10	16	6
1945	3,300	10,444	3,111	10,062	116	221	73	161
North Dakota:								
1940	1,100	3,130	1,002	2,848	12	40	86	242
1941	1,200	3,798	1,147	3,669	31	86	22	43
1942	100	245	98	239	2	6	0	0
1943	0	0	0	0	0	0	0	0
1944	0	0	0	0	0	0	0	0
1945	600	1,604	540	1,460	2	4	58	140
Ohio:								
1940	24,558	108,862	22,048	99,715	766	2,909	1,744	6,238
1941	32,457	143,377	29,115	132,036	942	3,988	2,400	7,353
1942	17,759	68,655	15,779	62,466	734	2,717	1,246	3,472
1943	11,323	44,977	7,291	30,736	1,187	4,640	2,845	9,601
1944	7,100	29,031	4,999	19,453	1,310	6,224	791	3,354
1945	9,950	57,262	8,253	48,335	434	2,391	1,263	6,536
Oklahoma:								
1940	6,500	19,876	6,136	19,251	266	378	98	247
1941	8,250	25,456	7,998	25,120	191	252	61	84
1942	6,535	18,985	6,211	18,398	260	520	64	67
1943	3,538	12,830	3,304	12,310	117	316	117	204
1944	1,500	2,521	1,305	2,243	130	215	65	63
1945	2,880	7,901	2,761	7,731	95	133	24	37

See footnotes at end of table.

TABLE 30.—*Estimated number and valuation of privately financed new family dwelling units for which permits were issued in nonfarm areas, by State and by type of structure, 1940–45*[1]*—Continued*

State and year	All private dwellings		1-family structures		2-family structures[2]		Multifamily structures[3]	
	Number of dwelling units	Valuation (in thousands)	Number of dwelling units	Valuation (in thousands)	Number of dwelling units	Valuation (in thousands)	Number of dwelling units	Valuation (in thousands)
Oregon:								
1940	6,600	$18,600	5,839	$16,690	159	$326	602	$1,584
1941	6,915	20,795	6,311	19,476	166	399	438	920
1942	2,951	9,076	2,598	8,186	61	167	292	723
1943	3,166	11,157	2,211	7,473	34	105	921	3,579
1944	2,420	6,980	2,120	5,759	6	23	294	1,198
1945	4,297	14,123	4,100	13,418	99	354	98	351
Pennsylvania:								
1940	24,278	102,889	22,882	98,863	443	1,604	953	2,422
1941	32,457	139,589	31,634	136,560	378	1,500	445	1,529
1942	18,458	72,486	17,122	69,313	780	1,940	556	1,233
1943	10,212	35,933	9,117	32,703	505	1,570	590	1,660
1944	3,606	11,802	2,756	9,471	666	1,962	184	369
1945	5,000	22,064	4,090	18,429	393	1,544	517	2,091
Rhode Island:								
1940	2,090	8,608	1,916	8,208	119	307	55	93
1941	1,820	7,865	1,693	7,508	107	303	20	54
1942	900	3,452	870	3,351	27	95	3	6
1943	95	310	95	310	0	0	0	0
1944	100	257	100	257	0	0	0	0
1945	900	4,079	857	3,889	22	90	21	100
South Carolina:								
1940	6,351	14,227	5,745	13,447	498	609	108	171
1941	7,322	17,149	6,397	15,527	485	785	440	837
1942	3,148	6,516	3,044	6,370	52	67	52	79
1943	1,590	2,309	1,467	2,076	40	27	83	206
1944	650	914	631	892	8	4	11	18
1945	1,400	2,392	1,297	2,260	84	89	19	43
South Dakota:								
1940	1,300	3,199	1,242	3,050	33	82	25	67
1941	1,265	3,639	1,231	3,548	23	63	11	28
1942	275	624	228	563	2	8	45	53
1943	240	719	145	476	27	93	68	150
1944	40	37	28	19	0	0	12	18
1945	470	1,310	443	1,269	10	16	17	25
Tennessee:								
1940	8,022	19,178	7,167	18,149	668	831	187	198
1941	11,066	29,967	9,340	27,418	1,330	1,998	396	551
1942	3,283	8,586	2,912	7,954	307	525	64	107
1943	1,984	3,974	1,730	3,514	254	460	0	0
1944	3,430	7,033	3,328	6,878	99	153	3	2
1945	3,800	10,808	3,451	9,851	239	682	110	275
Texas:								
1940	28,097	76,863	25,622	72,570	1,522	2,667	953	1,626
1941	35,299	97,529	32,457	92,869	1,617	2,538	1,225	2,122
1942	19,141	45,675	17,815	43,410	1,010	1,712	316	553
1943	14,050	22,565	11,355	17,492	1,745	3,134	950	1,939
1944	16,690	29,766	15,209	26,554	355	646	1,126	2,566
1945	25,637	59,577	24,194	55,578	629	1,686	814	2,313
Utah:								
1940	3,500	11,012	3,315	10,734	48	100	137	178
1941	3,450	11,181	3,155	10,437	166	517	129	227
1942	2,316	6,449	1,995	5,618	113	301	208	530
1943	3,493	11,589	3,368	11,260	68	184	57	145
1944	1,366	5,547	1,257	5,093	28	101	81	353
1945	1,224	4,752	1,166	4,580	26	114	32	58
Vermont:								
1940	700	3,251	683	3,194	13	47	4	10
1941	900	4,237	891	4,211	9	26	0	0
1942	100	213	98	205	2	8	0	0
1943	25	92	25	92	0	0	0	0
1944	0	0	0	0	0	0	0	0
1945	100	382	98	377	2	5	0	0
Virginia:								
1940	15,006	53,300	12,290	46,531	745	2,154	1,971	4,615
1941	18,839	67,971	14,559	56,770	421	1,267	3,859	9,934
1942	16,980	53,751	11,620	37,613	185	661	5,175	15,477
1943	9,932	27,735	6,007	15,085	56	218	3,869	12,432
1944	3,052	9,628	2,162	5,937	368	1,922	522	1,769
1945	6,950	22,218	6,385	20,395	269	795	296	1,028
Washington:								
1940	11,850	35,948	11,280	34,684	176	434	394	830
1941	13,373	44,405	13,012	43,640	143	336	218	429
1942	7,070	21,454	6,756	20,665	124	318	190	471
1943	6,729	25,299	6,101	23,478	397	1,250	231	571
1944	4,143	14,339	3,462	12,252	431	1,439	250	648
1945	6,500	26,126	6,046	24,783	179	633	275	710
West Virginia:								
1940	7,338	25,594	6,885	24,463	195	519	258	612
1941	8,805	28,016	8,445	27,105	213	501	147	410
1942	1,350	4,042	1,158	3,364	39	82	153	596
1943	600	1,279	597	1,271	3	8	0	0
1944	300	351	293	344	4	1	3	6
1945	1,000	3,157	928	2,996	49	107	23	54

See footnotes at end of table.

TABLE 30.—*Estimated number and valuation of privately financed new family dwelling units for which permits were issued in nonfarm areas, by State and by type of structure, 1940–45*[1]*—Continued*

State and year	All private dwellings		1-family structures		2-family structures[2]		Multifamily structures[3]	
	Number of dwelling units	Valuation (in thousands)	Number of dwelling units	Valuation (in thousands)	Number of dwelling units	Valuation (in thousands)	Number of dwelling units	Valuation (in thousands)
Wisconsin:								
1940	9,500	$34,145	8,599	$31,250	690	$2,401	211	$494
1941	11,500	42,971	10,064	38,400	936	3,329	500	1,242
1942	3,697	13,694	2,894	11,008	525	1,797	278	889
1943	2,030	7,512	1,161	4,549	611	2,174	258	789
1944	1,350	5,370	975	4,037	195	853	180	480
1945	3,750	18,162	3,143	15,448	317	1,642	290	1,072
Wyoming:								
1940	1,000	3,483	971	3,405	12	30	17	48
1941	1,100	3,861	1,039	3,750	22	51	39	60
1942	200	565	195	545	0	0	5	20
1943	425	1,118	413	1,088	0	0	12	30
1944	340	1,035	285	859	0	0	55	176
1945	500	1,599	422	1,458	11	16	67	125

[1] Includes estimates of the number and permit valuation of dwelling units in non-permit-issuing (urban and rural-nonfarm) places.

[2] Includes 1- and 2-family dwellings with stores.

[3] Includes multifamily structures with stores.

the 10 highest in regard to the number of dwelling units in existence in April 1940. However, there was a great concentration of military activities in Florida and Virginia and of ship and aircraft construction in Washington, which was responsible for a large amount of homebuilding to accommodate in-migrants.

The number of new nonfarm dwelling units for which permits were issued in each State during 1940–45 as a proportion of the number of dwellings already standing in April 1940 is shown in map "B." This presentation is particularly significant in pointing out areas of in-migrant need, since it neutralizes the factor of replacement demand. For instance, there were more units standing in 1940 in New York than in any other State (3,827,054), and it ranked fourth in the amount of home building during 1940–45; however, the number of dwellings started in that State during the 6-year period was only 4 percent of existing housing, indicating relative stability in wartime population.

On the other hand, in Nevada, which had the fewest units standing (31,993), there was proportionately more housing put under construction than in any other State (29 percent of existing housing). Replacement demand for homes in Nevada was negligible, since there were so few houses in existence. This condition, together with the fact that the population of Nevada increased 45 percent from 1940 to 1945, makes it apparent that most of the new dwellings put under construction during the 6-year period were to take care of families coming into the State from other areas. Reports of Federal contracts awarded in October 1941 for the construction of a 126-million-dollar basic magnesium plant near Las Vegas, which first required numerous construction workers and later many operational employees, further substantiates this conclusion.

As would be expected from the foregoing discussion of nonfarm housing, California was also the leading State in the dollar volume of building permits issued during the war years 1942–45. Over 17 percent, or 1.2 billion of the 7 billion dollar permit valuation figure for all urban areas, was reported for California alone. Michigan and Illinois (each accounting for around 7 percent of the total) ranked second and third, respectively, with 507 million and 468 million dollars.

Not only did California lead in the amount of total permit valuations, but it was in first place with respect to all classes of building construction: New residential building 522 million dollars (21 percent of the 2.5 billion dollars estimated for new residential building in all urban areas); new nonresidential building, 513 million dollars (16 percent of the 3.2-billion-dollar total); and additions, alterations, and repairs, 173 million dollars (13 percent of 1.3-billion-dollar total). Michigan, with 225 million dollars (9 percent of all urban) was second in the new residential building category. Second place for new nonresidential building went to Pennsylvania (250 million dollars, 8 percent of total), and for additions, alterations, and repairs to New York (123 million dollars, 9 percent of all urban).

From Region to Region

The impact of war upon construction activity in different sections of the country is reflected in the altered distribution of new nonfarm housing from

TABLE 31.—*Estimated number of new family dwelling units and valuation of building construction for which permits were issued in urban areas,[1] by State and by class of construction, 1942–45*

State and year	Number of new family dwelling units		Valuation (in thousands)							
			All building construction		New residential buildings[2]		New nonresidential buildings		Additions, alterations, and repairs	
	Total	Federal	Total	Federal	Total	Federal	Total	Federal	Total	Federal
All urban areas (U. S. total):										
1942	280,838	95,946	$2,707,573	$1,640,615	$918,413	$315,804	$1,510,688	$1,287,690	$278,472	$37,121
1943	209,418	89,704	1,262,133	558,549	583,496	208,327	439,131	332,585	239,506	17,637
1944	114,875	21,702	1,101,350	347,909	345,670	56,400	438,909	269,831	316,771	21,678
1945	160,526	11,327	1,966,913	249,732	663,160	31,598	827,614	188,272	476,139	29,862
Alabama:										
1942	6,376	3,071	33,981	24,512	15,886	10,684	14,689	13,463	3,406	365
1943	2,042	588	12,362	6,207	3,614	1,370	5,319	4,225	3,429	612
1944	1,630	0	10,958	2,300	2,480	0	4,535	1,737	3,943	563
1945	2,783	44	23,054	4,234	4,969	165	11,212	2,962	6,873	1,107
Arizona:										
1942	711	266	19,113	16,754	2,164	1,014	16,103	15,736	846	4
1943	1,340	942	4,824	2,485	2,793	1,877	887	565	1,144	43
1944	690	148	4,717	909	1,860	358	1,473	545	1,384	6
1945	1,431	0	11,951	675	6,073	14	3,695	621	2,183	40
Arkansas:										
1942	1,558	270	13,889	9,479	3,391	819	9,380	8,644	1,118	16
1943	570	0	2,396	286	369	0	745	275	1,282	11
1944	630	0	5,074	2,058	590	0	2,790	1,984	1,694	74
1945	1,382	50	8,714	1,825	2,780	111	3,798	1,599	2,136	115
California:										
1942	53,627	24,174	361,364	215,820	152,210	60,446	179,831	149,153	29,323	6,221
1943	46,716	27,786	225,602	114,676	113,692	58,329	81,652	53,977	30,258	2,370
1944	34,038	9,930	254,075	108,075	99,728	21,409	110,323	82,698	44,024	3,968
1945	36,879	5,159	366,961	68,606	156,264	11,949	140,825	51,374	69,872	5,283
Colorado:										
1942	1,068	76	27,392	22,227	2,884	261	22,511	21,890	1,997	76
1943	491	0	4,672	339	1,290	0	846	304	2,536	35
1944	684	0	6,493	623	1,827	0	1,674	552	2,992	71
1945	3,066	0	21,183	931	11,533	0	4,469	4	5,181	927
Connecticut:										
1942	7,862	3,762	74,129	43,382	30,493	13,520	35,256	29,612	8,380	250
1943	5,012	2,687	28,992	11,646	16,822	7,594	5,850	3,718	6,320	334
1944	705	0	11,770	1,372	2,840	0	3,509	1,240	5,421	132
1945	687	0	23,063	1,865	3,818	0	11,868	1,710	7,377	155
Delaware:										
1942	568	530	4,347	3,197	2,357	2,223	1,359	961	631	13
1943	1,189	518	4,631	1,207	3,523	1,128	331	79	777	0
1944	62	0	1,570	536	186	0	651	512	733	24
1945	108	0	4,988	923	597	0	3,177	895	1,214	28
District of Columbia:										
1942	9,632	3,746	80,846	61,889	38,708	23,582	37,169	35,213	4,969	3,094
1943	5,234	608	24,373	8,677	14,974	1,861	6,704	5,964	2,695	852
1944	2,606	487	20,238	9,989	7,421	1,031	9,206	8,268	3,611	690
1945	3,352	440	26,574	11,220	11,789	2,161	11,126	8,558	3,659	501
Florida:										
1942	5,993	3,149	48,694	32,758	16,345	8,910	25,015	21,844	7,334	2,004
1943	4,389	1,154	25,864	11,587	9,838	2,645	9,122	7,772	6,904	1,170
1944	4,159	1,080	26,949	9,657	9,696	2,978	7,964	5,542	9,289	1,137
1945	7,982	100	68,410	1,811	30,877	220	18,446	558	19,087	1,033
Georgia:										
1942	5,222	2,504	26,356	15,357	11,166	5,383	11,917	9,728	3,273	246
1943	6,291	2,880	21,157	8,947	14,347	5,813	3,051	2,722	3,759	412
1944	2,314	660	11,423	3,596	4,688	1,578	2,666	1,661	4,069	357
1945	2,387	0	24,044	3,137	6,753	0	12,062	3,009	5,229	128
Idaho:										
1942	121	0	1,152	40	249	0	392	40	511	0
1943	219	60	1,556	162	639	158	341	4	576	0
1944	373	60	2,738	300	877	139	978	161	883	0
1945	695	0	6,337	141	2,607	0	2,166	32	1,564	109
Illinois:										
1942	9,349	2,106	164,476	101,909	39,440	7,826	110,244	92,473	14,792	1,610
1943	6,732	1,500	100,524	61,099	29,578	7,597	58,728	52,571	12,218	931
1944	6,496	580	72,894	14,038	27,966	2,074	28,859	11,387	16,069	577
1945	9,122	922	130,138	8,953	52,758	3,496	51,516	4,300	25,864	1,157
Indiana:										
1942	5,714	106	88,156	58,443	18,617	333	64,013	57,841	5,526	269
1943	3,085	1,650	21,095	10,735	7,318	3,383	9,395	7,125	4,382	227
1944	2,549	508	23,386	5,766	8,790	1,001	8,592	4,201	6,004	564
1945	2,900	0	44,011	5,756	12,574	0	20,406	5,385	11,031	371
Iowa:										
1942	1,998	400	19,098	9,084	6,404	1,139	9,867	7,923	2,827	22
1943	181	0	6,559	2,267	493	0	4,146	2,245	1,920	22
1944	419	80	11,518	4,006	1,441	179	6,749	3,790	3,328	37
1945	1,045	50	18,694	1,609	3,972	29	9,828	1,475	4,894	105
Kansas:										
1942	3,021	0	11,184	404	7,797	0	1,448	317	1,939	87
1943	2,810	444	9,878	1,445	6,209	983	1,167	390	2,502	72
1944	914	0	9,431	2,533	2,613	0	3,288	1,999	3,530	534
1945	1,328	180	13,267	1,461	3,974	419	5,122	992	4,171	50

See footnotes at end of table.

TABLE 31.—*Estimated number of new family dwelling units and valuation of building construction for which permits were issued in urban areas,[1] by State and by class of construction, 1942–45—Continued*

State and year	Number of new family dwelling units		Valuation (in thousands)							
			All building construction		New residential buildings[2]		New nonresidential buildings		Additions, alterations, and repairs	
	Total	Federal	Total	Federal	Total	Federal	Total	Federal	Total	Federal
Kentucky:										
1942	1,770	652	$12,666	$8,560	$4,292	$1,881	$7,199	$6,546	$1,175	$133
1943	644	0	5,670	2,931	1,317	0	3,341	2,712	1,012	219
1944	440	120	6,476	3,537	1,015	335	4,149	3,003	1,312	199
1945	561	0	13,834	3,760	1,683	0	10,184	3,500	1,967	260
Louisiana:										
1942	2,408	148	38,618	29,518	6,456	562	29,631	28,418	2,531	538
1943	1,767	620	30,518	26,086	2,961	1,053	25,098	24,739	2,459	294
1944	5,038	1,445	23,996	11,369	12,145	3,656	8,981	7,450	2,870	263
1945	3,200	0	15,596	2,869	6,420	0	4,977	2,387	4,199	482
Maine:										
1942	2,925	2,082	28,909	24,573	10,000	7,450	17,752	16,842	1,157	281
1943	1,427	740	7,349	4,191	3,837	2,102	2,287	1,889	1,225	200
1944	70	0	2,312	524	205	0	717	309	1,390	215
1945	164	0	3,386	86	589	0	1,717	29	1,080	57
Maryland:										
1942	8,169	2,670	80,262	56,185	23,497	9,551	53,433	46,089	3,332	545
1943	3,711	248	15,836	2,569	9,492	732	3,181	1,747	3,163	90
1944	1,505	1,000	15,114	8,608	5,484	4,162	6,207	4,256	3,423	190
1945	1,012	0	17,336	1,280	4,852	0	6,820	947	5,664	333
Massachusetts:										
1942	4,691	863	109,208	75,703	17,613	3,192	75,584	68,824	16,011	3,687
1943	1,976	566	28,985	9,120	6,193	1,281	11,461	7,231	11,331	608
1944	387	0	26,187	5,514	1,211	0	9,759	5,144	15,217	370
1945	2,202	0	56,822	4,989	10,893	0	21,165	3,452	24,764	1,537
Michigan:										
1942	16,298	1,106	177,345	67,039	69,527	4,124	89,789	62,578	18,029	337
1943	19,953	7,341	120,345	44,540	76,954	19,425	29,470	24,782	13,921	333
1944	8,224	3,385	72,894	21,919	33,007	9,926	23,245	11,642	16,642	351
1945	7,437	64	136,496	8,341	45,876	189	63,801	7,900	26,819	252
Minnesota:										
1942	1,998	0	20,607	5,292	7,681	0	8,000	5,225	4,926	67
1943	87	0	7,564	2,673	124	0	3,933	2,620	3,507	53
1944	688	0	19,416	1,812	2,814	0	7,032	1,703	9,570	109
1945	3,236	0	41,831	96	17,071	0	12,525	46	12,235	50
Mississippi:										
1942	2,825	1,448	11,918	8,709	5,645	4,147	5,073	4,475	1,200	87
1943	2,186	778	4,685	2,132	2,774	1,238	817	536	1,094	358
1944	1,202	180	2,735	837	1,083	413	827	385	825	39
1945	1,851	0	8,989	2,280	2,570	0	4,435	2,154	1,984	126
Missouri:										
1942	2,128	0	33,671	21,105	6,343	0	22,534	19,943	4,794	1,162
1943	269	0	10,485	5,604	422	0	7,055	5,307	3,008	297
1944	949	100	18,225	6,024	2,257	240	9,186	5,752	6,782	32
1945	1,542	0	33,388	2,321	5,764	0	17,373	441	10,251	1,880
Montana:										
1942	335	200	1,682	711	1,024	689	215	2	443	20
1943	212	100	1,032	199	487	197	190	0	355	2
1944	373	120	3,428	329	1,234	294	1,740	0	454	35
1945	410	0	4,254	455	1,256	0	1,666	427	1,332	28
Nebraska:										
1942	992	0	5,879	160	3,125	0	1,344	144	1,410	16
1943	2,124	1,117	11,362	5,705	5,465	2,166	4,233	3,513	1,664	26
1944	704	0	8,501	2,648	2,908	0	3,401	2,648	2,192	0
1945	652	0	15,888	7,250	2,859	0	9,974	7,199	3,055	51
Nevada:										
1942	1,178	0	4,389	0	3,567	0	410	0	412	0
1943	524	164	2,222	439	1,451	365	397	74	374	0
1944	211	100	1,367	373	455	316	446	57	466	0
1945	422	0	6,307	1,490	2,519	0	2,541	1,476	1,247	14
New Hampshire:										
1942	228	85	3,773	2,627	740	388	2,068	1,869	965	370
1943	10	0	435	61	11	0	122	46	302	15
1944	10	0	941	351	4	0	398	329	539	22
1945	134	0	2,023	8	663	0	431	0	929	8
New Jersey:										
1942	10,757	1,453	121,206	66,719	36,532	5,727	70,318	59,921	14,356	1,071
1943	4,026	720	39,079	12,079	11,586	1,823	14,819	9,591	12,674	665
1944	1,236	0	34,103	6,623	3,903	0	14,269	5,588	15,931	1,035
1945	3,075	335	69,206	5,596	15,266	1,751	29,388	3,120	24,552	725
New Mexico:										
1942	635	0	2,931	460	1,741	0	625	456	565	4
1943	773	335	2,578	1,258	1,453	669	648	562	477	27
1944	653	200	1,963	509	1,256	464	286	15	421	30
1945	1,246	375	6,124	2,289	2,101	744	3,022	1,384	1,001	161
New York:										
1942	13,490	5,469	194,498	121,054	49,980	21,466	115,292	96,827	29,226	2,761
1943	5,029	3,199	56,550	23,836	13,785	7,407	22,585	15,118	20,180	1,311
1944	667	147	67,674	17,141	2,567	774	24,912	14,041	40,195	2,326
1945	3,886	0	100,103	9,963	22,801	0	43,977	8,041	33,325	1,922
North Carolina:										
1942	2,843	750	13,051	2,445	7,282	1,656	2,615	649	3,154	140
1943	887	60	6,387	620	2,431	143	1,516	295	2,440	182
1944	450	0	6,923	1,135	469	0	3,559	1,056	2,895	79
1945	2,305	0	30,696	890	8,467	0	15,724	803	6,505	87

See footnotes at end of table.

TABLE 31.—*Estimated number of new family dwelling units and valuation of building construction for which permits were issued in urban areas,*[1] *by State and by class of construction, 1942–45—Continued*

State and year	Number of new family dwelling units		Valuation (in thousands)							
			All building construction		New residential buildings[2]		New nonresidential buildings		Additions, alterations, and repairs	
	Total	Federal	Total	Federal	Total	Federal	Total	Federal	Total	Federal
North Dakota:										
1942	55	0	$424	0	$142	0	$105	0	$177	0
1943	0	0	393	$164	0	0	284	$145	109	$19
1944	23	0	789	240	262	0	329	239	198	1
1945	327	0	2,936	0	1,077	0	1,194	0	665	0
Ohio:										
1942	12,550	1,591	133,790	58,447	52,000	$6,839	63,894	51,011	17,896	597
1943	16,575	7,827	99,039	42,906	58,020	21,853	26,386	20,872	14,633	181
1944	6,764	200	67,109	11,723	28,559	1,012	19,735	9,705	18,815	1,006
1945	7,540	280	127,643	7,758	47,862	1,113	50,541	4,589	29,240	2,056
Oklahoma:										
1942	3,181	65	11,745	1,184	8,995	199	1,524	953	1.226	32
1943	1,675	150	9,810	1,508	6,012	895	1,007	560	2,791	53
1944	1,099	0	5,742	903	1,925	0	1,799	561	2,018	342
1945	2,100	0	23,955	8,086	6,200	0	13,912	7,925	3,843	161
Oregon:										
1942	6,569	4,985	42,105	31,044	18,643	13,536	21,364	17,440	2,098	68
1943	5,574	3,548	21,942	9,249	15,756	8,034	2,519	1,116	3,667	99
1944	1,617	150	14,761	4,082	5,077	375	6,000	3,543	3,684	164
1945	2,245	238	23,569	1,706	8,588	495	9,393	1,027	5,588	184
Pennsylvania:										
1942	13,989	3,835	229,164	153,229	54,959	15,254	151.450	134,492	22,755	3,483
1943	9,651	3,672	80,214	37,758	31,879	10,155	32,490	26,001	15,845	1,602
1944	2,390	322	59,104	30,818	8,305	1,069	32,996	27,367	17,803	2,382
1945	3,097	0	78,409	14,593	16,362	0	32,889	12,221	29,158	2,372
Rhode Island:										
1942	909	300	36,975	32,079	3,499	1,159	30,641	29,836	2,835	1,084
1943	187	105	3,795	1,861	562	301	1,538	1,220	1,695	340
1944	55	0	3,197	687	127	0	1,081	643	1,989	44
1945	662	0	8,332	312	3,021	0	1,595	34	3,716	278
South Carolina:										
1942	2,541	1,732	11,822	6,926	5,272	3,476	4,965	2,972	1,585	478
1943	436	60	3,824	907	752	128	1,478	685	1,594	94
1944	287	0	3,213	1,423	423	0	1,726	1,327	1,064	96
1945	690	0	7,251	1,431	1,502	0	4,082	1,352	1,667	79
South Dakota:										
1942	198	0	991	19	449	0	153	0	389	19
1943	234	0	1,450	165	703	0	227	119	520	46
1944	58	0	1,534	408	50	0	846	396	638	12
1945	389	30	3,287	145	1,238	123	967	0	1,082	22
Tennessee:										
1942	2,150	617	25,956	17,458	5,287	1,736	17,268	15,628	3,401	94
1943	1,203	0	10,358	3,630	2,611	0	4,517	3,617	3,230	13
1944	2,124	0	16,010	3,913	5,549	0	5,056	3,259	5,405	654
1945	2,905	0	32,952	3,695	8,335	0	16,124	2,877	8,493	818
Texas:										
1942	17,646	5,359	84,987	36,862	43,310	14,418	31,262	21,726	10,415	718
1943	15,797	4,478	49,287	16,421	25,736	7,588	11,409	8,493	12,142	340
1944	12,761	340	53,189	6,733	24,402	961	15,760	5,329	13,027	443
1945	18,523	275	145,474	16,623	46,671	215	74,887	15,481	23,916	927
Utah:										
1942	3,516	1,850	37,701	30,910	9,768	4,926	26,422	25,543	1,511	441
1943	2,955	400	13,374	2,615	10,138	983	1,962	1,413	1,274	219
1944	1,124	0	8,168	1,485	4,560	0	2,356	1,458	1,252	27
1945	917	0	12,932	2,206	4,178	0	5,434	1,116	3,320	1,090
Vermont:										
1942	208	125	790	398	575	398	80	0	135	0
1943	33	25	1,079	884	88	62	895	819	96	3
1944	4	0	197	30	6	0	115	30	76	0
1945	60	0	525	0	237	0	186	0	102	0
Virginia:										
1942	14,056	5,440	113,243	77,947	51,894	23,532	53,592	50,314	7,757	4.101
1943	7,647	3,722	38,576	20,909	21,078	8,864	12,072	9,894	5,426	2,151
1944	1,486	230	26,755	15,437	5,735	934	16,256	13,732	4,764	771
1945	2,665	0	32,585	4,335	11,886	0	13,720	3,318	6,979	1,017
Washington:										
1942	11,789	7,608	80,955	58,179	42,664	29,075	33,347	28,611	4,944	493
1943	12,370	7,837	56,634	24,822	33,653	15,498	14,336	8,853	8,645	471
1944	2,516	130	31,224	11,066	9,962	722	14,030	9,834	7,232	510
1945	5,855	2,535	52,786	15,059	23,825	7,954	17,331	5,624	11,630	1,481
West Virginia:										
1942	1,043	350	13,311	8,491	3.436	1,208	8,465	7,280	1,410	3
1943	116	0	2,824	1,385	286	0	1,696	1,362	842	23
1944	183	0	2,915	948	222	0	1,322	891	1,371	57
1945	674	0	10,462	1,190	2,494	0	5,238	1,162	2,730	28
Wisconsin:										
1942	3,809	1,003	48,009	21,320	13,942	3,075	24,888	18,238	9,179	7
1943	2,119	370	21,240	5,883	7,691	1,029	6,758	4,718	6,791	136
1944	1,139	0	20,684	2,899	4,837	0	6,826	1,759	9,021	1,140
1945	3,071	250	47,650	5,476	15,520	450	19,824	4,759	12.306	267
Wyoming:										
1942	139	0	815	7	422	0	192	0	201	7
1943	940	705	2,727	1,674	2,289	1,598	120	0	318	76
1944	169	0	1,270	103	649	0	305	103	316	0
1945	324	0	2,497	7	1,176	0	861	7	460	0

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[1] Includes number of dwelling units and value of building construction for which Federal contracts were awarded in urban areas.

[2] Includes valuation of dormitories and other nonhousekeeping residential buildings in addition to the housekeeping units shown in the first 2 columns.

TABLE 32.—*Value of contracts awarded and force-account work started on construction projects financed wholly or partially from Federal funds, by State, 1943–45*[1]

State	Value (in thousands of dollars)														
	1945							1944							1943[2]
	All types of projects	Building construction[3]			Streets and roads	Conservation and development	All other[4] construction	All types of projects	Building construction[3]			Streets and roads	Conservation and development	All other[4] construction	All types of projects
		Total	Residential	Nonresidential					Total	Residential	Nonresidential				
United States: Total	1,029,571	617,001	53,133	563,868	100,969	72,150	239,451	1,342,536	875,028	101,492	773,536	111,805	112,415	243,288	2,518,878
Alabama	27,238	18,079	182	17,897	2,608	2,128	4,423	20,912	7,416	408	7,008	2,673	2,563	8,260	39,594
Arizona	2,550	1.569	378	1,191	22	564	395	14,075	9,656	1,047	8,609	1,299	2,129	991	25,819
Arkansas	22,093	5,656	298	5,358	6,973	4,905	4,559	86,805	80,020	200	79,820	1,069	3,895	1,821	56,792
California	180,861	130,071	14,921	115,150	12,356	5,851	32,583	285,541	201,191	32,632	168,559	13,270	15,894	55,186	265,619
Colorado	3,070	1,003	0	1,003	376	69	1,622	4,557	781	10	771	1,432	108	2,236	8,615
Connecticut	5,993	4,579	138	4,441	127	1,155	132	4,917	4,001	688	3,313	24	206	686	20,674
Delaware	2,087	928	22	906	903	0	256	1.455	487	12	475	336	0	632	6,173
District of Columbia	11,800	11,367	2,170	9,197	44	7	382	11,806	9,991	1,121	8,870	263	0	1,552	14,355
Florida	24,237	11,163	5,033	6,130	604	608	11,862	42,429	27,989	4,674	23,315	2,833	68	11,539	145,776
Georgia	13,607	4,496	12	4,484	2,947	0	6,164	18,065	11,483	3,209	8,274	2,241	0	4,341	36,309
Idaho	2,042	599	426	173	197	388	858	4,329	2,648	187	2,461	704	419	558	21,352
Illinois	32,793	22,115	3,724	18,391	2,038	3,953	4,687	40,686	26,340	4,132	22,208	5,576	2,144	6,626	122,000
Indiana	24,199	14,809	2,333	12,476	2,330	437	6,623	18,540	15,797	1,759	14,038	1,036	387	1,320	18,430
Iowa	14,942	1,869	46	1,823	2,761	21	10,291	10,454	3,963	283	3,680	166	110	6,215	7,970
Kansas	13,741	8,275	817	7,458	300	112	5,054	13,312	8,255	932	7,323	296	60	4,701	13,903
Kentucky	14,937	5,387	2	5,385	1,149	5,966	2,435	25,538	7,137	355	6,782	1,744	15,028	1,629	47,014
Louisiana	18,840	4,375	54	4,321	653	7,378	6,434	36,098	20,696	3,997	16,699	3,246	5,662	6,494	80,820
Maine	808	321	13	308	57	0	430	6,756	4,659	627	4,032	552	59	1,486	17,022
Maryland	26,908	20,052	160	19,892	1,247	227	5,382	33,896	24,683	6,508	18,175	3,143	103	5,967	67,721
Massachusetts	14,258	12,132	57	12,075	544	60	1,522	11,446	9,354	96	9,258	413	305	1,374	36,108
Michigan	14,414	11,674	464	11,210	437	6	2,297	33,104	27,394	11,031	16,363	3,002	55	2,653	102,384
Minnesota	9,100	119	8	111	983	0	7,998	6,881	1,651	60	1,591	1,539	0	3,691	32,388
Mississippi	15,458	3,547	0	3,547	170	4,577	7,164	10,898	2,188	871	1,317	1,930	4,262	2,518	24,253
Missouri	61,022	48,266	288	47,978	1,019	797	10,940	21,374	11,255	600	10,655	2,389	844	6,886	31,728
Montana	7,076	1,095	28	1,067	2,069	75	3,837	3,262	484	321	163	2,037	229	512	1,611
Nebraska	26,149	19,958	33	19,925	913	652	4,626	14,803	5,833	1,491	4,342	5,159	626	3,185	17,872
Nevada	13,147	8,789	851	7,938	196	2,738	1,424	5,294	4,287	929	3,358	559	21	427	49,015
New Hampshire	441	9	0	9	276	0	156	2,261	1,613	11	1,602	518	19	111	2,310
New Jersey	36,777	32,249	1,865	30,384	121	2,662	1,745	22,695	16,006	331	15,675	1,794	1,148	3,747	59,665
New Mexico	12,862	5,195	867	4,328	2,195	983	4,489	8,611	1,377	723	654	1,620	2,900	2,714	18,162
New York	31,182	24,355	27	24,328	3,331	1,386	2,110	44,786	37,524	835	36,689	1,747	1,339	4,176	111,868
North Carolina	24,276	6,677	0	6,677	2,011	7,647	7,941	46,018	11,168	677	10,491	1,837	24,662	8,351	84,565
North Dakota	9,511	1,861	0	1,861	2,466	0	5,184	3,732	314	0	314	2,108	0	1,310	315
Ohio	19,034	14,185	1,728	12,457	1,220	353	3,276	42,133	27,416	1,650	25,766	4,067	573	10,077	117,152
Oklahoma	24,505	10,055	87	9,968	7,190	361	6,899	15,573	8,693	37	8,656	2,251	725	3,904	31,406
Oregon	14,533	6,121	1,186	4,935	4,900	1,572	1,940	22,440	15,662	825	14,837	1,712	2,378	2,688	33,383
Pennsylvania	43,265	33,655	886	32,769	1,868	168	7,574	77,696	64,219	2,869	61,350	8,979	38	4,460	125,081
Rhode Island	1,410	958	3	955	134	42	276	5,772	3,899	11	3,888	550	280	1,043	24,258
South Carolina	7,698	1,589	20	1,569	2,230	413	3,466	10,839	5,260	334	4,926	1,978	322	3,279	24,902
South Dakota	4,159	275	123	152	494	7	3,383	1,063	739	193	546	205	8	111	2,444
Tennessee	23,618	6,439	49	6,390	4,298	6,252	6,629	31,948	6,722	2,143	4,579	6,051	17,090	2,085	78,544
Texas	73,456	45,416	966	44,450	9,487	4,978	13,575	67,713	39,755	4,417	35,338	5,634	3,143	19,181	192,027
Utah	4,481	2,861	281	2,580	524	0	1,096	32,140	27,146	254	26,892	1,523	1,572	1,899	82,818
Vermont	760	15	0	15	131	0	614	450	65	35	30	158	0	227	1,264
Virginia	32,683	14,018	537	13,481	5,610	2,135	10,920	54,256	37,227	2,352	34,875	4,358	366	12,305	79,274
Washington	36,321	28,048	11,445	16,603	3,713	451	4,109	40,997	26,901	3,412	23.489	1,930	578	11,588	112,588
West Virginia	6,649	2,816	0	2,816	1,649	66	2,118	12,510	5,386	33	5,353	2,912	97	4,115	6,562
Wisconsin	13,984	6,139	605	5,534	763	0	7,082	7,249	5,034	1,899	3,135	471	0	1,744	14,557
Wyoming	4,596	1,772	0	1,772	2,335	0	489	4,421	3,263	271	2,992	471	0	687	4,416

[1] Projects classified as secret by the military (including atomic bomb production facilities) are excluded.

[2] Data by type by State not available for 1943.

[3] Includes additions, alterations, and repairs.

[4] Includes forestry, railroad construction, heavy engineering, and electrification work.

year to year among the 9 geographic divisions of the United States.

Three regions, the East North Central, South Atlantic, and Pacific, accounted for the greatest number of new nonfarm dwellings for which permits were issued in each year 1940–45. In 1940, the largest share of the new homes, 122,900 units (19 percent of the total nonfarm figure), were to be started in the South Atlantic States. The East North Central and the Pacific States followed in close order, with 106,300 and 104,600 units, respectively.

By 1942, the Pacific States were in the lead with a fourth of all new nonfarm housing (125,200 units), and they continued in first place through 1945. These substantial rises in new housing in the Far

TABLE 33.—*Estimated number and valuation of new family dwelling units for which permits were issued in nonfarm areas, by geographic division and by source of funds, 1942–45*[1]

Geographic division	All new family dwellings				Privately financed dwellings				Publicly financed dwellings			
	1945	1944	1943	1942	1945	1944	1943	1942	1945	1944	1943	1942
Number of units												
All divisions	244,900	169,400	350,100	496,600	227,318	138,779	183,660	301,193	17,582	30,621	166,440	195,407
Percent change from preceding year	+44.6	−51.6	−29.5		+63.8	−24.4	−39.0		−42.6	−81.6	−14.8	
New England	5,500	2,000	11,000	22,300	5,500	1,960	6,663	12,933	0	40	4,337	9,367
Middle Atlantic	16,400	7,100	30,100	61,400	16,065	6,259	17,793	45,606	335	841	12,307	15,794
East North Central	41,600	30,200	61,200	81,200	39,268	24,787	36,835	62,825	2,332	5,413	24,365	18,375
West North Central	12,100	5,800	10,400	24,200	11,650	4,730	5,367	17,601	450	1,070	5,033	6,599
South Atlantic	43,500	27,900	68,500	95,400	41,140	22,085	43,000	51,983	2,360	5,815	25,500	43,417
East South Central	10,700	9,000	14,000	27,000	10,656	7,590	8,071	14,429	44	1,410	5,929	12,571
West South Central	35,800	27,500	42,800	45,300	34,817	24,934	23,685	33,206	983	2,566	19,115	12,094
Mountain	11,100	5,800	20,400	14,600	9,700	4,561	6,733	7,657	1,400	1,239	13,667	6,943
Pacific	68,200	54,100	91,700	125,200	58,522	41,873	35,513	54,953	9,678	12,227	56,187	70,247
Valuation (in thousands)												
All divisions	$882,918	$468,803	$895,625	$1,530,606	$836,843	$391,318	$539,662	$948,360	$46,075	$77,485	$355,963	$582,246
Percent change from preceding year	+88.3	−47.7	−41.5		+113.9	−27.5	−43.1		−40.5	−78.2	−38.9	
New England	26,602	7,679	35,394	83,394	26,602	7,482	25,714	49,452	0	197	9,680	33,942
Middle Atlantic	74,711	22,984	92,399	230,393	72,960	20,022	59,476	168,127	1,751	2,962	32,923	62,266
East North Central	211,303	120,180	213,985	307,710	204,697	103,692	149,734	241,081	6,606	16,488	64,251	66,629
West North Central	44,160	15,959	23,996	70,368	43,072	13,551	13,413	52,383	1,088	2,408	10,583	17,985
South Atlantic	129,617	64,474	163,218	270,940	121,286	48,182	107,754	139,370	8,331	16,292	55,464	131,570
East South Central	23,588	16,345	23,101	64,346	23,423	12,313	12,112	29,050	165	4,032	10,989	35,296
West South Central	81,114	51,531	75,446	113,684	79,303	45,481	43,804	82,809	1,811	6,050	31.642	30,875
Mountain	37,449	15,937	50,649	42,263	33,572	13,139	19,418	20,412	3,877	2,798	31,231	21,851
Pacific	254,374	153,714	217,437	347,508	231,928	127,456	108,237	165,676	22,446	26,258	109,200	181,832

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[1] Includes number and value of dwelling units in nonfarm areas for which Federal contracts were awarded, and estimates of the number and valuation of dwelling units in non-permit-issuing (urban and rural-nonfarm) places.

TABLE 34.—*Estimated number and valuation of privately financed new family dwelling units for which permits were issued in nonfarm areas, by geographic division and by type of structure, 1942–45*[1]

Geographic division	1-family structures				2-family structures[2]				Multifamily structures[3]			
	1945	1944	1943	1942	1945	1944	1943	1942	1945	1944	1943	1942
Number of dwelling units												
All divisions	201,672	114,615	136,264	252,323	9,649	10,626	17,766	17,463	15,997	13,538	29,630	31,407
Percent change from preceding year	+76.0	−15.9	−46.0		−9.2	−40.2	+1.7		+23.0	−54.3	−5.7	
New England	4,944	1,793	4,770	11,560	198	14	264	355	358	153	1,629	1,018
Middle Atlantic	13,224	4,278	12,908	35,185	781	870	2,363	5,770	2,710	1,111	2,522	4,651
East North Central	35,078	20,047	28,132	55,867	1,322	2,684	4,443	4,045	2,868	2,056	4,260	2,913
West North Central	10,848	3,722	3,474	15,457	464	183	1,098	606	338	825	795	1,538
South Atlantic	36,290	18,427	26,952	38,056	1,254	1,266	3,403	2,264	3,596	2,392	12,645	11,663
East South Central	10,004	7,265	7,133	13,110	395	228	434	913	257	97	504	406
West South Central	31,788	20,606	20,297	31,063	1,719	2,499	2,041	1,741	1,310	1,829	1,347	402
Mountain	8,491	4,057	5,939	6,835	220	96	308	304	989	408	486	518
Pacific	51,005	34,420	26,659	45,190	3,296	2,786	3,412	1,465	4,221	4,667	5,442	8,298
Valuation (in thousands)												
All divisions	$751,785	$319,040	$409,290	$822,050	$32,608	$33,573	$49,034	$46,882	$52,450	$38,705	$81,338	$79,428
Percent change from preceding year	+135.6	−22.1	−50.2		−2.7	−31.5	+4.6		+35.5	−52.4	+2.4	
New England	24,425	6,971	20,391	45,407	772	39	757	1,217	1,405	472	4,566	2,828
Middle Atlantic	61,487	14,509	45,228	138,346	3,089	2,571	7,039	17,143	8,384	2,942	7,209	12,638
East North Central	185,085	84,007	118,791	218,851	6,796	11,962	16,925	13,939	12,816	7,723	14,018	8,291
West North Central	40,544	10,715	9,469	47,802	1,652	498	2,305	1,479	876	2,338	1,639	3,102
South Atlantic	107,473	37,499	64,608	104,575	3,351	3,828	8,012	4,655	10,462	6,855	35,134	30,140
East South Central	21,973	11,803	10,435	27,432	889	299	765	1,023	561	211	912	595
West South Central	72,418	35,625	37,234	78,863	3,743	5,881	3,743	3,281	3,142	3,975	2,827	665
Mountain	30,296	11,656	17,586	18,684	649	252	803	674	2,627	1,231	1,029	1,054
Pacific	208,084	106,255	85,548	142,090	11,667	8,243	8,685	3,471	12,177	12,958	14,004	20,115

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[1] Includes estimates of the number and valuation of dwelling units in non-permit-issuing (urban and rural-nonfarm) places.

[2] Includes 1- and 2-family dwellings with stores.

[3] Includes multifamily dwellings with stores.

West reflected the large population increases which took place there during the war years. Thousands of workers, many of them from farms, migrated to the leading Pacific Coast cities to work in airplane factories, shipyards, and other war industries. From 1940 to 1945, the population of the Pacific States increased 25 percent, or 2.4 million. Furthermore, increased employment of the native population enabled more people to afford their own homes or apartments.

In 1945, the employment rise after the end of the war in the nonmanufacturing industries—primarily the services and trades—almost offset the substantial declines in shipbuilding, airframe, and other manufacturing employment on the Pacific Coast following VJ-day. In addition, the housing needs of returning veterans and their families who had been living doubled up more than compensated for any out-migrants who may have left as the war industries shut down. Although the substantial number of 68,200 units, or 28 percent of all nonfarm houses, were to be started in the Pacific States in 1945 (almost four-fifths of them in California alone), the housing shortage remained acute throughout that region.

Only the Western and the Southern States, where most of the military installations were located, showed population increases between 1940 and 1945. The northern part of the country in particular experienced declines, as inductions depleted the civilian population and war workers migrated to new war centers. The Middle Atlantic States

TABLE 35.—*Estimated valuation*[1] *of the various classes of building construction for which permits were issued in all urban areas, by geographic division and by source of funds, 1942–45*

Geographic division and year	All building construction			New residential buildings			New nonresidential buildings			Additions, alterations, and repairs		
	Total	Non-Federal	Federal	Total	Non-Federal	Federal	Total	Non-Federal	Federal	Total	Non-Federal	Federal
	Valuation (in thousands)											
All divisions:												
1942	$2,707,573	$1,066,958	$1,640,615	$918,413	$602,609	$315,804	$1,510,688	$222,998	$1,287,690	$278,472	$241,351	$37,121
1943	1,262,133	703,584	558,549	583,496	375,169	208,327	439,131	106,546	332,585	239,506	221,869	17,637
1944	1,101,350	753,441	347,909	345,670	289,270	56,400	438,909	169,078	269,831	316,771	295,093	21,678
1945	1,966,913	1,717,181	249,732	663,160	631,562	31,598	827,614	639,342	188,272	476,139	446,277	29,862
New England:												
1942	253,785	75,022	178,763	62,921	36,813	26,108	161,381	14,398	146,983	29,483	23,811	5,672
1943	70,635	42,872	27,763	27,573	16,173	11,340	22,153	7,230	14,923	20,969	19,469	1,500
1944	44,604	36,126	8,478	4,393	4,393	0	15,579	7,884	7,695	24,632	23,849	783
1945	94,152	86,891	7,261	19,221	19,221	0	36,962	31,737	5,225	37,969	35,933	2,036
Middle Atlantic:												
1942	544,869	203,866	341,003	141,472	99,024	42,448	337,060	45,820	291,240	66,337	59,022	7,315
1943	175,843	102,170	73,673	57,250	37,865	19,385	69,894	19,184	50,710	48,699	45,121	3,578
1944	160,881	106,299	54,582	14,775	12,932	1,843	72,177	25,181	46,996	73,929	68,186	5,743
1945	247,717	217,566	30,151	54,429	52,678	1,751	106,254	82,872	23,382	87,034	82,016	5,018
East North Central:												
1942	611,775	304,618	307,157	193,525	171,329	22,196	352,828	70,687	282,141	65,422	62,602	2,820
1943	362,243	197,080	165,163	179,560	126,274	53,287	130,737	20,669	110,068	51,945	50,137	1,808
1944	256,967	200,622	56,345	103,159	89,146	14,013	87,257	48,563	38,694	66,551	62,913	3,638
1945	485,938	449,654	36,284	174,590	169,342	5,248	206,088	179,155	26,933	105,260	101,157	4,103
West North Central:												
1942	91,854	55,790	36,064	31,941	30,802	1,139	43,451	9,899	33,552	16,462	15,089	1,373
1943	47,691	29,668	18,023	13,416	10,267	3,140	21,045	6,706	14,339	13,230	12,695	535
1944	69,414	51,743	17,671	12,345	11,926	419	30,831	14,304	16,527	26,238	25,513	725
1945	129,292	116,409	12,883	35,955	35,384	571	56,983	46,830	10,153	36,354	34,195	2,159
South Atlantic:												
1942	391,932	126,767	265,165	159,957	80,436	79,521	198,530	23,480	175,050	33,445	22,851	10,594
1943	143,472	86,664	56,808	76,721	55,407	21,314	39,151	8,631	30,520	27,600	22,626	4,974
1944	115,100	63,771	51,329	34,324	23,641	10,683	49,557	12,312	37,245	31,219	27,818	3,401
1945	222,346	196,129	26,217	79,217	76,836	2,381	90,394	69,793	20,601	52,735	49,500	3,235
East South Central:												
1942	84,520	25,251	59,269	31,109	12,661	18,448	44,229	4,117	40,112	9,182	8,473	709
1943	33,075	18,175	14,900	10,316	7,708	2,608	13,994	2,904	11,090	8,765	7,563	1,202
1944	36,179	25,592	10,587	10,127	9,379	748	14,567	6,183	8,384	11,485	10,030	1,455
1945	78,829	64,860	13,969	17,557	17,392	165	41,955	30,462	11,493	19,317	17,006	2,311
West South Central:												
1942	149,239	72,196	77,043	62,152	46,154	15,998	71,797	12,056	59,741	15,290	13,986	1,304
1943	92,011	47,710	44,301	35,078	25,542	9,536	38,259	4,192	34,067	18,674	17,976	698
1944	88,001	66,938	21,063	39,062	34,445	4,617	29,330	14,006	15,324	19,609	18,487	1,122
1945	193,739	164,336	29,403	62,071	61,746	325	97,574	70,182	27,392	34,094	32,408	1,686
Mountain:												
1942	95,176	24,067	71,109	21,820	14,930	6,890	66,870	3,203	63,667	6,486	5,934	552
1943	32,985	23,814	9,171	20,540	14,693	5,847	5,391	2,469	2,922	7,054	6,652	402
1944	30,144	25,513	4,631	12,718	11,147	1,571	9,258	6,367	2,891	8,168	7,999	169
1945	71,584	63,391	8,193	31,443	30,685	758	23,855	18,787	5,068	16,286	13,919	2,367
Pacific:												
1942	484,423	179,381	305,042	213,516	110,460	103,056	234,542	39,338	195,204	36,365	29,583	6,782
1943	304,178	155,431	148,747	163,101	81,248	81,861	98,507	34,561	63,946	42,570	39,630	2,940
1944	300,060	176,837	123,223	114,767	92,261	22,506	130,353	34,278	96,075	54,940	50,298	4,642
1945	443,316	357,945	85,371	188,677	168,278	20,399	167,549	109,524	58,025	87,090	80,143	6,947

See footnotes at end of table.

TABLE 35.—*Estimated valuation*[1] *of the various classes of building construction for which permits were issued in all urban areas, by geographic division and by source of funds, 1942–45—Continued.*

Geographic division and year	All building construction			New residential buildings			New nonresidential buildings			Additions, alterations, and repairs		
	Total	Non-Federal	Federal	Total	Non-Federal	Federal	Total	Non-Federal	Federal	Total	Non-Federal	Federal
	Percent change from preceding year											
All divisions:												
1943	−63.4	−34.1	−66.0	−36.5	−37.7	−34.0	−70.9	−52.2	−74.2	−14.0	−8.1	−52.5
1944	−12.7	+7.1	−37.7	−40.8	−22.9	−72.9	(2)	+58.7	−18.9	+32.3	+33.0	+22.9
1945	+78.6	+127.9	−28.2	+91.8	+118.3	−44.0	+88.6	+278.1	−30.2	+50.3	+51.2	+37.8
New England:												
1943	−72.2	−42.9	−84.5	−56.3	−56.1	−56.6	−86.3	−49.8	−89.8	−28.9	−18.2	−73.6
1944	−36.9	−15.7	−69.5	−84.0	−72.8	−100.0	−29.7	+9.0	−48.4	+17.5	+22.5	−47.8
1945	+111.1	+140.5	−14.4	+337.5	+337.5	0.0	+137.3	+302.5	−32.1	+54.1	+50.7	+160.0
Middle Atlantic:												
1943	−67.7	−49.9	−78.4	−59.5	−61.8	−54.3	−79.3	−58.1	−82.6	−26.6	−23.6	−51.1
1944	−8.5	+4.0	−25.9	−74.2	−65.8	−90.5	+3.3	+31.3	−7.3	+51.8	+51.1	+60.5
1945	+54.0	+104.7	−44.8	+268.4	+307.3	−5.0	+47.2	+229.1	−50.2	+17.7	+20.3	−12.6
East North Central:												
1943	−40.8	−35.3	−46.2	−7.2	−26.3	+140.1	−62.9	−70.8	−61.0	−20.6	−19.9	−35.9
1944	−29.1	+1.8	−65.9	−42.6	−29.4	−73.7	−33.3	+135.0	−64.8	+28.1	+25.5	+101.2
1945	+89.1	+124.1	−35.6	+69.2	+90.0	−62.5	+136.2	+268.9	−30.4	+58.2	+60.8	+12.8
West North Central:												
1943	−48.1	−46.8	−50.0	−58.0	−66.7	+176.5	−51.6	−32.3	−57.3	−19.6	−15.9	−61.0
1944	+45.5	+74.4	−2.0	−8.0	+16.2	−86.7	+46.5	+113.3	+15.3	+98.3	+101.0	+35.5
1945	+86.3	+125.0	−27.1	+191.3	+196.7	+36.3	+84.8	+227.4	−38.6	+38.6	+34.0	+197.8
South Atlantic:												
1943	−63.4	−31.6	−78.6	−52.0	−31.1	−73.2	−80.3	−63.2	−82.6	−17.5	−1.0	−53.0
1944	−19.8	−26.4	−9.6	−55.3	−57.3	−49.9	+26.6	+42.6	+22.0	+13.1	+22.9	−31.6
1945	+93.2	+207.6	−48.9	+130.8	+225.0	−77.7	+82.4	+466.9	−44.7	+68.9	+77.9	−4.9
East South Central:												
1943	−60.9	−28.0	−74.9	−66.8	−39.1	−85.9	−68.4	−29.5	−72.4	−4.6	−10.7	+69.5
1944	+9.4	+40.8	−28.9	−1.8	+21.7	−71.3	+4.1	+112.9	−24.4	+31.0	+32.6	+21.0
1945	+117.9	+153.4	+31.9	+73.4	+85.4	−77.9	+188.0	+392.7	+37.1	+68.2	+69.6	+58.8
West South Central:												
1943	−38.3	−33.9	−42.5	−43.6	−44.7	−40.4	−46.7	−65.2	−43.0	+22.1	+28.5	−46.5
1944	−4.4	+40.3	−52.5	+11.4	+34.9	−51.6	−23.3	+234.1	−55.0	+5.0	+2.8	+60.7
1945	+120.2	+145.5	+39.6	+58.9	+79.3	−93.0	+232.7	+401.1	+78.8	+73.9	+75.3	+50.3
Mountain:												
1943	−65.3	−1.0	−87.1	−5.9	−1.6	−15.1	−19.4	−22.9	−95.4	+8.8	+12.1	−27.1
1944	−8.6	+7.1	−49.5	−38.1	−24.1	−73.1	+71.7	+157.9	−1.1	+15.8	+20.2	−58.0
1945	+137.5	+148.5	+76.9	+147.2	+175.3	−51.8	+157.7	+195.1	+75.3	+99.4	+74.0	+1300.6
Pacific:												
1943	−37.2	−13.4	−51.2	−23.9	−26.5	−21.2	−58.0	−12.1	−67.2	+17.1	+34.0	−56.7
1944	−1.4	+13.8	−17.2	−29.6	+13.6	−72.5	+32.3	−0.8	+50.2	+29.1	+26.9	+57.9
1945	+47.7	+102.4	−30.7	+64.4	+82.4	− 9.4	+28.5	+219.5	−39.6	+58.5	+59.3	+49.7

[1] Includes value of building construction in urban areas for which Federal contracts were awarded.

[2] Less than a tenth of 1 percent.

showed a million and a half decrease in population during this period, and the West North Central States declined over a million.

Reflecting increases in population, the South Atlantic States ranked next to the Pacific in the total number of new dwelling units for which permits were issued or contracts awarded in 1945 (43,500). The East North Central States were third with 41,600 units. Housing shortages in those areas had been accumulating throughout the war years for various reasons and remained critical at the end of 1945. In Chicago, for instance, housing shortages were caused by enlargement of the packing and chemical industries, as well as ordnance, the transfer of Federal agencies from Washington, and the expansion of war agencies already in the city. In Detroit, the shortage resulted partly from expansion of the aircraft engine industry. Ohio, the rubber center of the world, with its wartime production of steel, machinery, chemical products, and aircraft, also experienced a housing shortage which was still unrelieved as the war ended.

The smallest proportion of new nonfarm homes in 1945, on the other hand, were to be started in New England—5,500 units, or 2 percent of the national total. This compares with 30,400 units (5 percent of total) in 1940. In that year the Mountain States ranked lowest, with 21,600 new dwellings. Part of the decline in the amount of new housing to be built in New England was owing to a 2-percent decrease in population from 1940 to 1945. Although there was little migration into New England compared with most other regions, mainly because of less new industry, the housing shortage remained acute in 1945 as veterans returned in increasing numbers and principal industrial centers began to convert to peacetime production.

TABLE 36.—*Estimated valuation of new nonresidential buildings for which permits were issued in all urban areas, by general type of building, by geographic division, and by source of funds, 1942–45*[1]

Geographic division	Valuation								
	Total			Non-Federal			Federal		
	1945	1944	1943	1945	1944	1943	1945	1944	1943
	Industrial buildings[2]								
All divisions	$258,097,714	$159,705,866	$258,182,356	$210,577,020	$67,966,536	$45,970,102	$47,520,694	$91,739,330	$212,212,254
Percent change from preceding year	+61.6	−38.1	......	+209.8	+47.8	......	−48.2	−56.8	......
New England	15,812,678	6,197,039	7,336,740	13,475,678	3,260,239	2,346,785	2,337,000	2,936,800	4,989,955
Middle Atlantic	51,651,372	34,437,766	43,793,033	40,061,679	9,761,975	9,442,290	11,589,693	24,675,791	34,350,743
East North Central	99,527,470	47,011,309	108,783,557	88,836,344	22,291,643	9,336,376	10,691,126	24,719,666	99,447,181
West North Central	17,306,285	14,797,492	12,887,194	14,090,285	6,806,047	1,888,194	3,216,000	7,991,445	10,999,000
South Atlantic	14,651,416	7,178,679	7,856,070	12,502,416	2,809,754	1,690,152	2,149,000	4,368,925	6,165,918
East South Central	9,454,240	5,185,352	5,223,613	6,564,640	2,225,468	937,683	2,889,600	2,959,884	4,285,930
West South Central	15,947,890	11,242,921	27,689,610	6,940,718	3,690,774	789,286	9,007,172	7,552,147	26,900,324
Mountain	2,232,995	1,241,233	587,844	2,200,995	773,708	475,689	32,000	467,525	112,155
Pacific	31,513,368	32,414,075	44,024,695	25,904,265	16,346,928	19,063,647	5,609,103	16,067,147	24,961,048
	Commercial buildings[3]								
All divisions	296,720,103	68,405,826	46,336,002	295,769,169	50,400,481	23,374,734	950,934	18,005,345	22,961,268
Percent change from preceding year	+333.8	+47.6	......	+486.8	+115.5	......	−94.7	−21.6	......
New England	10,073,947	3,067,466	2,469,172	10,070,802	2,152,032	1,669,356	3,145	915,434	799,816
Middle Atlantic	27,695,975	9,571,120	6,454,853	27,561,794	8,881,442	3,758,199	134,181	689,678	2,696,654
East North Central	59,164,047	11,147,478	6,153,778	59,127,757	10,257,209	4,327,828	36,290	890,269	1,825,950
West North Central	22,372,226	3,931,746	2,169,663	22,372,226	3,931,746	1,908,572	......	......	261,091
South Atlantic	41,799,339	8,151,205	6,831,781	41,643,861	5,509,122	3,443,636	155,478	2,642,083	3,388,145
East South Central	16,320,490	4,087,507	2,116,370	16,021,487	2,354,666	819,302	299,003	1,732,841	1,297,068
West South Central	47,715,195	6,449,664	2,668,982	47,706,198	5,971,508	1,583,915	8,997	478,156	1,085,067
Mountain	13,184,777	2,672,828	1,793,516	13,177,858	2,593,088	925,234	6,919	79,740	868,282
Pacific	58,394,107	19,326,812	15,677,887	58,087,186	8,749,668	4,938,692	306,921	10,577,144	10,739,195
	Community buildings[4]								
All divisions	108,204,585	66,406,285	56,148,527	60,266,553	13,731,933	8,494,504	47,938,032	52,674,352	47,654,023
Percent change from preceding year	+62.9	+18.3	......	+338.9	+61.7	......	−9.0	+10.5	......
New England	3,981,624	2,387,297	3,923,418	2,632,360	393,800	1,021,172	1,349,264	1,993,497	2,902,246
Middle Atlantic	6,370,457	11,957,061	6,182,788	5,588,608	1,147,115	323,940	781,849	10,809,946	5,858,848
East North Central	22,842,316	12,188,197	9,235,657	11,260,684	3,478,662	1,512,018	11,581,632	8,709,535	7,723,639
West North Central	5,771,725	7,163,585	2,335,536	5,232,322	1,506,964	308,499	539,403	5,656,621	2,027,037
outh Atlantic	18,343,477	12,411,047	8,421,193	9,442,392	1,920,606	1,622,775	8,901,085	10,490,441	6,798,418
East South Central	12,951,900	3,128,763	5,135,684	6,712,746	525,625	427,379	6,239,154	2,603,138	4,708,305
West South Central	18,216,526	6,500,210	3,677,924	9,878,100	2,269,847	717,880	8,338,426	4,230,363	2,960,044
Mountain	4,340,777	2,333,243	1,635,077	1,406,550	470,722	119,502	2,934,227	1,862,521	1,515,575
Pacific	15,385,783	8,336,882	15,601,250	8,112,791	2,018,592	2,441,339	7,272,992	6,318,290	13,159,911
	Government buildings[5]								
ll divisions	83,954,453	98,937,481	48,881,368	3,699,097	1,689,748	1,414,780	80,255,356	97,247,733	47,466,588
Percent change from preceding year	−15.1	+102.4	......	+118.9	+19.4	......	−17.5	+104.9	......
New England	1,539,652	2,000,571	6,262,241	4,000	177,941	66,400	1,535,652	1,822,630	6,195,841
Middle Atlantic	12,196,254	10,895,085	7,828,028	1,984,000	510,907	702,000	10,212,254	10,384,178	7,126,028
ast North Central	3,881,468	3,601,895	1,257,754	107,583	150,598	190,912	3,773,885	3,451,297	1,066,842
West North Central	6,307,595	2,731,587	1,081,121	300	11,500	31,000	6,307,295	2,720,087	1,050,121
outh Atlantic	8,205,582	18,034,140	13,544,967	271,303	291,088	100,200	7,934,279	17,743,052	13,444,767
ast South Central	2,170,415	1,088,661	705,552	105,489	......	161,431	2,064,926	1,088,661	544,121
West South Central	10,213,866	3,077,856	3,175,773	188,354	89,156	72,128	10,025,512	2,988,700	3,103,645
Mountain	2,055,549	590,784	415,421	3,000	206,440	21,900	2,052,549	484,344	393,521
acific	37,384,072	56,916,902	14,610,511	1,035,068	352,118	68,809	36,349,004	56,564,784	14,541,702
	Public works and utility buildings[6]								
ll divisions	32,285,884	26,263,958	12,832,495	22,550,564	16,154,923	10,572,131	9,735,320	10,109,035	2,260,364
ercent change from preceding year	+22.9	+104.7	......	+39.6	+52.8	......	−3.7	+347.2	......
New England	2,423,314	391,439	174,409	2,423,314	364,939	141,353	......	26,500	33,056
Middle Atlantic	3,652,722	2,372,358	2,780,129	2,997,133	1,947,514	2,111,440	655,589	424,844	668,689
ast North Central	9,326,812	8,984,503	1,426,058	8,476,008	8,061,042	1,421,808	850,804	923,461	4,250
West North Central	1,401,426	657,105	1,259,981	1,310,958	497,975	1,259,981	90,468	159,130	......
outh Atlantic	4,209,261	2,663,179	1,509,233	3,195,413	722,433	789,142	1,013,848	1,940,746	720,091
ast South Central	152,861	326,037	300,081	152,861	326,037	45,025	......	......	255,056
West South Central	1,381,569	901,135	316,722	1,369,682	826,874	298,049	11,887	74,261	18,673
Mountain	544,550	1,806,981	306,502	520,100	1,757,512	290,415	24,450	49,469	16,087
acific	9,193,369	8,161,221	4,759,380	2,105,095	1,650,597	4,214,918	7,088,274	6,510,624	544,462

See footnotes at end of table.

TABLE 36.—*Estimated valuation of new nonresidential buildings for which permits were issued in all urban areas, by general type of building, by geographic division, and by source of funds, 1942–45*[1]—*Continued*

Geographic division	Valuation								
	Total			Non-Federal			Federal		
	1945	1944	1943	1945	1944	1943	1945	1944	1943
	All other nonresidential buildings[7]								
All divisions	$48,351,021	$19,189,096	$16,750,205	$46,479,549	$19,134,181	$16,719,887	$1,871,472	$54,915	$30,318
Percent change from preceding year	+152.0	+14.6	...	+142.9	+14.4	...	+3307.9	+81.1	...
New England	3,130,985	1,535,053	1,984,978	3,130,985	1,535,053	1,984,978	...	...	...
Middle Atlantic	4,686,707	2,943,226	2,855,400	4,678,854	2,932,336	2,846,167	7,853	10,890	9,233
East North Central	11,346,221	4,326,150	3,879,789	11,346,221	4,326,150	3,879,789	...	...	...
West North Central	3,824,119	1,549,622	1,311,211	3,824,119	1,549,622	1,309,855	...	...	1,356
South Atlantic	3,185,343	1,066,221	987,999	2,737,633	1,059,166	985,144	447,710	7,055	2,855
East South Central	905,147	750,765	512,927	905,147	750,765	512,927	...	...	...
West South Central	4,098,884	1,158,197	730,603	4,098,884	1,158,197	730,603	...	...	...
Mountain	1,495,557	659,299	653,481	1,477,957	659,299	636,607	17,600	...	16,874
Pacific	15,678,058	5,200,563	3,833,817	14,279,749	5,163,593	3,833,817	1,398,309	36,970	...

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[1] Includes value of new nonresidential buildings in urban areas for which Federal contracts were awarded.

[2] Includes factories, navy shipbuilding and repair facilities, army ordnance plants, bakeries, ice plants, industrial warehouses, and other appurtenant buildings, etc.

[3] Includes amusement and recreation buildings, stores and other mercantile buildings, public garages, gasoline and service stations, etc.

[4] Includes churches, hospitals, and other institutional buildings, schools, libraries, etc.

[5] Includes Federal, State, county, and municipal buildings, such as post offices, city halls, fire and police stations, army barracks, naval stations, etc.

[6] Includes railroad, bus and airport buildings, round houses, radio stations, gas and electric plants, public comfort stations, etc.

[7] Includes private garages, sheds, stables and barns, and some other buildings not elsewhere classified.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945*

NEW ENGLAND STATES

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Connecticut:										
Ansonia	1943	10	$112,785	0	0	6	$83.985	4	$28,800	0
	1944	1	150,000	0	0	1	150,000	0	0	0
*Bridgeport	1943	899	4,884,364	370	$2,678,900	77	1,544,678	452	660,786	623
	1944	558	1,009,114	40	168,800	82	494,511	436	345,803	40
	1945	792	2.735,747	53	339,300	113	1,677,638	626	718,809	58
Bristol	1943	1,257	2,479,321	492	2,001,386	257	45.017	508	432,918	492
	1944	649	335,404	13	61,000	100	56,235	536	218,169	13
	1945	852	997,778	13	62,500	253	652,916	586	282,362	13
Danbury	1943	216	292,258	0	0	21	216,710	195	75,548	0
	1944	314	169,914	0	0	15	13,975	299	155,939	0
	[1]1945	361	574,050	5	29,800	45	375,955	311	168,295	5
Derby	1943	75	162,233	50	116,958	11	4,760	14	40,515	50
	1944	36	41,374	3	11,500	18	20,473	15	9,401	3
	1945	60	327,160	9	48,300	22	240,225	29	38,635	9
East Hartford	1943	471	1,975,626	105	1,130,521	188	716,663	178	128,442	572
	1944	346	225,020	1	2,500	133	142,315	212	80,205	1
	1945	562	342,194	14	65,200	216	189,311	332	87,683	14
Fairfield	[1]1943	524	1,244,730	189	949,600	188	72,825	147	222,305	216
	1944	236	391,631	40	208,500	48	57,290	148	125,841	41
	1945	385	947,750	38	261,300	127	235,845	220	450,605	38
Farmington	1943	7	8,110	2	7,000	4	960	1	150	1
	1944	3	900	0	0	0	0	3	900	0
	1945	27	103,343	9	71,100	8	11,350	10	20,893	7
Greenwich	1943	231	139,378	2	10,000	87	36,575	142	92,803	2
	1944	224	206,320	1	4,200	28	38,840	195	163,280	5
	1945	474	1,924,017	74	1,040,645	72	205,165	328	678,207	73
Hamden	[1]1943	271	427,460	56	303.500	131	53,282	84	70.678	67
	1944	325	788,749	112	561,500	85	76,816	128	150,433	112
	[1]1945	279	642,665	29	160,700	111	260,690	139	221,275	29
*Hartford	1943	1,925	3,725,285	485	2,087,705	146	401,135	1,294	1,236,445	636
	1944	1,366	1,056,845	8	33,600	107	125,041	1,251	898,204	8
	1945	1,587	2,925,276	22	126,500	203	1,581,224	1,362	1,217,552	23
Manchester	[1]1943	677	2,383,662	387	2,252,900	127	40,695	163	90,067	478
	1944	308	197,232	18	99,600	103	19,040	187	78,592	17
*Meriden	1943	766	1,415,715	320	982,574	172	53,975	274	379,166	320
	1944	401	633,343	8	40,300	87	57,987	306	535,056	8
	1945	470	680,093	37	197,500	102	195,918	331	286,675	37
Middletown	1943	267	105,543	1	900	89	7,291	177	97,352	1
	1944	258	175,438	5	5,000	51	81,604	202	88,834	5
	1945	320	443,023	31	155,475	86	142,903	203	144,645	31
Naugatuck	1943	114	190,020	4	20,000	83	154,905	27	15,115	4
	1944	292	1,899,855	215	1,007,500	42	751,980	35	140,375	249
	[1]1945	126	581,425	9	50,600	72	504,975	45	25,850	9
*New Britain	1943	686	441,649	21	141,345	98	56,422	567	243,882	20
	1944	864	397,404	7	26,000	61	78,909	796	292,495	7
	1945	778	2,185,142	43	233,200	105	1,620,374	630	331,568	43
New Canaan	1943	78	51,708	0	0	43	15,713	35	35,995	0
	1944	46	38,931	0	0	15	4,700	31	34,231	0
	[1]1945	115	169,625	3	13,500	19	23,625	93	132,500	3
*New Haven	1943	1,287	1,477,276	61	304,300	180	447,904	1,046	725,072	79
	1944	1,163	1,395,176	15	187,000	101	492,317	1,047	715,859	14
	1945	1,531	2,928,546	35	240,300	183	1,613,211	1,313	1,075,035	35
*New London	1943	94	633,628	59	417,600	15	195,799	20	20,229	109
	1944	100	575,498	1	4,000	42	399,025	57	172,473	1
*Norwalk	1943	791	842,594	20	94,350	252	70,650	519	677,594	19
	1944	671	526,714	9	121,100	68	55,000	594	350,614	52
	[1]1945	832	2,564,067	52	230,000	152	1,206,280	628	1,127,787	51
Norwich	1943	101	19,249	0	0	13	1,670	88	17,579	0
	1944	177	59,543	1	2,800	15	3,295	161	53,448	1
	1945	266	300,290	6	17,050	37	57,752	223	225,488	6
*Stamford	1943	321	613,568	5	350,000	105	68,395	211	195,173	103
	1944	364	316,490	0	0	31	82,020	333	234,470	0
	1945	525	921,048	15	91,100	67	460,840	443	369,108	15
Stratford	1943	849	3,841,315	565	2,745,857	126	1,020,788	158	74,670	563
	1944	258	319,083	27	121,500	87	24,506	144	173,077	27
	[2]1945	331	284,826	24	122,200	145	66,105	162	96,521	26
Torrington	1943	322	135,713	2	4.600	89	14,260	231	116,853	2
	1944	246	181,157	5	19,800	31	66,475	210	94,882	5
	1945	313	465,573	27	157,000	65	94,985	221	213,588	27
Wallingford	1943	390	573,378	210	485,982	25	21,300	155	66,096	214
	1944	268	157,644	9	44,800	2	20,500	257	92,344	20
	1945	252	411,852	15	83,450	4	187,000	233	141,402	15
*Waterbury	1943	1,083	2,393,884	536	1,429,998	237	380,733	310	583,153	550
	1944	626	1,182,043	104	423,000	129	258,300	393	500,743	106
	1945	613	1,639,939	64	326,550	236	885,595	313	427,794	65

* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

[2] 10 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

NEW ENGLAND STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Connecticut—Continued										
West Hartford	1943	623	$1,704,421	376	$1,479,220	54	$141,300	193	$83,901	611
	1944	231	404,283	15	285,800	41	57,436	175	61,047	73
	1945	284	1,510,415	70	744,000	52	510,414	162	256,001	113
West Haven	1943	241	165,140	6	23,900	82	23,865	153	117,375	7
	1944	272	311,382	5	15,100	72	215,394	195	80,888	5
	1945	449	541,731	34	171,500	139	212,647	276	157,584	34
Weathersfield	1943	191	37,565	1	5,350	74	9,630	116	22,585	1
	1944	128	54,485	0	0	23	34,950	105	19,535	0
	1945	177	413,148	19	143,000	36	218,005	122	52,143	19
Willimantic	1943	182	418,874	136	346,825	13	2,325	33	69,724	185
	1944	51	37,000	0	0	14	6,830	37	30,170	0
	1945	75	281,604	10	55,260	23	189,350	42	36,994	13
Maine:										
*Bangor	1943	45	268,660	1	4,500	12	224,674	32	39,486	1
	1944	56	63,232	0	0	8	1,500	48	61,732	0
	1945	96	284,266	3	4,000	20	131,985	73	148,281	3
Brunswick	1944	56	190,007	6	3,200	12	116,579	38	70,228	6
	1945	65	111,185	6	8,970	27	49,715	32	52,500	6
Ellsworth	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	1	2,000	0	0	0	0	1	2,000	0
Fort Fairfield	1943	0	0	0	0	0	0	0	0	0
	1944	10	25,000	0	0	9	23,000	1	2,000	0
	1945	15	101,000	14	98,000	0	0	1	3,000	14
Hallowell	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	[1]1945	0	0	0	0	0	0	0	0	0
Lewiston	1943	159	93,715	14	9,980	56	34,980	89	48,755	14
	1944	138	225,137	9	16,000	28	54,072	101	155,065	9
	1945	233	521,745	23	61,850	76	305,500	134	154,395	23
Madison	1943	5	3,300	1	500	0	0	4	2,800	1
	1944	4	1,500	1	800	3	700	0	0	1
	1945	6	5,000	3	3,100	2	400	1	1,500	3
*Portland	1943	1,011	2,427,305	516	2,038,040	59	14,082	436	375,183	761
	1944	560	498,468	20	136,300	34	108,422	506	253,746	35
	1945	774	1,410,968	13	79,700	65	811,045	696	520,223	13
Presque Isle	1943	197	2,278,578	168	947,583	15	1,210,095	14	120,900	254
	1944	26	120,229	0	0	11	96,600	15	23,629	0
	1945	55	419,066	11	30,800	18	357,569	26	30,697	11
Rockland	1943	3	18,300	0	0	3	18,300	0	0	0
	1944	11	33,290	1	500	5	30,390	5	2,400	1
	1945	6	10,050	1	1,000	4	8,650	1	400	1
Rumford	1943	13	7,225	0	0	2	225	11	7,000	0
	1944	20	19,270	0	0	5	4,950	15	14,320	0
	1945	18	19,372	0	0	5	12,650	13	6,722	0
Saco	1943	40	6,900	1	200	26	3,875	13	2,825	1
	1944	39	9,000	0	0	23	5,750	16	3,250	0
	1945	67	39,950	20	25,500	16	5,500	31	8,950	10
Sanford	1943	104	415,194	0	0	55	392,519	49	22,675	0
	1944	109	40,555	1	500	27	9,315	81	30,740	1
	[1]1945	117	94,348	4	10,950	34	39,701	79	43,697	4
South Portland	1943	379	886,743	124	473,050	63	151,589	192	262,104	131
	1944	265	482,053	5	10,900	54	163,001	206	308,152	5
	1945	232	181,183	9	14,765	53	67,000	170	99,418	9
Westbrook	1943	54	72,645	7	10,100	19	15,140	28	47,405	7
	1944	49	13,342	2	1,880	16	3,455	31	8,007	2
	1945	101	65,724	7	4,100	23	19,490	71	42,134	7
Massachusetts:										
Andover	1943	58	17,485	0	0	36	11,645	22	5,840	0
	1944	81	33,103	1	975	39	9,140	41	22,988	1
	1945	118	181,530	8	31,800	53	66,110	57	83,620	8
Arlington	1943	332	58,269	0	0	22	1,770	310	56,499	0
	1944	463	141,305	2	4,200	11	2,075	450	135,030	2
	1945	571	389,789	21	154.200	18	32,200	532	203,389	23
Attleboro	1943	214	140,204	1	1,500	104	22,387	109	116,317	1
	1944	175	113,538	1	1,000	40	11,030	134	101,508	1
	1945	286	937,478	18	65,600	61	630,476	207	241,402	16
Barnstable	1943	146	54,888	2	2,100	23	18,500	121	34,288	2
	1944	96	113,932	18	34,150	28	51,335	50	28,447	18
	1945	166	339,150	42	140,550	54	99,550	70	99,050	36
Belmont	1943	79	21,748	0	0	10	610	69	21,138	0
	1944	103	31,538	0	0	7	3,700	96	27,838	0
	1945	178	366,900	5	44,600	19	236,310	154	85,990	5
Beverly	1943	176	48,006	3	3,770	65	10,590	108	33,646	2
	1944	125	123,035	1	5,000	23	34,035	101	84,000	1
	1945	199	340,146	38	180,300	43	74,321	118	85,525	38

* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

NEW ENGLAND STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Massachusetts—Continued										
*Boston [3]	1943	4,041	$6,055,515	23	$110,000	161	$2,471,804	3,857	$3,473,711	27
	1944	4,551	4,886,144	0	0	99	1,171,033	4,452	3.715,111	0
	1945	5,902	10,403,559	41	247.900	179	3,130,583	5,682	7,025,076	48
Braintree	1943	183	155,937	12	60,000	61	55,315	110	40,622	12
	1944	117	133,703	1	3,500	29	79,927	87	50,276	1
	1945	199	188,854	5	24,000	66	30,875	128	133,979	5
Bridgewater	1943	16	10,120	2	5,000	7	4,450	7	670	2
	1944	12	7,200	0	0	9	3,200	3	4,000	0
	1945	26	55,350	5	10,000	18	44,450	3	900	5
*Brockton	1943	306	211,526	1	2,500	90	27,289	215	181,737	1
	1944	374	251,038	0	0	40	20,345	334	230,693	0
	1945	623	586,752	21	98,700	91	82,715	511	405,337	21
*Brookline	1943	198	142,882	0	0	25	5,665	173	137,217	0
	1944	194	134,248	0	0	7	25,600	187	108,648	0
	1945	284	328,665	2	38,500	17	68,125	265	222,040	2
*Cambridge	1943	527	1,483,027	0	0	32	882,280	495	600.747	0
	1944	681	1,518,521	1	6,000	20	98,335	660	1,414,186	2
	1945	833	2,037,995	63	412,000	54	826,507	716	799,488	101
Canton	1943	12	4,625	2	3,500	10	1,125	0	0	2
	1944	10	191,433	0	0	6	181,100	4	10,333	0
	1945	26	127,100	12	70 000	9	43,700	5	13,400	12
*Chelsea	1943	259	123,680	0	0	7	2,287	252	121,393	0
	1944	259	1,319,478	0	0	12	1,195,231	247	124,247	0
	1945	335	1,872,974	3	13,000	13	1,203,983	319	655,991	3
*Chicopee	1943	722	1,797,734	255	549,300	231	1,091,796	236	156,638	255
	1944	292	774,480	7	22,600	91	495,570	194	256,310	7
	1945	466	496,602	44	156,900	191	173,190	231	166,512	47
Concord	1943	127	64,527	1	160	29	41,440	97	22,927	0
	1944	115	55,217	0	0	19	13,635	96	41,582	0
	1945	154	133,692	3	17,500	24	23,680	127	92,512	3
Dartmouth	1943	192	110,247	9	21,300	115	54,545	68	34,402	9
	1944	146	70,581	6	16,300	85	31,201	55	23,080	6
	1945	275	284,060	43	134,925	129	95,960	103	53,175	44
Dedham	1943	226	57,073	0	0	34	2,345	192	54,728	0
	1944	188	80,838	1	5,000	11	11,400	176	64,438	1
	1945	255	197,019	15	85,700	30	19,760	210	91,559	15
Easthampton	1943	40	370,841	1	2,500	25	352,701	14	15,640	1
	1944	46	22,698	3	9,000	29	6,713	14	6,985	3
	1945	76	39,335	2	1,300	42	20,650	32	17,385	1
*Everett	1943	199	108,121	0	0	23	26,868	176	81,253	0
	1944	284	360,424	0	0	21	207,003	263	153,421	0
	1945	280	1,977,058	3	10,500	43	1,708,137	234	258,421	3
*Fall River	1943	309	149,518	1	198	79	10,793	229	138,527	1
	1944	240	393,007	1	3,000	85	95,655	154	294,352	1
	1945	369	914,477	15	58,100	134	369,002	220	487,375	16
*Fitchburg	1943	206	58,738	2	1,100	62	8,683	142	48,955	2
	1944	207	89,246	1	300	38	17,195	168	71,751	1
	1945	277	905,150	27	130,605	64	451,395	186	323,150	27
Framingham	1943	96	68,935	1	2,000	35	32,110	60	34,825	1
	1944	114	231,275	1	3,000	37	156,589	76	71,686	1
	1945	160	700,263	29	140,700	46	310,794	85	248,769	29
Gardner	1943	62	63,545	2	5,000	19	5,740	41	52,805	2
	1944	57	104,971	1	23,115	19	25,475	37	56,381	0
	1945	83	240,425	5	20,100	38	138,210	40	82,115	5
Gloucester	1943	83	42,275	0	0	40	23,775	43	18,500	0
	1944	78	51,591	0	0	20	5,545	58	46,046	0
	1945	117	353,130	8	37,900	27	229.350	82	85,880	5
Granby	1943	24	19,080	8	13,550	10	2,280	6	3,250	6
	1944	26	13,505	2	5,000	11	4,695	13	3,810	2
	1945	26	36,680	9	28,050	13	4,025	4	4,605	9
Great Barrington	1943	28	6,983	1	800	26	6,008	1	175	1
	1944	12	2,250	0	0	5	1,400	7	850	0
	1945	24	20,010	1	2,000	14	5,975	9	12,035	1
Greenfield	1943	85	38,365	5	9,900	60	16,790	20	11,675	5
	1944	47	64,347	8	12,665	27	46,130	12	5,552	8
	1945	87	163,545	21	99,580	50	37,460	16	26,505	21
*Haverhill	1943	98	66,045	3	6,150	32	3,605	63	56.290	2
	1944	123	169,390	6	17,500	33	10,500	84	141,390	6
	1945	157	240,155	15	45,500	62	56,275	80	138,380	15
Hingham	1943	69	75,935	5	10,700	16	44,200	48	21,035	4
	1944	84	306,511	1	300	13	284,357	70	21,854	1
	1945	105	813,275	16	63,750	20	626,405	69	123,120	16
*Holyoke	1943	521	411,525	52	119,000	20	16,050	449	276,475	52
	1944	284	272,907	2	9,000	20	46,771	262	217,136	2
	1945	407	614,254	24	143,950	47	88,465	336	381,839	24

* In sample of 257 cities. See text and tables, pp. 12 to 16.

[3] Based on applications filed rather than permits issued.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

NEW ENGLAND STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Massachusetts—continued										
Hudson	1943	30	$7,900	0	0	23	$7,095	7	$805	0
	1944	32	17,025	0	0	17	6,850	15	10,175	0
	1945	54	46,805	4	$10,500	37	29,840	13	6,465	2
*Lawrence	1943	345	201,663	1	3,500	22	60,650	322	137,513	1
	1944	367	347,926	1	5,000	31	49,817	335	293,109	1
	1945	453	923,612	7	35,000	36	356,254	410	532,358	7
Leominster	1943	227	394,668	1	2,500	50	269,131	176	123,037	1
	1944	275	187,609	2	2,800	31	84,770	242	100,039	2
	1945	460	487,491	12	32,400	93	98,670	355	356,421	12
Lexington	1943	105	36,601	1	4,500	71	16,136	33	15,965	1
	1944	77	36,134	1	2,500	66	22,004	10	11,630	1
	1945	164	303,290	17	118,000	143	182,515	4	2,775	17
Longmeadow	1943	30	99,015	19	94,200	3	1,175	8	3,640	19
	1944	21	16,538	2	8,100	4	1,065	15	7,373	2
	1945	60	212,540	21	162,200	14	8,975	25	41,365	21
*Lowell	1943	378	155,397	3	5,625	70	47,375	305	102,397	3
	1944	341	211,432	3	5,100	36	33,360	302	172,972	3
	1945	376	418,717	5	5,600	58	97,465	313	315,652	4
*Lynn	1943	303	861,477	3	7,950	67	612,344	233	241,183	3
	1944	246	596,640	1	2,000	34	388,635	211	206,005	1
	1945	376	686,302	10	61,100	79	276,927	287	348,275	11
*Malden	1943	275	351,981	10	226,000	50	7,839	215	118,142	84
	1944	270	165,584	1	4,000	18	17,619	251	143,965	1
	1945	414	234,306	4	19,500	41	56,225	369	158,581	4
Marblehead	1943	101	88,880	3	11,000	11	6,850	87	71,030	5
	1944	117	105,267	1	5,000	13	7,550	103	92,717	1
	1945	140	246,429	11	55,900	14	18,850	115	171,679	11
Marlboro	1943	47	16,470	0	0	36	11,170	11	5,300	0
	1944	40	77,360	1	1,500	25	68,030	14	7,830	1
	1945	75	252,991	28	36,800	27	151,216	20	64,975	5
*Medford	1943	135	250,481	0	0	34	209,685	101	40,796	0
	1944	128	61,699	1	2,200	21	9,566	106	49,933	1
	1945	191	377,235	5	26,000	42	227,320	144	123,915	5
Melrose	1943	87	31,234	0	0	8	2,445	79	28,789	0
	1944	148	62,379	0	0	10	3,090	138	59,289	0
	1945	227	138,787	2	6,500	19	7,950	206	124,337	2
Methuen	1943	139	27,565	0	0	104	15,830	35	11,735	0
	1944	132	297,760	3	12,300	64	264,130	65	21,330	3
	1945	180	199,830	25	106,500	87	65,630	68	27,700	25
Milton	1943	428	82,876	0	0	72	11,893	356	70,983	0
	1944	412	102,851	0	0	33	18,443	379	84,408	0
	1945	603	412,633	22	194,300	33	21,170	548	197,163	22
Natick	1943	1	200	0	0	0	0	1	200	0
	1944	64	27,195	1	1,500	22	13,865	41	11,830	1
	1945	111	176,975	19	114,300	38	29,155	54	33,520	19
Needham	1943	152	35,945	0	0	34	5,235	118	30,710	0
	1944	145	52,120	0	0	19	5,975	126	46,145	0
	1945	166	218,735	14	87,000	18	35,500	134	96,235	14
*New Bedford	1943	689	383,534	0	0	214	89,426	475	294,108	0
	1944	1,432	795,505	1	750	90	42,015	1,341	752,740	1
	1945	857	744,368	28	119,100	191	165,360	638	459,908	28
Newburyport	1943	39	20,625	0	0	13	6,550	26	14,075	0
	1944	60	42,125	1	6,000	20	8,475	39	27,650	1
	1945	56	77,950	9	12,700	16	45,800	31	19,450	2
*Newton	1943	330	312,905	7	28,600	82	94,516	241	189,789	7
	1944	299	270,630	0	0	30	14,828	269	255,802	0
	1945	439	941,192	43	548,700	37	105,205	359	287,287	90
North Adams	1943	247	51,264	0	0	75	17,219	172	34,045	0
	1944	196	116,097	1	2,500	27	32,345	168	81,252	1
	1945	248	94,719	1	3,500	45	34,762	202	56,457	1
Northampton	1943	91	125,600	3	36,250	35	15,274	53	74,076	22
	1944	89	584,002	3	7,500	20	513,428	66	63,074	3
	1945	134	337,429	13	190,900	56	44,585	65	101,944	30
North Attleboro	1943	95	52,907	4	6,800	51	11,512	40	34,595	4
	1944	185	80,796	12	12,850	47	31,112	126	36,834	12
	1945	146	417,987	17	297,600	16	22,305	113	98,082	25
Northbridge	1943	38	32,065	0	0	28	7,730	10	24,335	0
	1944	33	115,165	0	0	12	39,000	21	76,165	0
	1945	66	575,531	5	25,900	31	527,052	30	22,579	5
Norwood	1943	103	98,218	0	0	47	29,166	56	69,052	0
	1944	91	50,751	0	0	19	10,643	72	40,108	0
	1945	126	316,393	4	25,000	11	161,000	111	130,393	4
Peabody	1943	112	112,413	16	50,800	50	15,527	46	46,086	16
	1944	90	87,402	1	500	24	25,577	65	61,325	1
	1945	99	144,430	8	26,050	35	14,615	56	103,765	7

* In sample of 257 cities. See text and tables, pp. 12 to 16.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

NEW ENGLAND STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Massachusetts—Continued										
*Pittsfield	1943	256	$98,215	11	$31,200	102	$23,945	143	$43,070	11
	1944	219	342,091	2	8,500	72	152,375	145	181,216	2
	1945	241	1,112,575	31	195,900	67	530,900	143	385,775	31
Plymouth	1943	36	21,200	0	0	18	8,925	18	12,275	0
	1944	49	35,775	2	8,000	22	8,975	25	18,800	2
	1945	85	151,668	19	46,600	33	30,600	33	74,468	4
*Quincy	1943	1,123	899,535	39	152,100	111	385,636	973	361,799	39
	1944	1,293	634,133	0	0	64	90,985	1,229	543,148	0
	1945	1,573	1,150,857	36	183,700	108	285,669	1,429	681,488	36
Reading	1943	48	15,010	2	3,600	14	3,065	32	8,345	2
	1944	37	16,555	1	4,500	9	840	27	11,215	1
	1945	73	178,005	20	89,375	21	36,885	32	51,745	19
*Revere	1943	278	77,795	1	2,000	23	3,875	254	71,920	1
	1944	290	100,113	1	800	13	5,450	276	93,863	1
	1945	467	428,471	6	12,500	38	48,528	423	367,443	5
*Salem	1943	501	239,749	0	0	50	21,130	451	218,619	0
	1944	414	442,059	0	0	20	30,660	394	411,399	0
	1945	523	957,394	6	38,500	41	412,430	476	506,464	6
Saugus	1943	285	230,619	41	167,400	85	21,207	159	42,012	41
	1944	268	98,864	4	13,000	36	27,070	228	58,794	4
	1945	356	248,984	21	109,500	94	27,891	241	111,593	21
*Somerville	1943	145	181,667	0	0	10	33,975	135	147,692	0
	1944	190	216,250	0	0	9	102,900	181	113,350	0
	1945	225	669,975	0	0	12	484,650	213	185,325	0
Southbridge	1943	121	309,531	80	150,041	16	25,100	25	134,390	80
	1944	78	458,950	61	284,500	5	2,400	12	172,050	62
	1945	42	123,300	11	59,000	10	22,250	21	42,050	12
South Hadley	1943	55	23,695	4	7,700	34	11,275	17	4,720	4
	1944	55	30,345	7	15,100	31	10,310	17	4,935	7
	1945	101	138,445	23	88,850	46	39,880	32	9,715	23
Spencer	1943	18	17,655	3	5,100	10	8,105	5	4,450	3
	1944	14	30,500	1	3,500	8	17,300	5	9,700	1
	1945	16	14,950	7	8,700	9	6,250	0	0	1
*Springfield	1943	1,489	4,292,781	490	2,308,521	240	1,005,429	759	978,831	666
	1944	1,182	1,844,839	15	44,290	151	757,037	1,016	1,043,512	15
	1945	1,631	4,780,154	201	1,074,104	292	1,649,876	1,138	2,056,174	200
Stoneham	1943	45	9,299	0	0	5	879	40	8,420	0
	1944	24	17,855	2	5,000	8	7,400	14	5,455	2
Swampscott	1943	36	8,850	1	1,800	10	715	25	6,335	1
	1944	37	39,995	0	0	14	29,545	23	10,450	0
	1945	53	43,010	1	8,000	12	13,685	40	21,325	1
Taunton	1943	249	204,027	4	2,925	59	125,921	186	75,181	2
	1944	374	230,616	0	0	70	57,915	304	172,701	0
	1945	456	443,878	9	31,200	104	266,591	343	146,087	13
Walpole	1943	74	44,965	0	0	51	38,965	23	6,000	0
	1944	65	42,255	2	1,200	42	35,130	21	5,925	2
	1945	89	265,220	6	39,000	58	199,420	25	26,800	6
*Waltham	1943	186	1,999,232	1	175	55	1,885,631	130	113,426	1
	1944	176	254,287	1	200	24	35,769	151	218,318	1
	1945	278	441,191	29	160,400	61	75,329	188	205,462	29
Watertown	1943	127	242,980	38	171,000	7	3,915	82	68,065	38
	1944	77	256,493	0	0	8	160,700	69	95,793	0
	1945	189	1,098,575	17	87,500	30	809,300	142	201,775	17
Wellesley	1943	134	79,008	0	0	72	10,353	62	68,655	0
	1944	87	63,745	2	9,500	23	5,295	62	48,950	2
	1945	195	584,053	37	319,700	70	157,295	88	107,058	37
Westfield	1943	148	78,809	2	5,500	95	19,055	51	54,254	1
	1944	113	113,178	15	50,600	46	21,925	52	40,653	15
	1945	212	802,227	59	269,150	66	461,346	87	71,731	63
West Springfield	1943	225	1,127,382	79	1,038,200	92	43,327	54	45,855	316
	1944	115	89,150	5	15,375	53	20,685	57	53,090	5
	1945	196	529,308	43	201,700	101	250,640	52	76,968	43
Westwood	1943	19	23,440	0	0	10	5,510	9	17,930	0
	1944	19	8,555	0	0	10	5,150	9	3,405	0
Weymouth	1943	192	345,089	21	87,000	56	221,378	115	36,711	21
	1944	192	105,289	6	8,300	44	22,845	142	74,144	6
	1945	253	285,032	24	136,700	70	50,470	159	97,862	24
Winchester	1943	66	23,355	0	0	5	650	61	22,705	0
	1944	67	24,510	0	0	4	1,550	63	22,960	0
	1945	116	224,251	19	168,800	10	13,530	87	41,921	19
Winthrop	1943	228	138,218	0	0	37	92,526	191	45,692	0
	1944	256	95,809	1	7,000	7	27,475	248	61,334	1
	1945	189	69,403	2	4,000	18	2,689	169	62,714	2

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* In sample of 257 cities. See text and tables, pp. 12 to 16.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

NEW ENGLAND STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Massachusetts—Continued										
Woburn	1943	57	$45,055	0	0	16	$22,465	41	$22,590	0
	1944	65	58,939	3	$7,800	18	22,175	44	28,964	3
	1945	81	125,857	6	23,300	32	70,830	43	31,727	6
*Worchester	1943	656	645,040	9	30,575	179	168,288	468	446,177	12
	1944	573	1,064,043	13	49,750	91	445,510	469	568,783	13
	1945	774	3,164,184	125	1,190,925	128	662,815	521	1,310,444	288
New Hampshire:										
Concord	1943	36	25,840	3	1,000	23	10,440	10	14,400	3
	1944	49	90,685	3	500	14	23,600	32	66,585	3
	1945	108	655,605	6	5,700	38	14,480	64	635,425	6
Keene	1943	126	76,560	0	0	48	32,075	78	44,485	0
Lebanon	1943	38	9,050	0	0	5	800	33	8,250	0
	1944	35	20,500	0	0	1	10,000	34	10,500	0
	1945	29	28,560	3	15,500	6	6,600	20	6,460	3
Littleton	1943	0	0	0	0	0	0	0	0	0
	1944	1	2,000	0	0	0	0	1	2,000	0
	1945	2	6,000	0	0	0	0	2	6,000	0
*Manchester	1943	1,066	288,189	3	550	189	54,645	874	232,994	3
	1944	1,381	405,437	4	3,370	86	35,228	1,291	366,839	4
	1945	1,643	1,079,829	63	278,650	128	229,123	1,452	572,056	65
Milford	1943	1	250	0	0	1	250	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	7	17,310	1	1,500	4	11,610	2	4,200	1
Portsmouth	1943	6	84,710	1	4,500	3	58,340	2	21,870	1
	1944	5	348,761	0	0	1	328,500	4	20,261	0
	1945	48	238,750	14	95,000	10	114,900	24	28,850	14
Rhode Island:										
*Cranston	1943	209	111,004	9	33,000	68	27,734	132	50,270	9
	1944	214	229,515	2	7,400	54	144,740	158	77,375	2
	1945	323	813,660	80	410,500	85	247,275	158	155,885	83
East Greenwich	1943	4	47,577	0	0	1	10,600	3	36,977	0
	1944	12	35,200	0	0	2	10,300	10	24,900	0
East Providence	1943	624	115,243	0	0	158	14,948	466	100,295	0
	1944	574	293,293	0	0	62	114,745	512	178,548	0
	1945	658	482,644	35	142,500	87	164,670	536	175,474	35
Johnston	1943	71	60,221	3	6,500	32	43,130	36	10,591	3
	1944	40	30,221	1	1,500	15	23,130	24	5,591	1
*Newport	1943	293	1,862,119	62	301,459	59	1,173,913	172	386,747	105
	1944	263	916,042	3	11,000	36	667,037	224	238,005	3
	1945	278	826,251	7	63,700	39	129,652	232	632,899	7
North Providence	1943	83	28,183	1	3,500	28	5,755	54	18,928	1
	1944	83	41,655	1	3,500	8	1,350	74	36,805	1
	1945	98	194,468	26	126,500	29	45,485	43	22,483	27
*Pawtucket	1943	223	178,379	0	0	47	36,840	176	141,539	0
	1944	240	167,789	0	0	26	9,050	214	158,739	0
	1945	396	831,320	64	342,600	83	95,095	249	393,625	68
*Providence	1943	1,561	884,281	0	0	119	170,978	1,442	713,303	0
	1944	1,622	987,330	2	9,000	74	119,180	1,546	859,150	2
	1945	1,831	2,670,250	28	243,800	135	481,800	1,668	1,944,650	46
Warren	1943	39	32,550	0	0	17	12,650	22	19,900	0
	1944	54	59,500	6	14,050	16	6,850	32	38,600	6
	1945	73	93,825	9	20,400	30	41,175	34	32,250	9
Warwick	1943	293	244,460	56	173,000	93	32,858	144	38,602	56
	1944	426	201,757	56	105,995	55	16,090	315	79,672	56
	1945	535	1,353,855	272	1,171,800	105	131,725	158	50,330	272
*Woonsocket	1943	102	39,614	0	0	39	5,436	63	34,178	0
	1944	79	64,778	2	4,500	35	5,636	42	54,642	2
	1945	149	253,617	22	91,700	58	85,845	69	76,072	22
Vermont:										
Barre	1943	209	18,980	0	0	52	4,635	157	14,345	0
	1944	197	27,455	0	0	17	6,850	180	20,605	0
	1945	254	141,210	2	8,000	27	85,175	225	48,035	4
Brattleboro	1943	18	14,800	0	0	7	10,775	11	4,025	0
	1944	12	6,375	0	0	8	5,225	4	1,150	0
	[1]1945	25	56,361	7	29,936	7	20,975	11	5,450	7
Bristol	1945	1	20,000	0	0	1	20,000	0	0	0
Burlington	1943	51	851,125	0	0	11	825,850	40	25,275	0
	1944	53	75,900	0	0	12	37,500	41	38,400	0
	[1]1945	100	264,275	18	76,400	20	135,450	62	52,425	18
Lyndonville	1943	2	3,400	0	0	2	3,400	0	0	0
	1944	0	0	0	0	0	0	0	0	0
Montpelier	1943	42	16,770	0	0	14	7,364	28	9,406	0
	1944	59	71,825	2	12,000	7	42,650	50	17,175	2

* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

NEW ENGLAND STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Vermont—Continued										
Newport	1943	10	$4,469	1	$200	6	$1,375	3	$2,894	1
	1944	7	2,525	0	0	5	2,100	2	425	0
	[1]1945	23	60,915	4	10,050	11	43,375	8	7,490	4
Randolph	1943	0	0	0	0	0	0	0	0	0
	1944	2	1,000	0	0	1	300	1	700	0
	1945	2	3,750	1	3,500	1	250	0	0	1
Rutland	1945	47	124,400	9	65,500	14	17,200	24	41,700	9
St. Johnsbury	1943	5	32,500	2	8,500	1	10,000	2	14,000	2
	1944	4	42,800	0	0	3	37,800	1	5,000	0
	1945	3	28,000	0	0	2	24,000	1	4,000	0
Waterbury	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0

MIDDLE ATLANTIC STATES

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
New Jersey:										
Allendale	1943	30	$16,337	0	0	17	$3,690	13	$12,647	0
	1944	24	14,935	0	0	9	7,000	15	7,935	0
	1945	46	82,165	3	$17,900	17	35,475	26	28,790	3
Allenhurst	1943	2	6,000	0	0	0	0	2	6,000	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Asbury Park	1943	168	80,118	1	25	3	849	164	79,244	0
	1944	269	162,323	0	0	9	3,260	260	159,063	0
	1945	346	260,520	3	6,989	9	13,110	334	240,421	3
*Atlantic City	1943	972	400,177	0	0	6	1,730	966	398,447	0
	1944	1,274	1,330,960	1	1,000	15	337,304	1,258	992,656	1
	1945	1,662	1,685,034	5	16,500	20	292,422	1,637	1,376,112	5
Atlantic Highlands	1945	16	25,500	0	0	5	16,400	11	9,100	0
Audubon	1943	104	55,668	4	16,000	4	1,200	96	38,468	4
	1944	137	60,411	0	0	5	10,650	132	49,761	0
	1945	196	114,456	4	27,700	3	1,290	189	85,466	7
Avon-by-the-Sea	1945	2	15,500	2	15,500	0	0	0	0	2
Barrington	1943	79	55,576	2	8,000	0	0	77	47,576	2
	1944	52	21,925	1	4,200	4	845	47	16,880	1
	1945	46	39,584	0	0	6	20,550	40	19,034	0
*Bayonne	1943	79	986,082	0	0	22	867,548	57	118,534	0
	1944	190	1,274,257	0	0	23	1,097,044	167	177,213	0
	1945	600	1,777,001	1	2,500	24	1,295,824	575	478,677	1
Belleville	1943	122	415,041	20	92,500	41	218,225	61	104,316	25
	1944	105	408,715	7	27,500	39	330,315	59	50,900	7
	1945	210	1,262,399	67	364,100	42	817,529	101	80,770	68
Bellmawr	1943	23	4,641	2	900	11	1,945	10	1,796	2
	1944	41	23,282	3	7,900	13	6,200	25	9,182	3
	1945	50	49,866	7	32,000	21	10,500	22	7,366	7
Belmar	1945	133	94,200	10	34,300	5	2,900	118	57,000	10
Bergenfield	1943	45	24,454	3	12,000	6	5,050	36	7,404	3
	1944	39	15,084	0	0	12	3,550	27	11,534	0
	1945	134	447,144	60	321,800	21	80,585	53	44,759	60
Berlin	1943	36	6,905	0	0	6	1,200	30	5,705	0
	1944	41	16,560	2	3,000	8	3,300	31	10,260	2
	1945	18	24,600	2	5,000	7	12,050	9	7,550	2
Bernardsville	1943	21	15,022	2	1,300	10	3,212	9	10,510	3
	1944	16	19,750	0	0	6	12,700	10	7,050	0
	1945	39	111,355	8	46,750	18	40,555	13	24,050	8
Beverly	1943	30	10,664	0	0	1	470	29	10,194	0
	1944	47	26,896	0	0	4	11,350	43	15,546	0
	1945	44	21,079	0	0	5	4,825	39	16,254	0
Bloomfield	1943	270	562 622	2	12,000	25	7,925	243	512,697	2
	1944	358	632,371	14	247,200	25	149,265	319	235,906	59
	1945	501	1,163,010	59	627,000	45	224,169	397	311,841	136
Bloomsbury	1943	3	3,300	0	0	2	3,000	1	300	0
	1944	2	4,250	1	3,500	1	750	0	0	1
	1945	1	100	0	0	0	0	1	100	0
Bogota	1943	0	0	0	0	0	0	0	0	0
	1944	1	125,000	0	0	1	125,000	0	0	0
	1945	8	22,000	0	0	8	22,000	0	0	0

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* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

MIDDLE ATLANTIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
New Jersey—Continued										
Boonton	1943	9	$42,850	0	0	9	$42,850	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	20	55,450	4	$22,000	13	32,100	3	$1,350	4
Bound Brook	1943	39	11,264	0	0	15	2,854	24	8,410	0
	1944	36	30,077	0	0	7	1,250	29	28,827	0
	1945	46	95,035	3	18,000	13	47,240	30	29,795	3
Bradley Beach	1943	6	13,650	1	3,200	0	0	5	10,450	1
	1944	29	31,210	0	0	0	0	29	31,210	0
	1945	103	95,395	4	11,500	6	41,370	93	42,525	4
Bridgeton	1943	238	581,350	213	563,749	14	11,325	11	6,276	213
	1944	40	16,645	15	3,000	12	8,565	13	5,080	15
	1945	68	110,730	29	26,900	31	74,155	8	9,675	29
Brooklawn	1943	15	3,850	0	0	3	950	12	2,900	0
	1944	11	6,295	0	0	1	495	10	5,800	0
	1945	13	6,894	0	0	3	1,450	10	5,444	0
Burlington	1943	88	294,157	10	255,300	8	2,114	70	36,743	100
	1944	85	60,653	0	0	7	1,740	78	58,913	0
	1945	236	662,204	10	19,200	37	585,885	189	57,119	9
Butler	1943	17	20,900	4	9,000	0	0	13	11,900	4
	1944	18	5,600	1	1,000	5	1,800	12	2,800	1
	1945	42	28,475	3	5,500	14	10,650	25	12,325	3
Caldwell	1943	23	1,011,138	3	190,000	6	817,963	14	3,175	60
	1944	32	319,729	2	10,000	4	299,672	26	10,057	2
	1945	50	572,268	12	480,725	14	73,775	24	17,768	115
Califon	[1]1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
*Camden	1943	977	1,165,051	118	486,100	16	16,921	843	662,030	138
	1944	878	767,909	2	6,500	28	134,010	848	627,399	2
	1945	1,021	2,439,759	42	207,585	113	1,163,165	866	1,069,009	42
Cape May	1945	24	36,300	3	11,000	3	14,400	18	10,900	3
Carlstadt	1943	80	32,630	0	0	9	5,610	71	27,020	0
	1944	151	117,202	0	0	24	60,243	127	56,959	0
	1945	169	327,755	2	11,100	38	249,973	129	66,682	3
Carteret	1943	65	156,574	21	65,000	29	72,274	15	19,300	21
	1944	60	181,674	32	149,205	17	21,090	11	11,379	42
	1945	55	252,570	12	55,300	42	194,270	1	3,000	12
Clayton	1943	12	2,865	2	1,050	8	1,700	2	115	2
	1944	18	5,625	1	1,200	8	2,125	9	2,300	1
	1945	18	27,850	4	23,000	7	2,700	7	2,150	5
Clementon	1945	11	10,500	2	5,600	1	600	8	4,300	2
Cliffside Park	1943	111	42,985	1	2,000	1	500	109	40,485	1
	1945	85	72,282	4	23,500	5	13,700	76	35,082	6
*Clifton	1943	329	343,689	3	14,200	33	91,570	293	237,919	4
	1944	374	763,180	1	3,500	68	470,008	305	289,672	1
	1945	534	2,747,542	136	763,000	100	1,390,224	298	594,318	140
Clinton	1943	4	2,300	0	0	1	200	3	2,100	0
	1944	7	6,482	1	5,000	2	135	4	1,347	1
	1945	8	25,473	1	3,000	5	21,473	2	1,000	1
Closter	1943	27	8,885	2	3,800	15	2,405	10	2,680	2
	1944	28	46,434	6	20,200	7	1,502	15	24,732	6
	1945	57	90,870	3	18,000	22	45,015	32	27,855	3
Collingswood	1943	173	123,616	7	70,000	2	950	164	52,666	28
	1944	168	95,119	0	0	2	40,200	166	54,919	0
	1945	260	159,599	3	15,000	18	44,485	239	100,114	3
Cranford township	1943	167	613,196	95	596,000	31	6,671	41	10,525	220
	1944	67	74,650	10	42,000	10	4,250	47	28,400	10
	1945	169	1,313,157	61	341,000	30	921,846	78	50,311	61
Cresskill	1943	14	3,200	0	0	8	1,445	6	1,755	0
	1944	10	4,880	0	0	4	2,920	6	1,960	0
	1945	28	19,395	2	11,000	19	5,565	7	2,830	2
Deal	1943	0	0	0	0	0	0	0	0	0
	1944	3	1,850	0	0	0	0	3	1,850	0
	1945	15	17,450	5	5,500	4	3,300	6	8,650	5
Demarest	1943	5	1,450	0	0	2	500	3	950	0
	1944	0	0	0	0	0	0	0	0	0
	1945	10	30,900	3	22,500	3	2,050	4	6,350	3
Dover	1943	17	43,965	0	0	2	3,300	15	40,665	0
	1944	11	47,745	0	0	3	796	8	46,949	0
	1945	29	299,800	2	24,300	10	112,024	17	163,476	2
Dumont	1943	33	12,270	0	0	9	3,050	24	9,220	0
	1944	61	34,008	0	0	21	11,150	40	22,858	0
	1945	170	565,921	92	497,450	21	31,386	57	37,085	92

* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

MIDDLE ATLANTIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
New Jersey—Continued										
Dunellen	1943	83	$115,667	16	$100,000	21	$1,245	46	$14,422	32
	1944	31	45,010	1	4,500	5	790	25	39,720	1
	1945	68	46,575	2	11,100	21	12,180	45	23,295	2
East Newark	1943	23	12,950	0	0	0	0	23	12,950	0
	1944	44	22,750	0	0	1	6,000	43	16,750	0
	1945	32	21,350	0	0	0	0	32	21,350	0
*East Orange	1943	676	548,963	2	132,000	13	8,425	661	408,538	61
	1944	715	450,873	0	0	18	22,925	697	427,948	0
	1945	881	850,260	2	16,000	22	59,135	857	775,125	2
East Paterson	1943	112	665,086	2	8,000	38	546,876	72	110,210	4
	1944	109	77,073	0	0	28	11,656	81	65,417	0
	1945	179	719,712	23	419,000	45	235,760	111	64,952	114
East Rutherford	1943	46	82,565	0	0	10	15,200	36	67,365	0
	1944	58	40,168	0	0	9	11,645	49	28,523	0
	1945	110	152,720	3	12,500	15	61,400	92	78,820	5
Eatontown	1943	30	41,933	7	21,600	9	9,610	14	10,723	7
	1944	45	25,721	8	5,975	6	1,600	31	18,146	8
	1945	102	90,653	13	50,000	46	12,685	43	27,968	12
Edgewater	1943	36	84,326	0	0	2	26,500	34	57,826	0
	1944	25	131,206	0	0	1	140	24	131,066	0
	1945	21	117,164	0	0	3	48,200	18	68,964	0
Egg Harbor City	1943	7	1,575	2	350	2	375	3	850	2
	1944	14	7,693	0	0	4	2,345	10	5,348	0
	1945	71	54,352	0	0	7	6,100	64	48,252	0
*Elizabeth	1943	373	779,794	55	383,500	46	143,285	272	253,009	114
	1944	223	541,983	0	0	35	255,355	188	286,628	0
	1945	306	848,749	13	92,000	72	406,212	221	350,537	13
Emerson	1944	15	11,759	1	3,500	6	3,950	8	4,309	1
	[1] 1945	3	17,000	3	17,000	0	0	0	0	3
Englewood	1943	83	56,842	0	0	17	7,205	66	49,637	0
	1944	117	138,416	0	0	15	30,745	102	107,671	0
	1945	159	389,400	9	73,000	30	130,850	120	185,550	9
Englewood Cliffs	1943	20	8,430	0	0	11	6,000	9	2,430	0
	1944	3	600	0	0	0	0	3	600	0
	[1] 1945	14	40,400	4	30,000	6	5,700	4	4,700	4
Essex Fells	1943	6	3,100	0	0	1	450	5	2,650	0
	1944	3	5,500	0	0	0	0	3	5,500	0
	1945	11	30,650	1	8,000	2	1,600	8	21,050	1
Fairlawn	1943	91	188,110	2	6,600	14	149,960	75	31,550	2
	1944	129	149,047	2	6,500	29	26,725	98	115,822	2
	1945	324	672,932	109	500,900	51	87,375	164	84,657	109
Fairview	1943	65	52,665	0	0	4	800	61	51,865	0
	1944	86	62,697	0	0	10	14,400	76	48,297	0
	1945	97	252,685	5	21,000	10	153,250	82	78,435	5
Fanwood	1945	56	244,250	48	240,050	0	0	8	4,200	48
Far Hills	1943	1	2,500	0	0	0	0	1	2,500	0
	1944	0	0	0	0	0	0	0	0	0
	1945	4	3,950	1	2,000	3	1,950	0	0	1
Flemington	1943	28	20,240	5	3,590	20	14,150	3	2,500	7
	1944	27	65,338	4	15,700	20	42,688	3	6,950	5
	1945	25	237,600	2	9,500	17	222,000	6	6,100	2
Florham Park	1943	6	3,150	0	0	1	350	5	2,800	0
	1944	6	3,300	0	0	0	0	6	3,300	0
	1945	27	79,750	14	70,000	6	5,700	7	4,050	14
Fort Lee	1943	25	15,869	1	4,200	2	364	22	11,305	1
	1944	50	78,658	1	7,000	5	41,550	44	30,108	1
	1945	90	165,679	12	74,900	8	29,500	70	61,279	12
Franklin Lakes	1943	2	5,500	2	5,500	0	0	0	0	2
	1944	5	11,400	5	11,400	0	0	0	0	5
Freehold	1943	14	26,900	1	4,000	11	17,700	2	5,200	1
	1944	13	25,950	0	0	5	17,450	8	8,500	0
	1945	16	38,900	2	10,500	9	23,900	5	4,500	2
Garfield	1943	244	130,344	0	0	8	30,580	236	99,764	0
	1944	264	233,430	0	0	11	87,450	253	145,980	0
	1945	231	328,051	8	49,000	36	135,375	187	143,676	8
Garwood	1943	74	415,596	48	374,000	11	26,368	15	15,228	94
	1944	16	23,674	0	0	2	10,300	14	13,374	0
	1945	26	83,245	3	21,400	10	19,400	13	42,445	3
Glassboro	1943	94	26,510	4	2,650	15	2,985	75	20,875	4
	1944	139	51,573	9	13,000	12	5,260	118	33,313	8
	1945	125	78,349	10	12,500	24	24,425	91	41,424	10
Glen Ridge	1943	20	10,135	0	0	1	195	19	9,940	0
	1944	20	5,544	0	0	2	1,550	18	3,994	0
	1945	58	65,169	0	0	3	1,175	55	63,994	0

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* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

MIDDLE ATLANTIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
New Jersey—Continued										
Glen Rock	1943	38	$7,338	0	0	9	$2,795	29	$4,543	0
	[1] 1945	44	205,000	44	$205,000	0	0	0	0	44
Gloucester City	1943	189	69,447	2	6,500	11	2,100	176	60,847	2
	1944	237	124,627	2	2,500	11	43,050	224	79,077	2
	1945	244	128,698	3	9,000	21	38,450	220	81,248	3
Hackensack	1943	285	146,917	0	0	13	6,302	272	140,615	0
	1944	421	301,014	0	0	22	76,958	399	224,056	0
	1945	465	1,226,475	70	363,500	39	522,070	356	340,905	70
Haddonfield	1943	151	54,592	0	0	13	1,175	138	53,417	0
	1944	185	118,105	0	0	6	2,230	179	115,875	0
	1945	204	117,605	1	9,000	20	16,140	183	92,465	1
Haddon Heights	1943	24	4,250	0	0	6	500	18	3,750	0
	1944	13	2,900	0	0	1	400	12	2,500	0
	1945	143	75,559	3	24,300	10	8,200	130	43,059	3
Haledon	1943	42	18,264	0	0	8	1,007	34	17,257	0
	1944	28	14,225	0	0	3	565	25	13,660	0
	1945	49	79,065	0	0	10	31,665	39	47,400	0
Harrington Park	1943	17	6,960	0	0	7	1,440	10	5,520	0
	1944	6	5,025	0	0	1	750	5	4,275	0
	1945	11	16,000	2	9,500	5	3,100	4	3,400	1
Harrison	1943	86	822,100	0	0	40	764,470	46	57,630	0
	1944	76	591,660	0	0	18	370,050	58	221,610	0
	1945	81	507,315	0	0	19	457,705	62	49,610	0
Hasbrouck Heights	1943	101	226,059	34	203,000	6	2,450	61	20,609	67
	1944	91	54,341	1	13,000	9	5,940	81	35,401	1
	1945	90	197,327	10	83,000	9	70,650	71	43,677	10
Haworth	1943	2	750	0	0	1	250	1	500	0
	1945	7	9,275	0	0	2	1,300	5	7,975	0
Hawthorne	1943	154	49,129	0	0	23	15,220	131	33,909	0
	1944	262	108,023	3	15,500	14	21,259	245	71,264	3
	1945	334	178,790	8	33,540	41	30,970	285	114,280	8
High Bridge	1943	0	0	0	0	0	0	0	0	0
	1944	2	200	0	0	1	50	1	150	0
	1945	3	900	0	0	3	900	0	0	0
Highland Park	1943	29	13,285	1	2,900	4	1,350	24	9,035	0
	1944	91	403,345	40	376,000	9	4,885	42	22,460	107
	1945	74	163,053	21	107,400	9	26,251	44	29,402	21
Highlands	1944	31	9,655	1	1,400	5	1,150	25	7,105	1
	1945	40	29,665	7	12,100	11	4,325	22	13,240	7
Hightstown	1943	1	2,000	0	0	0	0	1	2,000	0
	1944	5	5,800	0	0	2	1,800	3	4,000	0
	1945	8	24,500	1	5,000	4	10,500	3	9,000	1
Hillside	1943	42	12,137	0	0	7	1,550	35	10,587	0
	1944	37	15,754	1	3,000	4	795	32	11,959	1
	1945	71	70,256	4	27,500	13	9,050	54	33,706	4
Hillside township	1943	174	354,485	11	77,000	74	225,458	89	52,027	22
	1944	131	673,050	16	435,000	15	98,200	100	139,850	160
	1945	189	1,050,008	34	227,100	35	642,025	120	180,883	34
*Hoboken	1943	638	2,189,891	0	0	14	1,283,610	624	906,281	0
	1944	646	481,201	0	0	5	43,450	641	437,751	0
	1945	659	681,829	0	0	4	156,900	655	524,929	0
Interlaken	1943	1	200	0	0	0	0	1	200	0
	1944	3	975	0	0	1	500	2	475	0
*Irvington	1943	174	631,299	20	486,400	22	17,110	132	127,789	182
	1944	198	971,315	19	784,500	19	35,600	160	151,215	246
	1945	227	516,570	9	77,300	45	164,850	173	274,420	13
*Jersey City	1943	279	1,683,438	0	0	26	1,205,719	253	477,719	0
	1944	377	1,208,602	1	1,000	39	280,361	337	927,241	1
	1945	415	1,295,073	0	0	33	301,600	382	993,473	0
*Kearny	1943	269	444,695	0	0	29	112,298	240	332,397	0
	1944	451	1,277,871	2	115,000	34	730,115	415	432,756	1
	1945	554	2,904,576	15	94,500	47	2,265,050	492	545,026	15
Kenilworth	1943	0	0	0	0	0	0	0	0	0
	1944	31	7,782	0	0	0	0	31	7,782	0
	1945	91	141,422	0	0	20	100,975	71	40,447	0
Keyport	1943	25	36,200	0	0	5	25,750	20	10,450	0
	1944	18	18,925	0	0	5	9,200	13	9,725	0
	1945	44	75,150	5	19,000	9	34,400	30	21,750	5
Laurel Springs	1943	35	12,517	0	0	3	460	32	12,057	0
	1944	36	12,407	0	0	1	250	35	12,157	0
	1945	61	20,999	0	0	7	3,400	54	17,599	0
Lawnside	1943	13	18,425	11	18,300	0	0	2	125	11
	1944	39	45,998	15	34,900	6	2,925	18	8,173	15
	1945	37	33,347	13	27,952	6	660	18	4,735	13

* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

MIDDLE ATLANTIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
New Jersey—Continued										
Leonia	1943	25	$9,215	0	0	1	$300	24	$8,915	0
	1944	27	12,101	0	0	0	0	27	12,101	0
	1945	55	259,227	25	$231,684	6	12,550	24	14,993	60
Lincoln Park	1943	14	5,395	0	0	1	100	13	5,295	0
	1944	23	13,830	1	2,400	5	2,700	17	8,730	1
	1945	29	23,265	0	0	7	10,050	22	13,215	0
Linden	1943	273	924,600	117	372,500	71	436,004	85	116,096	132
	1944	211	1,973,217	56	185,800	50	1,668,307	105	119,110	57
	1945	319	1,268,421	87	434,250	88	552,796	144	281,375	87
Lindenwold	1943	66	14,492	0	0	21	2,859	45	11,633	0
	1944	74	18,851	0	0	18	3,370	56	15,481	0
	1945	82	37,576	3	8,500	26	9,016	53	20,060	3
Linwood	1943	0	0	0	0	0	0	0	0	0
	1944	15	21,560	1	2,000	4	14,450	10	5,110	1
	1945	70	65,095	0	0	8	26,975	62	38,120	0
Little Ferry	1943	31	18,440	0	0	10	6,340	21	12,100	0
	1944	33	13,555	0	0	14	7,575	19	5,980	0
	1945	71	66,706	2	6,300	27	28,550	42	31,856	2
Little Silver	1943	12	5,250	0	0	8	1,350	4	3,900	0
	1944	19	18,222	1	2,400	6	1,711	12	14,111	1
	1945	28	90,726	8	67,975	8	5,600	12	17,151	8
Lodi	1943	122	846,850	108	769,600	4	58,450	10	18,800	216
	1944	35	130,342	0	0	8	74,672	27	55,670	0
	1945	33	161,350	8	36,700	8	32,800	17	91,850	8
Long Branch	1943	138	577,237	49	444,393	22	34,257	67	98,587	239
	1944	137	143,588	12	41,690	26	7,724	99	94,174	26
	1945	213	394,333	34	99,050	54	153,854	125	141,429	42
Lyndhurst township	1943	236	144,441	1	4,000	41	28,936	194	111,505	1
	1944	238	475,049	35	200,000	26	102,930	177	172,119	52
	1945	177	193,670	7	42,000	38	58,420	132	93,250	7
Madison	1943	35	18,017	0	0	17	3,867	18	14,150	0
	1944	37	30,933	3	9,658	15	6,050	19	15,225	2
	1945	55	92,483	5	49,000	20	14,500	30	28,983	5
Magnolia	1943	110	37,090	0	0	7	8,450	103	28,640	0
	1944	68	23,235	0	0	0	0	68	23,235	0
	1945	51	21,052	1	4,500	2	1,000	48	15,552	1
Manasquan	1943	111	27,358	0	0	2	700	109	26,658	0
	1944	143	41,694	2	2,600	3	1,960	138	37,134	2
	1945	252	296,090	34	183,435	0	0	218	112,655	32
Manville	1943	371	869,275	340	829,650	16	35,635	15	3,990	375
	1944	87	19,340	0	0	19	10,800	68	8,540	0
	[1]1945	88	82,037	10	43,300	26	25,622	52	13,115	10
Maplewood township	1943	124	47,405	0	0	4	1,650	120	45,755	0
	1944	153	113,284	0	0	12	38,625	141	74,659	0
	1945	184	267,154	5	54,860	18	109,885	161	102,409	5
Margate City	1945	70	160,930	25	139,500	0	0	45	21,430	25
Matawan	1945	44	43,566	4	8,500	15	21,700	25	13,366	3
Maywood	1943	107	26,627	0	0	9	3,514	98	23,113	0
	1944	137	36,516	0	0	8	7,643	129	28,873	0
	1945	186	168,157	16	90,300	18	34,101	152	43,756	16
Merchantville	1943	53	45,354	2	9,882	2	12,290	49	23,182	5
	1944	47	27,148	0	0	0	0	47	27,148	0
	1945	78	30,890	0	0	0	0	78	30,890	0
Metuchen	1943	13	16,755	5	13,300	2	1,050	6	2,405	6
	1944	15	309,608	0	0	2	1,660	13	307,948	0
	1945	65	260,067	15	58,500	21	37,468	29	164,099	31
Middlesex	1943	109	276,807	50	200,000	11	24,650	48	52,157	50
	1944	86	84,499	3	12,000	15	21,300	68	51,199	3
	1945	75	101,922	1	3,500	21	42,500	53	55,922	1
Midland Park	1943	107	16,374	0	0	39	3,811	68	12,563	0
	1944	69	41,908	2	8,050	15	11,394	52	22,464	2
	1945	133	151,885	11	57,600	31	44,800	91	49,485	10
Millburn township	1943	89	30,414	0	0	35	6,222	54	24,192	0
	1944	67	41,334	0	0	8	747	59	40,587	0
	1945	118	445,060	19	211,050	20	140,570	79	93,440	19
Milltown	1943	18	4,020	0	0	10	1,630	8	2,390	0
	1944	9	1,570	0	0	3	355	6	1,215	0
	1945	24	24,585	3	9,500	10	6,575	11	8,510	3
Monmouth Beach	1943	0	0	0	0	0	0	0	0	0
*Montclair	1943	336	234,057	0	0	14	5,648	322	228,409	0
	1944	318	169,055	0	0	7	2,448	311	166,607	0
	1945	426	427,419	5	45,500	22	30,655	399	351,264	6
Montvale	1943	25	6,715	0	0	17	2,075	8	4,640	0
	1944	31	10,035	0	0	11	2,820	20	7,215	0
	1945	41	24,010	2	10,400	11	3,255	28	10,355	2

* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

MIDDLE ATLANTIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
New Jersey—Continued										
Moonachie	1943	16	$11,025	1	$4,200	8	$3,375	7	$3,450	1
	1944	8	9,375	1	3,000	1	600	6	5,775	1
	1945	27	10,270	0	0	2	850	25	9,420	0
Morris Plains	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	4	20,050	1	5,500	3	14,550	0	0	1
Morristown	1943	58	38,079	0	0	3	925	55	37,154	0
	1944	80	32,287	0	0	5	1,674	75	30,613	0
	1945	99	97,136	0	0	1	1,300	98	95,836	0
Mountain Lakes	1943	15	16,500	0	0	5	10,200	10	6,300	0
	1944	13	58,940	0	0	8	51,840	5	7,100	0
	1945	10	26,045	1	15,000	4	795	5	10,250	1
Mount Ephraim	1943	55	16,147	0	0	1	200	54	15,947	0
	1944	70	29,848	2	7,000	5	1,250	63	21,598	2
	1945	80	146,795	1	13,000	8	102,950	71	30,845	1
Neptune township	1943	19	16,300	3	3,600	6	9,700	10	3,000	3
	1944	180	78,344	3	2,900	33	18,900	144	56,544	3
	1945	32	20,800	0	0	7	6,150	25	14,650	0
*Newark	1943	837	5,708,727	34	173,500	79	3.906,274	724	1,628,953	70
	1944	768	2,751,491	9	78,350	71	815,378	688	1,857,763	29
	1945	1,328	6,318,591	288	1,504,770	126	1,783,475	914	3,030,346	298
*New Brunswick	1943	148	162,755	28	68,600	22	44,790	98	49,365	28
	1944	126	194,894	4	11,100	22	76,835	100	105,959	4
	1945	219	1,249,824	67	367,000	32	738,566	120	144,258	67
New Milford	1943	18	4,830	0	0	8	1,775	10	3,055	0
	1945	95	179,541	26	153,800	27	11,030	42	14,711	26
New Providence	1943	27	7,465	0	0	20	4,525	7	2,940	0
	1944	17	7,270	0	0	9	3,770	8	3,500	0
	1945	25	103,900	8	45,500	14	56,700	3	1.700	8
Newton	1943	0	0	0	0	0	0	0	0	0
	1945	2	13,500	0	0	0	0	2	13,500	0
North Arlington	1943	43	13,108	0	0	6	2,415	37	10,693	0
	1944	91	496,108	33	481,000	9	1,923	49	13,185	217
	1945	123	138,465	32	90,700	29	15,020	62	32,745	33
North Bergen township	1943	340	352,567	0	0	12	60,800	328	291,767	0
	1944	419	245,969	0	0	9	61,500	410	184,469	0
	1945	513	505,946	0	0	21	326,600	492	179,346	0
North Caldwell	1943	20	3,928	0	0	8	1,350	12	2,578	0
	1944	29	9,048	0	0	7	2,790	22	6,258	0
	1945	24	17,510	1	7,000	8	6,050	15	4,460	1
Northfield	1943	22	5,735	0	0	1	1,200	21	4,535	0
	1944	42	31,281	0	0	3	3,347	39	27,934	0
	1945	74	36,301	3	8,000	9	3,100	62	25,201	3
North Haledon	1943	75	56,625	5	15,500	43	24,555	27	16,570	5
	1944	68	31,705	3	13,000	15	3,220	50	15,485	3
	1945	90	98,215	12	64,600	23	10,835	55	22,780	12
North Plainfield	1943	74	52,046	2	8,500	16	10,065	56	33,481	3
	1944	66	116,181	15	79,500	6	11,050	45	25,631	14
	1945	56	160,355	19	83,200	17	51,505	20	25,650	23
Northvale	1943	0	0	0	0	0	0	0	0	0
	1944	3	10,000	2	6,500	1	3,500	0	0	2
North Wildwood	1945	153	69,362	6	12,800	1	1,000	146	55,562	7
Norwood	1943	14	6,300	0	0	5	1,250	9	5,050	0
	1944	7	6,900	1	5,200	4	1,300	2	400	1
	1945	20	35,800	3	13,400	10	14,850	7	7,550	3
Nutley	1943	217	379,703	34	325,400	37	4,800	146	49,503	101
	1944	142	405,453	13	296,000	27	27,145	102	82,308	92
	1945	221	886,061	26	317,950	52	373,555	143	194,556	78
Oaklyn	1943	69	23,175	0	0	3	600	66	22,575	0
	1944	64	25,717	0	0	3	500	61	25,217	0
	1945	158	68,693	0	0	3	8,475	155	60,218	0
Ocean City	1945	799	479,469	17	53,400	48	59,224	734	366,845	18
Oceanport	1943	2	14,000	2	14,000	0	0	0	0	10
	1944	4	7,850	0	0	0	0	4	7,850	0
	1945	23	12,975	1	4,000	2	800	20	8,175	1
Oradell	1945	21	42,730	4	31,800	5	2,780	12	8,150	4
*Orange	1943	200	464,508	6	299,000	15	47,710	179	117,798	94
	1944	243	167,798	0	0	14	44,735	229	123,063	0
	1945	274	533,604	12	50,000	38	315,865	224	167,739	12
Palisades Park	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	1	16,000	1	16,000	0	0	0	0	4

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* In sample of 257 cities. See text and tables, pp. 12 to 16.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

MIDDLE ATLANTIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
New Jersey—Continued										
Palmyra	1943	73	$63,850	7	$35,000	6	$1,100	60	$27,750	7
	1944	86	40,775	0	0	3	1,900	83	38,875	0
	1945	78	51,441	0	0	5	20,850	73	30,591	0
Park Ridge	1943	64	9,845	0	0	1	75	63	9,770	0
	1945	68	54,911	4	23,400	4	4,080	60	27,431	4
*Passaic	1943	395	403,554	24	134,950	21	62,840	350	205,764	48
	1944	413	446,409	0	0	16	123,942	397	322,467	0
	1945	545	1,300,488	4	409,000	36	264,535	505	626,953	88
*Paterson	1943	625	810,855	30	117,950	48	143,845	547	549,060	30
	1944	880	1,284,395	4	15,950	40	575,222	836	693,223	4
	1945	1,293	1,535,051	5	26,000	85	391,799	1,203	1,117,252	5
Paulsboro	[1]1943	52	84,147	26	78,000	3	700	23	5,447	26
	1944	52	35,806	1	2,000	7	1,175	44	32,631	1
	1945	47	62,580	4	13,000	15	34,650	28	14,930	4
Peapack-Gladstone	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	13	26,625	0	0	4	2,150	9	24,475	0
Pennsauken township	1943	395	357,459	43	254,700	41	7,361	311	95,398	80
	1944	307	146,038	3	5,900	19	8,271	285	131,867	3
Penns Grove	1943	50	15,468	0	0	1	50	49	15,418	0
	1944	55	70,600	11	19,175	2	9,500	42	41,925	11
	1945	71	59,610	5	8,300	4	18,700	62	32,610	7
*Perth Amboy	1943	206	817,047	90	488,800	32	241,947	84	86,300	182
	1944	139	1,050,209	1	10,000	57	641,574	81	398,635	0
	1945	156	892,857	6	23,300	72	686,803	78	182,754	6
Phillipsburg	1943	10	5,200	2	3,000	4	1,000	4	1,200	2
	1944	21	225,235	1	5,000	17	205,185	3	15,050	1
	1945	18	87,125	1	4,000	13	82,025	4	1,100	1
Pine Hill	1944	32	5,968	0	0	12	2,175	20	3,793	0
	1945	48	24,677	2	4,200	13	8,615	33	11,862	2
Pitman	1943	44	15,966	0	0	4	1,150	40	14,816	0
	1944	74	31,095	0	0	6	2,000	68	29,095	0
	1945	108	95,766	4	15,500	13	11,550	91	68,716	4
*Plainfield	1943	367	1,074,556	108	578,800	51	338,092	208	157,664	206
	1944	298	1,294,045	8	38,000	81	777,294	209	478,751	7
	1945	284	1,023,162	28	190,500	39	516,106	217	316,556	28
Pleasantville	1943	42	9,810	0	0	2	3,000	40	6,810	0
	1944	80	19,183	0	0	2	600	78	18,583	0
	1945	213	107,302	0	0	3	17,900	210	89,402	0
Point Pleasant	1943	9	4,600	1	1,000	6	1,750	2	1,850	1
	1944	32	22,900	11	7,250	11	8,750	10	6,900	11
	1945	68	101,200	32	77,600	12	7,200	24	16,400	32
Point Pleasant Beach	1945	44	109,810	13	51,800	11	27,380	20	30,630	13
Pompton Lakes	1943	35	20,870	0	0	12	14,445	23	6,425	0
	1944	32	54,990	2	7,400	7	34,350	23	13,240	2
	1945	62	200,785	8	45,500	13	36,450	41	118,835	8
Princeton	1943	28	27,207	0	0	1	125	27	27,082	0
	1944	34	85,087	0	0	2	300	32	84,787	0
	1945	48	183,827	0	0	8	81,200	40	102,627	0
Prospect Park	1943	69	24,283	0	0	0	0	69	24,283	0
	1944	72	32,415	0	0	0	0	72	32,415	0
	1945	74	41,054	0	0	4	10,525	70	30,529	0
Rahway	1943	245	335,271	43	251,000	41	7,520	161	76,751	75
	1944	317	138,056	0	0	23	25,545	294	112,511	0
	1945	381	619,459	19	71,000	50	395,304	312	153,155	19
Ramsey	1943	35	9,805	0	0	30	7,680	5	2,125	0
	1944	38	12,280	1	2,800	14	2,534	23	6,946	1
	1945	43	36,193	3	6,740	15	9,240	25	20,213	3
Red Bank	1943	39	112,853	4	90,000	11	2,488	24	20,365	36
	1944	51	76,184	0	0	11	2,270	40	73,914	0
	1945	109	539,894	32	402,600	24	65,325	53	71,969	123
Ridgefield	1943	153	43,202	0	0	23	13,395	130	29,807	0
	1944	151	124,615	0	0	17	48,505	134	76,110	0
	1945	116	229,817	4	25,000	14	98,950	98	105,867	6
Ridgefield Park	1943	95	35,369	0	0	5	575	90	34,794	0
	1944	119	57,853	0	0	3	5,600	116	52,253	0
	1945	171	454,886	2	17,000	40	352,590	129	85,296	2
Ridgewood	1943	221	103,421	1	1,050	16	5,945	204	96,426	1
	1944	215	110,837	1	3,500	16	18,075	198	89,262	1
	1945	313	382,933	13	131,380	34	61,127	266	190,426	13
Ringwood	1943	0	0	0	0	0	0	0	0	0
	1944	16	6,574	0	0	8	1,894	8	4,680	0
	1945	46	31,305	12	18,100	13	4,550	21	8,655	12

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* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

MIDDLE ATLANTIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
New Jersey—Continued										
Riverton	1943	8	$9,320	1	$5,000	1	$500	6	$3,820	3
	1944	12	23,085	1	12,565	0	0	11	10,520	9
	1945	15	18,912	0	0	0	0	15	18,912	0
Rivervale	1943	29	8,550	0	0	22	6,700	7	1,850	0
	1944	17	8,985	1	4,500	13	3,085	3	1,400	1
	1945	29	15,100	1	4,700	20	7,725	8	2,675	1
Rockaway	1943	68	106,778	32	96,000	18	4,718	18	6,060	32
	1944	22	17,055	1	4,500	6	1,655	15	10,900	1
	1945	29	43,380	7	14,640	7	18,800	15	9,940	7
Roselle	1943	82	327,603	14	262,700	23	35,984	45	28,919	60
	1944	81	107,380	10	52,000	20	11,000	51	44,380	10
	1945	150	430,692	54	304,200	35	73,395	61	53,097	54
Roselle Park	1944	29	30,875	0	0	1	11,000	28	19,875	0
	1945	40	64,300	7	44,000	7	7,900	26	12,400	7
Rumson	1943	65	64,740	3	11,500	32	11,365	30	41,875	3
	1944	31	22,975	1	800	8	9,625	22	12,550	1
	1945	46	104,050	5	29,500	16	44,900	25	29,650	8
Runnemede	1943	70	88,713	28	79,900	9	1,105	33	7,708	28
	1944	50	15,886	0	0	5	1,500	45	14,386	0
	1945	71	65,612	6	19,100	19	28,900	46	17,612	6
Rutherford	1943	73	33,037	0	0	5	1,350	68	31,687	0
	1944	100	75,799	1	7,000	9	17,775	90	51,024	1
	1945	139	201,005	9	97,000	19	17,038	111	86,967	10
Sea Bright	1943	7	13,750	0	0	1	500	6	13,250	0
	1944	5	2,200	0	0	1	900	4	1,300	0
	1945	9	8,275	1	3,500	2	1,600	6	3,175	1
Sea Girt	1943	7	5,875	1	4,000	0	0	6	1,875	1
	1944	13	10,090	0	0	0	0	13	10,090	0
	1945	34	28,035	2	12,500	1	450	31	15,085	2
Sea Isle City	1943	22	10,972	0	0	3	675	19	10,297	0
	1944	202	211,045	3	1,850	5	2,270	194	206,925	3
	1945	217	154,082	17	41,300	14	33,645	186	79,137	20
Secaucus	1943	25	20,700	1	2,500	10	11,050	14	7,150	1
	1944	14	41,325	1	4,500	8	32,700	5	4,125	0
	1945	27	122,650	3	17,000	14	93,350	10	12,300	3
Shewsbury	1943	21	31,378	4	10,048	7	3,680	10	17,650	4
	1944	17	58,341	3	11,375	4	3,300	10	43,666	3
	1945	21	135,956	2	5,000	11	74,135	8	56,821	2
Somerdale	1944	20	9,880	1	3,500	4	725	15	5,655	1
	1945	32	13,240	1	500	11	6,560	20	6,180	1
Somers Point	1943	11	5,058	1	600	3	1,250	7	3,208	1
	1945	51	16,075	0	0	0	0	51	16,075	0
Somerville	1943	102	382,433	40	352,800	11	3,500	51	26,133	120
	1944	62	514,549	1	6,000	17	480,694	44	27,855	1
	1945	90	635,617	6	41,000	16	231,359	68	363,258	6
South Belmar	1943	37	7,898	1	1,000	1	285	35	6,613	1
	1944	69	15,086	0	0	0	0	69	15,086	0
	1945	105	48,069	8	29,300	0	0	97	18,769	8
South Orange	1943	192	51,236	0	0	19	4,664	173	46,572	0
	1944	220	108,688	0	0	3	1,848	217	106,840	0
	1945	289	299,591	9	105,000	9	64,037	271	130,554	9
South Plainfield	1943	103	99,783	1	5,000	44	68,118	58	26,665	1
South River	1943	33	46,532	10	40,000	8	3,460	15	3,072	10
	1944	13	9,035	1	3,000	3	695	9	5,340	1
	1945	61	133,108	3	30,000	12	78,940	46	24,168	2
Spring Lake	1943	59	38,691	0	0	1	150	58	38,541	0
	1944	117	61,269	0	0	2	400	115	60,869	0
	1945	129	202,007	0	0	2	101,200	127	100,807	0
Stanhope	1943	1	500	0	0	1	500	0	0	0
	1944	1	500	0	0	0	0	1	500	0
Summit	1943	44	68,458	0	0	6	1,798	38	66,660	0
	1944	48	45,455	1	5,000	10	6,980	37	33,475	1
	1945	102	807,240	11	80,500	17	599,750	74	126,990	11
Sussex	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Teaneck township	1945	29	142,765	27	141,585	1	100	1	1,080	59
Tenafly	1943	60	28,143	0	0	7	7,700	53	20,443	0
	1944	81	58,568	0	0	9	20,202	72	38,366	0
	1945	96	197,634	20	119,291	6	34,050	70	44,293	19
Totowa	1943	92	56,375	0	0	4	38,490	88	17,885	0
	1944	95	64,157	0	0	12	44,115	83	20,042	0
	1945	126	128,973	3	10,400	22	72,374	101	46,199	3

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

MIDDLE ATLANTIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
New Jersey—Continued										
*Trenton	1943	787	$1,541,848	320	$1,019,538	23	$65,793	444	$456,517	320
	1944	891	927,026	1	2,000	28	349,543	862	575,483	1
	1945	1,094	2,132,105	5	73,500	44	1,055,110	1,045	1,003,495	13
Union Beach	1945	91	27,101	1	900	31	10,700	59	15,501	1
*Union City	1943	214	87,206	0	0	0	0	214	87,206	0
	1944	280	369,605	0	0	5	179,100	275	190,505	0
	1945	420	428,019	0	0	10	120,900	410	307,119	0
Union township	1943	236	448,979	20	269,200	33	29,985	183	149,794	79
	1944	201	322,460	3	17,800	39	199,175	159	105,485	3
	1945	378	1,932,880	91	611,100	81	1,098,055	206	223,725	93
Ventnor city	1943	157	37,437	0	0	0	0	157	37,437	0
	1944	430	114,858	0	0	0	0	430	114,858	0
	1945	664	244,723	5	40,300	0	0	659	204,423	5
Verona	1943	51	28,427	0	0	21	4,249	30	24,178	0
	1944	65	72,099	0	0	19	27,805	46	44,294	0
	1945	70	123,160	5	48,100	14	34,635	51	40,425	5
Vineland	1943	57	63,158	0	0	18	15,655	39	47,503	0
	1944	71	22,840	2	2,900	25	9,595	44	10,345	2
	1945	67	268,751	2	8,000	35	251,175	30	9,576	2
Wallington	1943	66	820,306	1	2,500	12	781,700	53	36,106	1
	1944	79	183,698	2	17,000	15	128,875	62	37,823	3
	1945	108	164,999	4	20,700	15	54,725	89	89,574	5
Wanaque	1943	53	20,985	1	2,800	16	7,740	36	10,445	1
	1944	28	13,845	2	4,400	7	3,475	19	5,970	2
	1945	112	69,365	2	11,900	34	29,075	76	28,390	2
Watchung	1943	26	5,117	0	0	18	2,167	8	2,950	0
	1944	31	30,470	4	18,000	9	2,125	18	10,345	4
	1945	40	83,562	10	57,200	18	15,995	12	10,367	10
Weehawken township	1943	184	105,806	0	0	2	4,900	182	100,906	0
	1944	164	103,254	0	0	2	30,800	162	72,454	0
	1945	162	83,366	0	0	7	18,750	155	64,616	0
Wenonah	1943	0	0	0	0	0	0	0	0	0
	1944	1	4,000	1	4,000	0	0	0	0	1
	1945	0	0	0	0	0	0	0	0	0
West Caldwell	1943	16	4,800	0	0	5	2,075	11	2,725	0
	1945	25	80,350	7	58,000	5	4,250	13	18,100	7
Westfield	1943	76	37,370	1	2,500	9	885	66	33,985	1
	1944	63	78,371	0	0	8	54,430	55	23,941	0
	1945	90	117,725	11	55,700	11	19,475	68	42,550	11
West Long Branch	[1]1943	14	9,315	1	3,500	7	3,840	6	1,975	1
	1944	22	11,094	0	0	2	900	20	10,194	0
	1945	35	43,875	3	11,500	14	18,100	18	14,275	3
*West New York	1943	92	35,865	0	0	2	1,150	90	34,715	0
	1944	142	108,765	0	0	8	34,650	134	74,115	0
	1945	158	176,015	1	5,000	10	57,500	147	113,515	1
West Orange	1943	129	90,184	0	0	40	47,739	89	42,445	0
	1944	114	100,421	0	0	14	49,160	100	51,261	0
	1945	201	269,573	21	166,500	22	10,335	158	92,738	21
West Paterson	1943	88	21,572	0	0	23	7,602	65	13,970	0
	1944	86	38,419	4	13,000	16	3,460	66	21,959	4
	1945	96	45,831	5	20,000	29	9,720	62	16,111	5
Westville	1943	11	4,720	0	0	6	2,650	5	2,070	0
	1944	12	11,800	1	2,000	8	8,700	3	1,100	1
	1945	73	36,720	0	0	14	7,565	59	29,155	0
Westwood	1945	48	132,750	13	66,550	14	38,825	21	27,375	14
Wildwood	1943	138	43,894	0	0	1	100	137	43,794	0
	1944	173	402,868	0	0	5	133,835	168	269,033	0
	1945	280	281,540	4	24,000	25	123,475	251	134,065	12
Woodbine	1943	1	25,000	0	0	1	25,000	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	8	9,450	0	0	4	7,350	4	2,100	0
Woodbridge township	1943	294	401,752	49	269,800	163	63,560	82	68,392	80
	1944	189	396,184	21	81,700	101	269,319	67	45,165	21
	1945	356	790,211	59	248,660	159	421,646	138	119,905	56
Woodbury	1943	117	46,080	1	700	6	1,010	110	44,370	1
	1944	115	109,836	1	2,500	4	13,500	110	93,836	1
	1945	161	138,933	2	10,300	11	41,576	148	87,057	2
Woodbury Heights	1943	4	8,650	0	0	1	500	3	8,150	0
	1944	7	8,950	1	7,000	4	1,400	2	550	1
	1945	9	8,650	0	0	3	1,800	6	6,850	0
Wood-Ridge	1943	84	178,911	0	0	23	145,523	61	33,388	0
	1944	106	1,903,792	0	0	13	1,844,450	93	59,342	0
	1945	89	1,907,977	2	14,200	17	1,841,249	70	52,528	2
Woodstown	1943	0	0	0	0	0	0	0	0	0
	1944	3	3,425	1	2,000	1	225	1	1,200	1
	1945	9	23,600	2	7,600	2	7,500	5	8,500	3

* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

MIDDLE ATLANTIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
New York:										
Addison	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	4	$13,000	1	$3,000	2	$9,000	1	$1,000	1
Akron	1943	11	2,818	0	0	9	2,418	2	400	0
	1944	18	15,625	0	0	10	10,025	8	5,600	0
	1945	25	19,661	1	6,000	14	8,906	10	4,755	1
*Albany	1943	1,434	560,265	0	0	11	103,365	1,423	456,900	0
	1944	1,438	727,470	0	0	14	92,561	1,424	634,909	0
	1945	1,993	1,470,844	10	96,900	15	42,100	1,968	1,331,844	11
Alden	1943	1	300	0	0	1	300	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	[1]1945	5	23,500	1	3,500	3	15,000	1	5,000	1
Amityville	1943	34	17,342	0	0	9	8,915	25	8,427	0
	1944	35	29,920	1	3,500	10	8,140	24	18,280	1
	[1]1945	61	106,532	6	32,500	27	43,937	28	30,095	6
*Amsterdam	1943	2	11,500	0	0	1	7,500	1	4,000	0
	1944	9	15,349	0	0	3	1,300	6	14,049	0
	1945	37	227,700	2	7,400	26	205,300	9	15,000	3
Angola	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	[1]1945	0	0	0	0	0	0	0	0	0
Ardsley	1943	6	5,710	0	0	3	4,600	3	1,110	0
	1944	6	4,985	0	0	0	0	6	4,985	0
	[1]1945	27	41,775	1	10,000	3	13,750	23	18,025	1
Attica	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	5	1,700	0	0	4	1,600	1	100	0
*Auburn	1943	286	125,753	1	2,000	21	33,705	264	90,048	1
	1944	238	196,397	0	0	14	85,610	224	110,787	0
	1945	254	617,269	9	37,300	41	391,525	204	188,444	9
Babylon	1943	17	16,110	2	5,000	7	2,620	8	8,490	2
	1944	34	14,515	1	1,500	19	8,845	14	4,170	1
	1945	49	140,994	17	60,300	13	56,850	19	23,844	17
Baldwinsville	1943	30	21,170	1	1,500	8	1,860	21	17,810	1
	1944	24	30,269	2	7,250	8	2,860	14	20,159	2
	[1]1945	39	61,945	5	28,000	14	7,995	20	25,950	5
Batavia	1943	58	26,693	0	0	17	7,415	41	19,278	0
	1944	46	82,061	0	0	13	60,365	33	21,696	0
	1945	112	316,615	9	45,600	49	189,575	54	81,440	9
Beacon	1943	38	12,620	1	2,000	6	1,790	31	8,830	1
	1944	52	130,925	1	1,500	2	117,000	49	12,425	1
	1945	92	28,100	0	0	6	4,000	86	24,100	0
*Binghamton	1943	1,648	721,809	0	0	115	245,670	1,533	476,139	0
	1944	1,452	714,734	1	1,378	68	72,982	1,383	640,374	1
	1945	1,562	3,069,434	33	150,200	110	1,808,568	1,419	1,110,666	33
Blasdell	1943	25	12,525	0	0	16	8,775	9	3,750	0
	1944	12	6,875	0	0	6	1,650	6	5,225	0
	1945	32	500,690	6	36,000	13	459,090	13	5,600	10
Briarcliff Manor	1943	15	10,487	0	0	10	5,730	5	4,757	0
	1944	6	4,498	0	0	4	2,098	2	2,400	0
	1945	15	26,000	1	6,000	7	3,700	7	16,300	1
Brightwaters	1943	2	500	0	0	0	0	2	500	0
	1944	2	780	0	0	1	300	1	480	0
	1945	5	33,300	1	5,500	2	22,000	2	5,800	1
Brockport	1943	6	2,000	0	0	4	1,400	2	600	0
	1944	7	21,600	0	0	5	19,400	2	2,200	0
	[1]1945	28	312,300	0	0	11	304,850	17	7,450	0
Bronxville	1943	3	800	0	0	0	0	3	800	0
	1944	17	40,925	0	0	2	12,500	15	28,425	0
	1945	29	147,931	2	40,000	2	4,631	25	103,300	2
*Buffalo	1943	2,096	6,234,934	468	3,109,661	226	1,473,521	1,402	1,651,752	933
	1944	1,580	3,911,248	51	274,500	207	2,344,616	1,322	1,292,132	61
	1945	2,082	4,596,478	107	681,350	354	1,302,467	1,621	2,612,661	149
Canajoharie	1943	0	0	0	0	0	0	0	0	0
	1944	1	40,000	0	0	1	40,000	0	0	0
	[1]1945	0	0	0	0	0	0	0	0	0
Canisteo	[1]1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
Cattaraugus	1943	1	5,000	0	0	1	5,000	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	2	7,000	0	0	2	7,000	0	0	0
Cazenovia	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	2	7,500	0	0	2	7,500	0	0	0

* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

MIDDLE ATLANTIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
New York—Continued										
Cedarhurst	1943	4	$2,300	0	0	2	$1,150	2	$1,150	0
	1944	8	7,575	0	0	1	500	7	7,075	0
	1945	28	100,885	7	$69,000	1	600	20	31,285	7
Champlain	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Cohoes	1943	1	700	0	0	1	700	0	0	0
	1944	15	5,150	0	0	6	1,425	9	3,725	0
	1945	18	23,225	2	4,700	2	4,550	14	13,975	2
Colonie	1943	317	109,567	0	0	1	5,000	316	104,567	0
	1944	2	1,860	1	1,695	1	165	0	0	1
	1945	3	13,000	3	13,000	0	0	0	0	3
Corinth	1943	0	0	0	0	0	0	0	0	0
	1944	2	5,000	1	2,500	1	2,500	0	0	1
	1945	2	6,000	0	0	2	6,000	0	0	0
Corning	1943	68	22,312	0	0	22	9,737	46	12,575	0
	1944	78	29,526	3	7,500	24	8,010	51	14,016	3
	1945	75	175,626	26	130,100	16	27,075	33	18,451	26
Coxsackie	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	3	5,500	1	5,000	2	500	0	0	1
Croton-on-Hudson	1943	0	0	0	0	0	0	0	0	0
	1944	15	4,700	1	2,500	6	700	8	1,500	1
Depew	1943	59	24,418	4	6,100	36	4,093	19	14,225	4
	1944	43	85,970	5	15,000	17	61,625	21	9,345	5
	1945	77	64,230	7	17,200	39	29,855	31	17,175	7
Deposit	1943	1	300	0	0	0	0	1	300	0
	1944	4	6,900	0	0	3	6,400	1	500	0
Dobbs Ferry	1943	7	2,626	0	0	1	250	6	2,376	0
	1944	8	13,465	0	0	1	500	7	12,965	0
	1945	17	44,660	2	10,000	3	3,260	12	31,400	4
Dolgeville	1943	6	4,200	0	0	2	3,500	4	700	0
	1944	11	14,900	1	1,500	5	8,600	5	4,800	1
	1945	16	11,300	2	5,000	4	1,700	10	4,600	2
Dunkirk	1943	251	159,246	2	4,000	47	24,101	202	131,145	2
	1944	220	60,855	0	0	28	10,075	192	50,780	0
	1945	203	94,067	2	4,000	38	22,480	163	67,587	3
East Aurora	1943	7	950	0	0	4	600	3	350	0
	1944	11	16,950	2	8,100	4	750	5	8,100	1
	1945	34	120,650	4	15,000	19	94,600	11	11,050	5
East Hampton	1943	2	5,500	2	5,500	0	0	0	0	2
	1944	0	0	0	0	0	0	0	0	0
	1945	13	31,000	13	31,000	0	0	0	0	13
East Rochester	1943	12	1,340	0	0	7	855	5	485	0
	1944	13	5,540	1	2,100	4	600	8	2,840	1
	1945	24	40,435	6	20,980	11	18,425	7	1,030	6
East Rockaway	1943	15	5,038	0	0	2	325	13	4,713	0
East Syracuse	1943	13	837,000	0	0	2	823,000	11	14,000	0
	1944	48	882,385	0	0	4	849,350	44	33,035	0
	1945	23	21,300	0	0	3	11,000	20	10,300	0
Elmira	1943	755	2,226,730	466	2,079,400	56	20,919	233	126,411	466
	1944	249	328,484	1	10,000	51	154,762	197	163,722	0
	1945	356	524,850	1	2,800	62	297,575	293	224,475	1
Elmsford	1943	10	2,505	0	0	4	195	6	2,310	0
	1944	11	8,225	0	0	1	100	10	8,125	0
	1945	13	26,350	1	7,000	4	1,350	8	18,000	1
Endicott	1943	105	77,599	1	9,540	24	38,880	80	29,179	1
	1944	99	66,491	2	11,960	13	5,022	84	49,509	2
	1945	158	205,168	9	46,000	34	59,466	115	99,702	12
Fairport	1944	43	7,998	0	0	4	800	39	7,198	0
	1945	37	37,662	6	26,000	3	1,275	28	10,387	6
Falconer	1943	9	1,250	0	0	4	400	5	850	0
	1944	12	1,995	0	0	4	800	8	1,195	0
	1945	10	2,210	0	0	0	0	10	2,210	0
Farmingdale	1943	18	19,186	0	0	10	15,536	8	3,650	0
	1944	17	7,650	0	0	5	1,750	12	5,900	0
	1945	33	76,050	3	18,600	21	50,750	9	6,700	2
Fayetteville	1943	2	1,100	0	0	1	200	1	900	0
	1944	10	26,800	0	0	0	0	10	26,800	0
	1945	9	29,575	1	6,500	4	20,975	4	2,100	1
Floral Park	1943	35	7,614	0	0	4	850	31	6,764	0
	1944	51	15,992	1	2,500	10	4,190	40	9,302	1
	1945	88	58,140	2	14,000	7	1,874	79	42,266	2
Frankfort	1943	0	0	0	0	0	0	0	0	0

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

MIDDLE ATLANTIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
New York—Continued										
Fredonia	1943	10	$1,700	0	0	0	0	10	$1,700	0
	1944	12	2,300	0	0	1	$200	11	2,100	0
	1945	27	75,250	3	$12,000	5	58,100	19	5,150	2
Freeport	1943	113	55,949	0	0	22	7,291	91	48,658	0
	1944	100	96,013	1	1,025	26	47,960	73	47,028	1
	1945	203	425,975	28	180,500	27	98,290	148	147,185	29
Fulton	1943	32	8,960	0	0	13	3,265	19	5,695	0
	1944	32	52,963	0	0	18	22,320	14	30,643	0
	1945	42	1,316,855	4	8,500	18	1,211,030	20	97,325	4
Garden City	1943	60	193,324	0	0	6	143,812	54	49,512	0
	1944	48	35,288	0	0	3	10,000	45	25,288	0
	1945	189	1,094,942	105	894,300	3	81,300	81	119,342	105
Geneseo	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Geneva	1943	263	754,998	250	579,000	10	174,998	3	1,000	250
	1944	6	2,145	0	0	6	2,145	0	0	0
	1945	24	780,251	0	0	17	777,516	7	2,735	0
Glen Cove	1943	127	286,177	1	1,000	15	196,932	111	88,245	1
	1944	70	76,938	0	0	10	4,525	60	72,413	0
	1945	108	259,531	9	94,000	28	82,450	71	83,081	9
Glens Falls	1943	72	40,484	0	0	38	2,685	34	37,799	0
	1944	84	85,524	0	0	21	13,425	63	72,099	0
	1945	93	135,641	6	20,100	21	30,000	66	85,541	5
Gloversville	1943	123	20,924	0	0	46	4,805	77	16,119	0
	1944	68	32,226	0	0	16	14,213	52	18,013	0
	1945	158	152,076	0	0	48	81,275	110	70,801	0
Gouverneur	1943	10	14,400	0	0	3	10,250	7	4,150	0
	1944	8	7,600	1	3,000	1	2,500	6	2,100	1
	1945	34	28,710	1	1,500	10	4,770	23	22,440	1
Gowanda	1943	10	3,200	0	0	7	700	3	2,500	0
	1944	5	1,450	0	0	2	400	3	1,050	0
	1945	24	47,700	3	4,650	14	38,950	7	4,100	3
Granville	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Great Neck	1943	11	2,465	0	0	4	525	7	1,940	0
	1944	34	14,630	0	0	1	500	33	14,130	0
	1945	52	193,300	17	126,000	5	40,600	30	26,700	17
Great Neck Estates	1943	8	1,720	0	0	0	0	8	1,720	0
	1944	5	10,000	0	0	0	0	5	10,000	0
	1945	5	4,600	0	0	1	1,000	4	3,600	0
Hamburg	1943	29	10,560	1	4,000	16	2,750	12	3,810	1
	1944	30	5,012	0	0	6	685	24	4,327	0
	1945	65	173,645	14	90,000	23	49,640	28	34,005	14
Hamilton	1943	1	400	0	0	1	400	0	0	0
	1944	2	2,900	0	0	2	2,900	0	0	0
	1945	4	19,650	3	19,500	0	0	1	150	3
Hastings-on-Hudson	1943	6	1,235	0	0	1	485	5	750	0
Haverstraw	1943	4	1,250	0	0	2	400	2	850	0
Hempstead	1943	69	70,402	15	60,000	10	2,300	44	8,102	15
	1944	70	100,593	1	5,000	4	63,106	65	32,487	2
	1945	177	865,855	70	583,850	23	177,520	84	104,485	105
Hornell	1943	10	4,850	0	0	2	350	8	4,500	0
	1944	14	25,850	0	0	6	15,900	8	9,950	0
	1945	37	89,306	0	0	11	8,225	26	81,081	0
Irondequoit town	1943	53	28,755	3	14,000	26	5,950	24	8,805	3
	1944	84	23,785	0	0	28	7,225	56	16,560	0
	1945	201	442,375	59	312,100	70	48,630	72	81,645	59
Irvington	1943	8	31,859	0	0	4	27,934	4	3,925	0
	1944	9	7,800	0	0	1	4,000	8	3,800	0
Island Park	1943	19	3,505	0	0	0	0	19	3,505	0
	1944	24	40,105	0	0	1	22,800	23	17,305	0
	1945	50	50,670	3	24,500	2	7,300	45	18,870	3
Ithaca	1943	46	131,240	1	10,000	9	12,225	36	109,015	0
	1944	49	135,450	0	0	7	114,150	42	21,300	0
	[1] 1945	55	211,620	4	20,500	19	129,645	32	61,475	4
Jamestown	1943	158	190,994	0	0	23	126,210	135	64,784	0
	1944	177	260,875	0	0	20	23,265	157	237,610	0
	1945	222	414,816	8	38,900	37	117,500	177	258,416	8
Johnson City	1943	349	62,993	0	0	44	8,702	305	54,291	0
	1944	299	1,441,120	5	7,000	41	1,325,453	253	108,667	6
	1945	367	928,798	19	93,900	34	732,762	314	102,136	19

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[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

MIDDLE ATLANTIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
New York—Continued										
Johnstown	1943	18	$10,500	0	0	17	$10,400	1	$100	0
	1944	17	10,450	0	0	14	8,300	3	2,150	0
	1945	45	39,350	0	0	30	26,300	15	13,050	0
Kenmore	1943	144	1,239,931	97	$531,700	12	684,180	35	24,051	180
	1944	55	130,770	20	119,000	14	4,570	21	7,200	36
	1945	89	203,408	21	111,400	28	63,153	40	28,855	24
Kensington	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Kings Point	1943	3	4,775	0	0	1	975	2	3,800	0
Kingston	1943	316	117,459	0	0	45	35,140	271	82,319	0
	1944	281	110,025	0	0	28	5,362	253	104,663	0
	1945	408	294,667	8	40,300	29	74,675	371	179,692	8
Lackawanna	1943	97	1,082,220	42	944,000	31	132,820	24	5,400	232
	1944	49	45,900	0	0	16	7,350	33	38,550	0
	1945	83	133,125	7	29,500	43	88,825	33	14,800	8
Lake Placid	1943	2	1,200	0	0	1	1,000	1	200	0
	1944	2	800	0	0	0	0	2	800	0
	1945	15	125,853	2	80,000	2	12,853	11	33,000	0
Larchmont	1943	25	16,884	0	0	0	0	25	16,884	0
	1944	48	34,830	0	0	2	400	46	34,430	0
	1945	78	60,383	0	0	2	900	76	59,483	0
Le Roy	1943	67	50,200	0	0	2	2,300	65	47,900	0
	1944	57	32,400	0	0	4	7,500	53	24,900	0
	1945	70	33,500	1	6,000	8	4,300	61	23,200	1
Lindenhurst	1943	55	42,826	10	22,300	31	14,923	14	5,603	10
	1945	130	195,476	41	123,000	42	31,780	47	40,696	41
Liverpool	1943	12	2,585	0	0	11	2,285	1	300	0
	1944	5	2,450	0	0	2	550	3	1,900	0
	[1] 1945	26	112,375	18	105,000	3	750	5	6,625	18
Lockport	1943	257	75,380	0	0	22	18,355	235	57,025	0
	1944	212	69,752	3	4,800	36	38,139	173	26,813	3
	1945	189	1,922,623	9	28,000	52	1,846,930	128	47,693	9
Long Beach	1943	146	150,921	0	0	2	80,500	144	70,421	0
	1944	253	216,937	1	7,000	3	5,250	249	204,687	1
	1945	274	780,776	52	455,180	7	60,986	215	264,610	52
Lynbrook	1943	51	20,502	0	0	7	2,845	44	17,657	0
	1944	73	42,973	1	4,500	5	9,850	67	28,623	1
	1945	190	563,591	47	260,500	22	141,200	121	161,891	47
Malone	1943	31	19,450	0	0	10	1,380	21	18,070	0
	1944	35	25,860	3	3,800	14	14,700	18	7,360	3
	1945	21	38,000	1	2,500	6	10,475	14	25,025	1
Malverne	1943	52	9,715	0	0	0	0	52	9,715	0
	1944	45	20,876	1	4,500	1	100	43	16,276	1
	1945	76	240,442	35	220,000	5	10,059	36	10,383	36
Mamaroneck	1943	30	51,860	0	0	18	27,360	12	24,500	0
	1944	21	28,700	0	0	8	25,700	13	3,000	0
	1945	75	223,720	13	92,350	23	94,430	39	36,940	13
Manlius	1943	0	0	0	0	0	0	0	0	0
	1944	6	14,200	2	10,000	1	200	3	4,000	2
	[1] 1945	3	4,000	0	0	0	0	3	4,000	0
Massena	1943	27	20,850	2	4,500	17	11,700	8	4,650	2
	1944	21	20,775	4	8,200	7	3,725	10	8,850	4
	1945	35	41,744	3	8,200	17	21,371	15	12,173	3
Mayville	1943	27	19,285	1	2,500	4	11,350	22	5,435	1
	1944	12	3,367	0	0	1	200	11	3,167	0
	1945	10	4,990	1	1,400	2	2,500	7	1,090	1
Medina	1943	5	69,050	1	68,000	2	650	2	400	0
	1944	8	194,900	0	0	4	189,150	4	5,750	0
	1945	13	8,250	0	0	12	4,750	1	3,500	0
Menands	1943	3	7,900	0	0	1	1,000	2	6,900	0
	1944	6	66,482	0	0	3	66,000	3	482	0
Middletown	1943	75	90,110	0	0	19	3,150	56	86,960	0
	1944	77	72,868	0	0	12	5,175	65	67,693	0
	1945	98	101,822	1	5,500	20	9,560	77	86,762	1
Mineola	1943	60	61,411	0	0	16	37,100	44	24,311	0
	1944	65	191,301	0	0	18	167,575	47	23,726	0
	1945	130	495,236	18	93,500	33	296,890	79	104,846	18
Mohawk	1943	2	1,100	0	0	2	1,100	0	0	0
	1944	3	1,800	0	0	2	800	1	1,000	0
	[1] 1945	4	13,400	0	0	3	5,400	1	8,000	0
Monroe	1943	8	7,380	1	3,200	4	430	3	3,750	1
	1944	14	10,145	0	0	2	1,250	12	8,895	0
	[1] 1945	13	19,695	1	3,500	0	0	12	16,195	1

[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

MIDDLE ATLANTIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
New York—Continued										
Mount Morris	1943	3	$3,560	0	0	1	$500	2	$3,060	0
	1944	3	3,400	0	0	3	3,400	0	0	0
	1945	2	7,000	0	0	0	0	2	7,000	0
*Mount Vernon	1943	127	101,437	0	0	7	3,675	120	97,762	0
	1944	165	133,774	0	0	11	43,624	154	90,150	0
	1945	237	869,015	12	$530,000	17	79,363	208	259,652	211
Munsey Park	1943	2	4,300	0	0	0	0	2	4,300	0
	1944	3	500	0	0	1	200	2	300	0
Nassau	1943	1	75	0	0	1	75	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Newark	1943	19	11,943	0	0	8	7,203	11	4,740	0
	1944	22	45,946	0	0	6	1,771	16	44,175	0
	1945	46	102,325	4	26,000	22	59,575	20	16,750	3
*Newburgh	1943	30	83,866	1	4,000	10	22,600	19	57,266	2
	1944	31	47,225	0	0	16	13,775	15	33,450	0
	1945	51	271,478	3	14,000	22	70,840	26	186,638	4
New Hartford	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	2	10,000	2	10,000	0	0	0	0	2
New Hyde Park	1944	18	8,900	0	0	8	6,246	10	2,654	0
*New Rochelle	1943	134	182,660	0	0	25	98,860	109	83,800	0
	1944	251	166,955	1	3,500	28	13,839	222	149,616	1
	1945	359	963,909	29	260,400	44	155,007	286	548,502	29
*New York City:[4]										
The Bronx	1943	983	2,636,171	4	15,000	69	1,120,493	910	1,500,678	4
	1944	1,209	4,776,302	12	45,900	78	909,936	1,119	3,820,466	17
	1945	546	2,503,674	38	385,300	70	963,014	438	1,155,360	104
Brooklyn	1943	5,434	7,771,086	5	19,700	188	3,183,268	5,241	4,568,118	7
	1944	5,543	15,629,598	2	8,300	330	5,310,317	5,211	10,310,981	2
	1945	1,282	7,260,016	340	2,917,550	145	2,064,708	797	2,277,758	549
Manhattan	1943	1,458	4,092,573	1	4,500	39	1,110,281	1,418	2,977,792	2
	1944	1,863	11,915,539	0	0	62	1,254,313	1,801	10,661,226	0
	1945	1,271	14,828,938	5	2,730,800	69	2,840,569	1,197	9,257,569	389
Queens	1943	2,678	7,582,128	10	52,500	304	4,218,013	2,364	3,311,615	11
	1944	2,832	7,212,531	64	315,300	358	3,203,912	2,410	3,693,319	96
	1945	1,552	9,665,611	698	4,197,750	183	3,915,255	671	1,552,606	735
Richmond	1943	686	3,147,910	9	24,850	59	2,639,440	618	483,620	9
	1944	898	1,867,787	30	95,700	97	970,904	771	801,183	35
	1945	278	831,774	47	231,400	85	220,160	146	380,214	55
*Niagara Falls	1943	2,942	6,406,569	2,332	4,556,842	159	1,534,545	451	315,182	2,448
	1944	719	936,063	21	103,500	145	579,492	553	253,071	21
	1945	924	1,891,448	62	333,221	159	1,192,919	703	365,308	64
North Pelham	1943	14	8,582	0	0	2	550	12	8,032	0
	1944	16	13,574	0	0	3	6,500	13	7,074	0
	1945	22	22,670	1	4,600	4	6,000	17	12,070	1
Northport	1943	11	9,514	0	0	5	4,123	6	5,391	0
	1944	15	60,052	1	2,500	1	200	13	57,352	1
	1945	42	169,465	8	51,000	11	8,250	23	110,215	8
North Syracuse	1943	36	12,530	2	1,800	9	3,635	25	7,095	2
	1944	23	9,375	1	2,500	4	850	18	6,025	1
	1945	33	83,825	15	77,600	6	1,350	12	4,875	15
North Tarrytown	1943	4	3,100	0	0	0	0	4	3,100	0
	1944	2	27,600	0	0	1	25,000	1	2,600	0
	1945	5	584,000	3	34,000	2	550,000	0	0	3
North Tonawanda	1943	312	312,345	8	11,590	164	219,174	140	81,581	8
	1944	282	187,829	45	91,245	90	59,423	147	37,161	25
	1945	365	434,061	15	49,800	156	254,348	194	129,913	15
Northville	1943	4	1,650	0	0	3	850	1	800	0
	1944	2	900	0	0	2	900	0	0	0
	1945	11	2,900	0	0	7	2,150	4	750	0
Norwich	1944	2	4,000	2	4,000	0	0	0	0	2
	1945	19	45,309	2	12,700	11	31,509	6	1,100	2
Oakfield	1943	3	550	0	0	1	200	2	350	0
	1944	4	325	0	0	1	100	3	225	0
	1945	10	25,400	1	800	8	24,450	1	150	1
Ogdensburg	1943	3	800	0	0	2	600	1	200	0
	1944	0	0	0	0	0	0	0	0	0
	1945	7	209,000	3	9,000	1	150,000	3	50,000	3
Old Westbury	1943	13	19,540	0	0	3	3,050	10	16,490	0
	1944	8	9,335	0	0	3	5,865	5	3,470	0
	1945	22	33,590	2	7,900	9	6,900	11	18,790	2

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* In sample of 257 cities. See text and tables, pp. 12 to 16.

[4] Data for 1943 and 1944 are based on applications filed, rather than on permits issued. Large projects which were definitely determined to represent postwar plans have been deleted. Figures for 1945 are based on inspection records and represent work actually started.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

MIDDLE ATLANTIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
New York—Continued										
Olean	1943	27	$76,851	0	0	14	$31,775	13	$45,076	0
	1944	38	217,681	0	0	15	198,441	23	19,240	0
	1945	81	381,965	22	$112,100	20	216,525	39	53,340	22
Oneida	1943	50	106,960	0	0	14	17,220	36	89,740	0
	1944	42	57,896	0	0	12	26,010	30	31,886	0
	1945	42	105,433	0	0	17	94,575	25	10,858	0
Oneonta	1943	5	4,000	0	0	0	0	5	4,000	0
	1944	3	22,542	0	0	1	7,542	2	15,000	0
	1945	7	11,497	0	0	5	5,500	2	5,997	0
Orchard Park	1943	18	4,285	0	0	14	2,735	4	1,550	0
	1944	20	24,990	0	0	9	23,400	11	1,590	0
	1945	19	30,705	2	7,000	15	23,155	2	550	2
Ossining	1943	21	13,090	0	0	11	5,050	10	8,040	0
	1944	22	10,790	0	0	4	650	18	10,140	0
	1945	41	91,800	2	12,000	14	41,300	25	38,500	2
Oswego	1943	142	74,461	0	0	32	30,250	110	44,211	0
	1944	294	133,377	0	0	20	43,475	274	89,902	0
	1945	521	306,675	0	0	37	142,883	484	163,792	0
Owego	1943	18	4,738	0	0	1	60	17	4,678	0
	1944	16	6,175	0	0	7	1,375	9	4,800	0
	[1]1945	40	40,585	0	0	12	9,405	28	31,180	0
Patchogue	1943	37	30,448	3	9,250	16	11,158	18	10,040	3
	1944	28	25,350	2	6,000	12	7,500	14	11,850	2
	1945	49	83,954	4	16,400	17	11,325	28	56,229	4
Peekskill	1943	38	33,350	0	0	7	4,400	31	28,950	0
	1944	34	19,415	0	0	7	5,325	27	14,090	0
	1945	50	198,675	2	6,975	28	170,550	20	21,150	8
Pelham Manor	1943	5	1,505	0	0	0	0	5	1,505	0
	1944	10	22,050	0	0	0	0	10	22,050	0
	1945	23	179,270	9	129,500	6	33,590	8	16,180	8
Penn Yan	1943	9	11,650	0	0	8	11,400	1	250	0
	1944	7	1,250	0	0	7	1,250	0	0	0
	1945	10	79,500	2	5,500	7	71,500	1	2,500	2
Perry	1943	5	1,950	0	0	4	1,550	1	400	0
	1944	7	18,300	1	2,000	6	16,300	0	0	1
	1945	20	23,825	0	0	15	21,225	5	2,600	0
Piermont	1943	3	1,950	0	0	1	700	2	1,250	0
	1944	11	12,075	0	0	5	7,475	6	4,600	0
	1945	1	5,000	1	5,000	0	0	0	0	1
Pittsford Village	1943	13	1,825	0	0	8	855	5	970	0
	1944	14	13,535	0	0	4	700	10	12,835	0
	1945	14	16,890	1	8,000	9	6,290	4	2,600	1
Plattsburg	1943	254	88,962	0	0	14	11,380	240	77,582	0
	1944	217	155,797	1	1,000	22	58,335	194	96,462	1
	1945	255	329,416	8	15,800	24	146,200	223	167,416	5
Pleasantville	1943	10	1,333	0	0	5	508	5	825	0
	1944	24	11,662	1	2,200	3	2,350	20	7,112	1
	1945	28	102,122	1	8,000	4	78,050	23	16,072	1
Port Chester	1943	53	76,115	0	0	7	48,300	46	27,815	0
	1944	51	105,220	0	0	6	49,450	45	55,770	0
	1945	88	347,382	1	6,000	15	237,800	72	103,582	1
Port Henry	1943	2	2,400	0	0	0	0	2	2,400	0
	1944	1	500	0	0	0	0	1	500	0
	1945	6	41,600	0	0	3	35,600	3	6,000	0
Port Jervis	1944	0	0	0	0	0	0	0	0	0
	[1]1945	0	0	0	0	0	0	0	0	0
*Poughkeepsie	1943	56	68,717	4	15,300	11	7,550	41	45,867	4
	1944	107	111,332	0	0	12	18,065	95	93,267	0
	1945	162	2,613,704	55	297,200	29	1,285,781	78	1,030,723	55
Rensselaer	1943	154	137,819	0	0	6	91,150	148	46,669	0
	1944	171	159,637	0	0	6	12,150	165	147,487	0
	1945	161	553,921	1	6,648	7	400,763	153	146,510	1
Rhinebeck	1943	1	4,000	0	0	0	0	1	4,000	0
	1944	1	4,000	0	0	0	0	1	4,000	0
	1945	4	7,000	0	0	0	0	4	7,000	0
Richfield Springs	1943	1	1,500	0	0	0	0	1	1,500	0
	1944	0	0	0	0	0	0	0	0	0
	1945	1	2,000	0	0	0	0	1	2,000	0
*Rochester	1943	1,106	1,482,903	23	84,100	166	732,610	917	666,193	23
	1944	990	1,607,375	0	0	164	917,528	826	689,847	0
	1945	1,621	11,296,454	149	1,258,550	327	8,600,800	1,145	1,437,104	148
Rockville Centre	1943	146	39,854	0	0	6	1,275	140	38,579	0
	1944	188	398,917	0	0	7	287,826	181	111,091	0
	1945	306	1,086,588	47	625,500	9	273,597	250	187,491	102

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* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

MIDDLE ATLANTIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
New York—Continued										
Rouses Point	1943	1	$8,000	0	0	1	$8,000	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Rye	1943	32	76,015	1	$49,000	17	12,950	14	$14,065	0
	1944	25	35,295	0	0	6	1,600	19	33,695	0
	[1] 1945	37	87,725	4	39,500	7	9,200	26	39,025	4
Saratoga Springs	1943	21	23,300	0	0	3	5,000	18	18,300	0
	1944	16	24,300	0	0	3	14,700	13	9,600	0
	[1] 1945	29	51,782	2	9,600	6	9.700	21	32,482	2
Scarsdale	1943	12	11,110	0	0	3	1,380	9	9,730	0
	1944	44	35,965	0	0	7	1,740	37	34,225	0
	1945	70	243,025	6	134,300	18	28,340	46	80,385	6
*Schenectady	1943	946	578,365	1	3,200	77	73,113	868	502,052	1
	1944	953	2,598,825	0	0	67	1,820,993	886	777,832	0
	1945	1,129	2,347,676	5	21,000	93	1,763,426	1,031	563,250	5
Scotia	1943	184	170,060	28	140,000	17	3,325	139	26,735	28
	1944	168	452,322	3	4,395	20	7,895	145	440,032	3
	1945	164	2,236,083	4	13,500	11	2,004,865	149	217,718	4
Sea Cliff	1943	8	905	1	180	4	100	3	625	1
	1944	12	12,425	0	0	1	1,050	11	11,375	0
	1945	22	34,300	0	0	9	23,950	13	10,350	0
Seneca Falls	1943	3	12,500	0	0	3	12,500	0	0	0
	1944	8	10,175	0	0	8	10,175	0	0	0
	1945	14	13,675	0	0	12	8,225	2	5,450	0
Sherman	[1] 1943	4	3,100	0	0	1	500	3	2,600	0
	1944	0	0	0	0	0	0	0	0	0
	1945	4	3,950	0	0	0	0	4	3,950	0
Sherrill	[1] 1943	4	14,275	1	12,000	1	150	2	2,125	5
Silver Creek	1943	0	0	0	0	0	0	0	0	0
	1944	1	4,000	0	0	0	0	1	4,000	0
	1945	12	82,100	2	27,500	3	30,600	7	24,000	2
Sinclairville	1943	1	300	0	0	1	300	0	0	0
	1944	1	50	0	0	1	50	0	0	0
	1945	3	1,700	0	0	0	0	3	1,700	0
Skaneateles	1944	8	2,800	0	0	8	2,800	0	0	0
	1945	8	2,800	0	0	8	2,800	0	0	0
Sloan	1943	25	52,205	13	48,750	2	160	10	3,295	14
	1944	18	6,740	1	2,500	6	975	11	3,265	1
	1945	34	36,020	10	29,000	10	1,715	14	5,305	10
Sodus	1943	0	0	0	0	0	0	0	0	0
Solvay	1943	27	9,920	0	0	7	1,720	20	8,200	0
	1944	27	10,310	0	0	4	1,000	23	9,310	0
	1945	26	10,950	0	0	10	6,500	16	4,450	0
Southampton	1943	8	19,750	0	0	6	3,750	2	16,000	0
	1944	11	29,750	0	0	3	1,100	8	28,650	0
	1945	14	77,000	2	50,000	9	17,000	3	10,000	2
South Dayton	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
South Nyack	1943	7	4,350	0	0	0	0	7	4,350	0
	1944	9	2,625	0	0	3	700	6	1,925	0
	1945	11	7,500	0	0	0	0	11	7,500	0
Spencerport	1943	7	950	0	0	1	150	6	800	0
	1944	1	400	0	0	1	400	0	0	0
	1945	8	22,175	1	7,500	1	12,500	6	2,175	1
Springville	1943	18	6,970	0	0	12	3,185	6	3,785	0
	1944	13	39,462	0	0	3	1,000	10	38,462	0
	1945	17	16,725	1	2,000	7	5,850	9	8,875	1
Stewart Manor	1943	3	455	0	0	0	0	3	455	0
	1944	6	1,125	0	0	0	0	6	1,125	0
	1945	16	26,095	3	19,500	0	0	13	6,595	3
Suffern	[1] 1943	17	21,980	1	1,500	4	1,255	12	19,225	1
	1944	18	19,350	0	0	7	1,800	11	17,550	0
	1945	22	45,373	2	14,500	6	14,125	14	16,748	3
*Syracuse	1943	480	1,238,407	62	239,600	77	551,481	341	447,326	62
	1944	578	1,503,800	22	110,000	80	463,652	476	930,148	22
	1945	839	3,097,430	115	697,500	142	957,014	582	1,442,916	115
Tarrytown	1943	15	10,330	0	0	0	0	15	10,330	0
	1944	14	21,745	0	0	2	345	12	21,400	0
	1945	23	852,100	0	0	3	762,300	20	89,800	0
Thomaston	1943	1	500	0	0	1	500	0	0	0
	1944	5	1,760	0	0	0	0	5	1,760	0
	1945	6	9,525	0	0	2	3,000	4	6,525	0

* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

MIDDLE ATLANTIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
New York—Continued										
Ticonderoga	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Tonawanda	1943	59	$985,752	0	0	33	$960,477	26	$25,275	0
	1944	100	125,305	1	$3,000	41	75,875	58	46,430	1
	1945	118	148,415	4	18,300	43	52,700	71	77,415	4
*Troy	1943	346	148,332	1	6,000	14	23,050	331	119,282	1
	1944	416	265,363	1	4,500	11	28,540	404	232,323	1
	1945	596	443,855	1	35,000	22	155,940	573	252,915	0
Trumansburg	1943	0	0	0	0	0	0	0	0	0
	1944	7	11,500	1	4,000	6	7,500	0	0	1
	1945	6	8,000	2	5,000	1	300	3	2,700	2
Tuckahoe	1943	9	20,601	0	0	2	4,851	7	15,750	0
	1944	10	9,800	0	0	2	1,000	8	8,800	0
	[1] 1945	4	44,000	1	7,500	3	36,500	0	0	1
Tupper Lake	1943	0	0	0	0	0	0	0	0	0
	1944	3	23,000	0	0	1	8,000	2	15,000	0
	1945	5	8,500	0	0	5	8,500	0	0	0
*Utica	1943	51	264,622	0	0	9	74,793	42	189,829	0
	1944	301	1,217,690	187	922,200	48	128,223	66	167,267	187
	1945	175	1,449,846	9	39,300	57	184,902	109	1,225,644	9
Valatie	[1] 1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Valley Stream	1943	63	367,890	0	0	18	361,195	45	6,695	0
	1944	126	78,365	2	6,000	22	27,800	102	44,565	2
	1945	264	645,539	83	483,850	33	53,741	148	107,948	84
Victor	1943	2	125	0	0	1	75	1	50	0
	1944	1	150	0	0	0	0	1	150	0
	[1] 1945	3	1,100	0	0	2	950	1	150	0
Walden	1943	54	10,157	0	0	8	3,050	46	7,107	0
	1944	44	18,231	2	6,500	2	800	40	10,931	2
	1945	58	24,323	1	3,000	3	2,089	54	19,234	1
Walton	1943	0	0	0	0	0	0	0	0	0
	1944	7	7,050	0	0	4	6,700	3	350	0
	1945	12	59,000	3	11,500	6	45,750	3	1,750	4
Warsaw	1943	9	1,550	0	0	2	200	7	1,350	0
	1944	12	43,150	0	0	6	34,200	6	8,950	0
	1945	15	8,825	0	0	11	7,725	4	1,100	0
Waterloo	1943	18	2,390	0	0	1	175	17	2,215	0
	1944	11	1,590	0	0	0	0	11	1,590	0
	1945	6	8,000	0	0	2	2,200	4	5,800	0
*Watertown	1943	472	426,430	56	308,000	32	7,592	384	110,838	56
	1944	375	198,821	0	0	41	18,220	334	180,601	0
	1945	377	249,370	7	17,000	59	43.302	311	189,068	7
Watervliet	1943	32	15,800	0	0	3	225	29	15,575	0
	1944	33	12,630	0	0	7	1,500	26	11,130	0
	1945	35	42,926	0	0	6	34,800	29	8,126	0
Waverly	1943	2	10,000	0	0	0	0	2	10,000	0
	1944	3	5,200	0	0	2	5,000	1	200	0
	1945	5	10,000	0	0	0	0	5	10,000	0
Wayland	1943	0	0	0	0	0	0	0	0	0
	1944	1	200	1	200	0	0	0	0	1
	1945	0	0	0	0	0	0	0	0	0
Webster	1943	8	9,535	0	0	3	325	5	9,210	0
	1944	9	4,950	0	0	1	200	8	4,750	0
	1945	6	33,000	0	0	2	31,500	4	1,500	0
Weedsport	1943	1	1,500	0	0	0	0	1	1,500	0
	1944	1	200	0	0	1	200	0	0	0
	1945	3	12,000	2	8,000	1	4,000	0	0	2
Westfield	1943	4	27,700	0	0	2	26,250	2	1,450	0
	1944	11	11,100	0	0	7	9,550	4	1,550	0
	1945	9	149,650	1	3,000	7	146,400	1	250	1
West Haverstraw	1943	9	2,850	0	0	4	350	5	2,500	0
	1944	12	1,700	1	1,200	11	500	0	0	1
	1945	4	33,500	0	0	4	33,500	0	0	0
Whitehall	1943	13	2,000	0	0	4	450	9	1,550	0
	1944	8	1,195	0	0	2	600	6	595	0
	1945	16	39,040	0	0	5	31,975	11	7,065	0
White Plains	1943	84	32,908	0	0	23	8,650	61	24,258	0
	1944	193	94,530	0	0	17	15,676	176	78,854	0
	1945	236	466,646	10	70,500	38	183,800	188	212,346	10
Williamsville	1943	47	94,010	20	86,600	16	5,970	11	1,440	31
	1944	17	41,495	3	17,300	11	20,920	3	3,275	4
	1945	42	115,485	8	49,500	20	53,675	14	12,310	8

* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

MIDDLE ATLANTIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
New York—Continued										
Williston Park	1943	25	$11,686	0	0	16	$3,171	9	$8,515	0
	1944	21	7,055	0	0	10	2,450	11	4,605	0
	1945	50	121,518	14	$71,000	13	33,975	23	16,543	14
Wilson	1943	2	575	0	0	1	350	1	225	0
	1944	2	750	0	0	2	750	0	0	0
	1945	4	32,500	2	8,500	2	24,000	0	0	2
*Yonkers	1943	310	322,155	0	0	58	91,306	252	230,849	0
	1944	320	514,320	2	5,500	55	226,275	263	282,545	2
	1945	506	1,281,103	42	363,000	110	305,785	354	612,318	66
Pennsylvania:										
Abington township	1943	302	134,139	4	14,700	46	32,503	252	86,936	4
	1944	289	109,378	2	1,200	35	22,481	252	85,697	2
	1945	360	376,487	17	119,350	55	79,129	288	178,008	17
Adamstown	1945	0	0	0	0	0	0	0	0	0
Aldan	1943	12	5,875	0	0	2	450	10	5,425	0
	1944	19	3,788	0	0	5	1,218	14	2,570	0
	1945	26	21,375	2	12,200	4	4,390	20	4,785	2
*Allentown	1943	665	2,113,264	416	1,289,550	45	315,350	204	508,364	416
	1944	541	1,889,768	280	1,191,800	48	314,825	213	383,143	391
	1945	482	1,657,834	24	85,700	79	791,225	379	780,909	24
*Altoona	1943	1,811	368,261	1	900	267	57,753	1,543	309,608	1
	1944	1,817	406,236	1	200	125	90,950	1,691	315,086	1
	1945	1,825	728,350	8	36,500	134	225,138	1,683	466,712	8
Ambridge	1943	75	348,740	62	308,000	5	29,575	8	11,165	62
	1944	14	16,350	1	3,500	6	1,600	7	11,250	1
	1945	26	114,299	7	68,000	9	26,100	10	20,199	5
Apollo	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Arnold	1943	118	65,911	8	32,100	1	175	109	33,636	8
	1944	96	37,050	1	4,000	2	385	93	32,665	1
	1945	137	68,725	4	11,500	6	1,650	127	55,575	4
Aspinwall	1943	4	3,100	0	0	1	500	3	2,600	0
	1944	5	3,900	0	0	0	0	5	3,900	0
	1945	18	57,424	0	0	3	23,645	15	33,779	0
Auburn	1945	0	0	0	0	0	0	0	0	0
Avalon	1943	6	12,900	0	0	2	650	4	12,250	0
	1944	8	6,300	0	0	0	0	8	6,300	0
	1945	13	12,035	0	0	7	9,500	6	2,535	0
Avis	1943	5	2,700	0	0	2	300	3	2,400	0
	1944	2	300	0	0	2	300	0	0	0
	1945	8	2,300	1	900	7	1,400	0	0	1
Baden	1943	32	84,720	17	82,500	13	1,720	2	500	17
Bangor	1943	1	25,000	0	0	0	0	1	25,000	0
	1944	3	8,000	0	0	1	1,000	2	7,000	0
	1945	5	64,600	1	1,100	4	63,500	0	0	1
Beaver	1945	9	14,250	1	12,000	8	2,250	0	0	1
Beaver Falls	1945	23	74,457	1	1,500	14	62,914	8	10,043	1
Bedford	1943	1	150	0	0	1	150	0	0	0
	1944	7	19,650	0	0	6	17,650	1	2,000	0
	1945	4	7,790	0	0	2	4,000	2	3,790	0
Bellefonte	1943	2	1,500	0	0	2	1,500	0	0	0
	1944	4	46,000	1	25,000	1	500	2	20,500	0
	1945	6	41,350	3	25,350	3	16,000	0	0	10
Bellevue	1943	40	209,825	20	178,000	4	3,400	16	28,425	80
	1944	17	27,622	1	3,000	1	6,995	15	17,627	1
	1945	34	30,284	0	0	1	850	33	29,434	0
Berlin	1943	2	600	0	0	2	600	0	0	0
	1944	6	4,850	1	2,500	5	2,350	0	0	1
	1945	6	14,000	1	7,500	4	3,500	1	3,000	1
Berwick	1943	79	38,898	9	14,550	23	5,588	47	18,760	10
	1944	69	39,554	0	0	21	20,496	48	19,058	0
	1945	87	356,005	10	24,135	35	291,075	42	40,795	9
*Bethlehem	1943	535	1,545,070	391	1,247,428	38	131,412	106	166,230	410
	1944	95	482,703	3	40,100	26	301,154	66	141,449	2
	1945	148	788,145	33	219,900	33	316,700	82	251,545	33
Birdsboro	1943	53	2,510	0	0	1	200	52	2,310	0
	1944	55	5,306	0	0	0	0	55	5,306	0
	1945	55	2,310	0	0	2	400	53	1,910	0
Blairsville	1943	3	2,100	0	0	0	0	3	2,100	0
	1945	23	35,120	5	6,700	9	24,600	9	3,820	3
Bloomsburg	1943	66	63,855	13	7,675	7	38,950	46	17,230	14
	1944	103	75,902	4	8,500	12	37,650	87	29,752	4
	1945	96	254,725	2	6,000	22	208,150	72	40,575	2

* In sample of 257 cities. See text and tables, pp. 12 to 16.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

MIDDLE ATLANTIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Pennsylvania—Continued										
Boyertown	1943	21	$62,030	1	$20,000	5	$10,355	15	$31,675	1
	1944	17	26,635	0	0	5	4,335	12	22,300	0
	1945	38	74,690	1	4,500	10	9,350	27	60,840	1
Braddock	1943	8	30,400	1	4,500	3	16,500	4	9,400	1
	1944	14	1,459,125	0	0	2	1,446,000	12	13,125	0
	1945	21	42,492	0	0	4	18,400	17	24,092	0
Bradford	1943	241	51,784	0	0	17	1,260	224	50,524	0
	1944	228	187,746	0	0	12	56,625	216	131,121	0
	1945	287	293,458	10	56,500	17	12,075	260	224,883	10
Brentwood	1943	2	11,000	1	6,000	0	0	1	5,000	1
	1944	5	29,000	0	0	3	27,000	2	2,000	0
	1945	36	233,000	28	210,600	3	16,600	5	5,800	30
Bridgeport	1943	61	152,850	0	0	5	112,500	56	40,350	0
	1944	40	56,400	0	0	1	900	39	55,500	0
	1945	63	75,420	4	17,000	4	34,600	55	23,820	5
Bristol	1943	72	646,645	56	167,000	9	462,545	7	17,100	56
	1944	19	340,850	1	34,000	5	230,700	13	76,150	0
	1945	21	41,292	1	2,500	9	11,292	11	27,500	1
Brockway	1943	3	1,000	0	0	3	1,000	0	0	0
	1944	4	1,300	0	0	4	1,300	0	0	0
	1945	3	9,100	0	0	3	9,100	0	0	0
Butler	1943	20	106,233	0	0	4	1,200	16	105,033	0
	1944	83	347,388	1	60,000	12	174,357	70	113,031	24
	1945	119	565,372	2	14,000	31	358,026	86	193,346	2
Camp Hill	1943	11	11,225	0	0	0	0	11	11,225	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Canonsburg	1943	12	5,523,805	3	15,000	6	5,500,255	3	8,550	3
	1944	17	3,421,350	2	700	12	3,419,600	3	1,050	1
	1945	10	21,200	0	0	8	18,900	2	2,300	0
Carlisle	1943	67	36,582	3	4,400	15	4,775	49	27,407	3
	1944	112	180,717	1	200	30	101,300	81	79,217	1
	1945	141	240,531	22	71,000	35	104,365	84	65,166	22
Castle Shannon	1943	2	5,300	2	5,300	0	0	0	0	2
	1944	3	2,000	0	0	1	500	2	1,500	0
	1945	18	40,050	3	13,000	4	17,950	11	9,100	3
Catasauqua	1943	9	77,400	0	0	2	500	7	76,900	0
	1944	6	81,159	1	4,500	1	50,000	4	26,659	1
	1945	6	62,250	0	0	4	60,250	2	2,000	0
Catawissa	1943	1	200	1	200	0	0	0	0	1
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Centerville	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	9	12,985	0	0	0	0	9	12,985	0
Chambersburg	1943	25	92,500	13	68,000	9	10,700	3	13,800	13
	1944	225	1,291,170	214	668,400	7	56,363	4	566,407	214
	1945	22	244,214	6	25,200	13	195,125	3	23,889	7
Charleroi	1943	1	800	0	0	0	0	1	800	0
	1944	7	24,000	0	0	2	20,200	5	3,800	0
	1945	4	38,400	0	0	3	37,800	1	600	0
Cheltenham township	1943	178	682,988	33	600,000	23	13,170	122	69,818	132
	1944	143	178,708	6	50,000	16	51,865	121	76,843	24
	1945	217	447,718	15	170,650	12	81,200	190	195,868	15
*Chester	1943	332	1,238,434	292	939,596	11	252,550	29	46,288	310
	1944	48	181,222	2	3,000	15	109,845	31	68,377	2
	1945	100	675,682	12	55,550	29	467,975	59	152,157	13
Cheswick	1943	7	4,353	0	0	3	118	4	4,235	0
	1944	2	2,500	0	0	0	0	2	2,500	0
Clairton	1943	193	119,962	0	0	36	5,450	157	114,512	0
	1944	265	92,354	12	22,215	44	14,880	209	55,259	7
	1945	245	221,307	14	70,000	26	47,633	205	103,674	15
Clarendon	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Coalport	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Coatesville	1943	44	22,795	0	0	6	2,000	38	20,795	0
	1944	93	78,657	0	0	9	27,250	84	51,407	0
	1945	72	109,240	0	0	8	10,050	64	99,190	0
Collingdale	1944	15	5,150	0	0	11	3,640	4	1,510	0
	1945	19	18,850	4	14,000	13	3,250	2	1,600	4
Colwyn	1943	10	8,773	0	0	4	169	6	8,604	0
	1944	10	18,405	0	0	7	2,135	3	16,270	0
	1945	15	26,845	0	0	7	6,170	8	20,675	0

* In sample of 257 cities. See text and tables, pp. 12 to 16.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

MIDDLE ATLANTIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Pennsylvania—Continued										
Connellsville	1943	7	$3,220	0	0	0	0	7	$3,220	0
	1944	22	6,620	0	0	7	$2,475	15	4,145	0
	1945	45	90,832	5	$9,700	30	66,780	10	14,352	5
Conshohocken	1943	154	178,231	33	146,190	23	6,108	98	25,933	33
	1944	126	87,865	0	0	12	1,741	114	86,124	0
	1945	139	59,515	2	5,500	7	1,190	130	52,825	2
Coopersburg	1943	1	250	0	0	1	250	0	0	0
	1944	5	4,230	0	0	5	4,230	0	0	0
	1945	7	7,750	0	0	5	6,850	2	900	0
Coraopolis	1943	2	47,961	0	0	2	47,961	0	0	0
	1944	3	31,985	0	0	2	27,000	1	4,985	0
	1945	1	18,000	0	0	1	18,000	0	0	0
Corry	1944	18	28,860	0	0	11	4,210	7	24,650	0
	1945	25	280,460	2	11,000	11	253,900	12	15,560	2
Crafton	1943	36	140,715	17	127,000	4	475	15	13,240	40
	1944	20	14,526	1	5,000	3	798	16	8,728	2
	1945	19	47,200	1	7,000	7	27,750	11	12,450	1
Cressona	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
Curwensville	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	2	11,000	0	0	1	10,000	1	1,000	0
Dallas	1943	2	1,250	0	0	1	1,000	1	250	0
	1944	3	2,400	0	0	0	0	3	2,400	0
	1945	27	15,520	1	1,000	0	0	26	14,520	1
Darby	1943	663	1,946,225	644	1,932,000	1	250	18	13,975	644
	1944	88	224,265	59	177,000	5	33,540	24	13,725	59
	1945	96	179,422	39	117,000	10	16,055	47	46,367	39
Denver	1943	14	2,985	0	0	0	0	14	2,985	0
	1944	18	2,525	0	0	1	200	17	2,325	0
	1945	21	15,400	1	3,000	1	1,500	19	10,900	0
Donora	1943	21	7,500	0	0	2	800	19	6,700	0
	1944	26	15,600	1	3,500	1	300	24	11,800	1
	1945	28	20,375	1	2,000	4	10,000	23	8,375	1
Dormont	1943	21	30,810	3	19,500	2	3,200	16	8,110	6
	1944	12	27,957	0	0	5	17,617	7	10,340	0
	1945	9	16,470	2	9,000	3	1,270	4	6,200	2
Downingtown	1943	30	8,732	0	0	7	948	23	7,784	0
	1944	20	27,652	0	0	5	16,350	15	11,302	0
	1945	28	47,084	0	0	7	40,675	21	6,409	0
Doylestown	1943	40	43,080	0	0	10	30,150	30	12,930	0
	1944	45	33,545	0	0	4	3,700	41	29,845	0
	1945	61	95,669	3	10,750	13	61,569	45	23,350	3
Du Bois	1943	8	4,029	0	0	0	0	8	4,029	0
	1944	16	83,250	0	0	2	8,500	14	74,750	0
	1945	31	99,960	0	0	3	33,500	28	66,460	0
Duboistown	1943	1	2,600	1	2,600	0	0	0	0	1
	1944	4	575	0	0	2	175	2	400	0
	1945	16	5,220	0	0	6	3,570	10	1,650	0
Duncannon	1943	1	30	0	0	1	30	0	0	0
	1944	3	2,300	0	0	1	2,000	2	300	0
	1945	2	275	0	0	1	75	1	200	0
Duquesne	1943	172	324,522	51	235,700	4	8,475	117	80,347	51
	1944	82	380,267	1	5,000	7	351,730	74	23,537	1
	1945	115	182,925	9	100,000	11	36,460	95	46,465	36
East Berlin	1943	6	4,960	0	0	1	1,500	5	3,460	0
	1944	9	2,305	0	0	5	2,195	4	110	0
	1945	11	7,970	0	0	2	6,500	9	1,470	0
East Lansdowne	1943	14	4,577	0	0	0	0	14	4,577	0
	1944	9	1,555	0	0	0	0	9	1,555	0
	1945	21	21,210	1	3,500	2	6,000	18	11,710	1
East McKeesport	1943	2	3,500	2	3,500	0	0	0	0	2
	1944	0	0	0	0	0	0	0	0	0
	1945	7	10,450	1	4,000	2	5,000	4	1,450	1
*Easton	1943	158	130,600	0	0	19	10,260	139	120,340	0
	1944	121	146,058	0	0	11	41,075	110	104,983	0
	1945	121	910,657	0	0	10	537,300	111	373,357	0
East Pittsburgh	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
East Stroudsburg	1943	0	0	0	0	0	0	0	0	0
	1944	7	4,350	0	0	4	1,300	3	3,050	0
	1945	9	18,150	3	3,800	5	13,650	1	700	3

* In sample of 257 cities. See text and tables, pp. 12 to 16.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

MIDDLE ATLANTIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Pennsylvania—Continued										
Eddystone	1943	9	$1,480	0	0	3	650	6	$830	0
	1944	4	10,193	0	0	0	0	4	10,193	0
	1945	13	87,710	0	0	4	$69,400	9	18,310	0
Edgewood	1943	2	17,000	1	$16,000	0	0	1	1,000	7
	1944	0	0	0	0	0	0	0	0	0
	1945	3	172,150	1	12,000	1	160,000	1	150	2
Edgeworth	1943	8	23,600	2	16,050	3	4,250	3	3,300	2
	1944	3	27,100	0	0	2	26,100	1	1,000	0
	1945	7	17,700	1	6,000	3	1,700	3	10,000	1
Elizabethtown	1943	4	5,200	0	0	2	1,000	2	4,200	0
	1944	1	750	0	0	0	0	1	750	0
	1945	8	86,400	2	18,000	4	67,000	2	1,400	2
Elizabethville	1943	0	0	0	0	0	0	0	0	0
	1944	1	100	1	100	0	0	0	0	1
	1945	4	725	2	475	2	250	0	0	3
Ellwood City	1945	32	57,850	4	14,500	13	29,300	15	14,050	4
Emmaus	1943	31	110,125	16	83,000	11	6,825	4	20,300	17
	1944	38	113,700	16	79,000	10	13,400	12	21,300	16
	1945	57	187,965	14	90,300	28	17,665	15	80,000	14
Emsworth	1943	4	61,800	1	5,000	2	54,500	1	2,300	0
	1944	17	98,600	17	98,600	0	0	0	0	34
	1945	2	12,500	1	7,500	1	5,000	0	0	2
Ephrata	1943	27	7,383	0	0	6	1,901	21	5,482	0
	1944	28	35,410	0	0	4	13,430	24	21,980	0
	1945	36	47,380	4	28,500	5	8,125	27	10,755	7
*Erie	1943	800	4,721,585	154	861,152	173	3,398,674	473	461,759	302
	1944	614	1,093,662	59	171,948	116	69,023	439	852,691	61
	1945	796	2,151,712	87	315,300	130	476,476	579	1,359.936	97
Etna	1943	1	5,000	0	0	1	5,000	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	1	9,500	0	0	1	9,500	0	0	0
Exeter	1943	3	1,100	0	0	1	400	2	700	0
	1944	9	20,200	0	0	5	3,900	4	16,300	0
	1945	6	5,560	1	2,400	2	660	3	2,500	1
Farrell	1943	2	2,189	0	0	1	200	1	1,989	0
	1944	164	675,174	151	653,128	10	3,996	3	18,050	151
	1945	9	14,830	4	13,500	5	1,330	0	0	3
Fayette City	1943	2	1,800	0	0	0	0	2	1,800	0
	1944	0	0	0	0	0	0	0	0	0
	1945	1	700	0	0	0	0	1	700	0
Folcroft	1945	18	50,435	0	0	4	40,100	14	10,335	0
Ford City	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	4	8,000	4	8,000	0	0	0	0	3
Forest Hills	1943	26	103,850	14	84,000	4	1,500	8	18,350	14
	1944	19	83,505	1	3,000	2	13,100	16	67,405	0
	1945	34	56,555	6	46,500	10	3,605	18	6,450	9
Forty Fort	1943	7	2,056	0	0	3	565	4	1,491	0
	1944	6	3,875	0	0	3	1,525	3	2,350	0
	1945	17	86,740	4	25,500	11	58,540	2	2,700	4
Fountain Hill	1943	19	84,683	3	8,175	2	350	14	76,158	3
	1944	16	69,200	8	45,000	5	22,500	3	1,700	8
	1945	11	41,100	6	33,100	2	1,700	3	6,300	6
Fox Chapel	1943	2	300	0	0	1	100	1	200	0
	1944	0	0	0	0	0	0	0	0	0
	1945	4	34,900	3	34,500	1	400	0	0	3
Girardville	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Glassport	1943	81	399,085	29	136,200	6	240,650	46	22,235	29
	1944	41	24,583	1	2,000	0	0	40	22,583	1
	1945	52	66,369	10	49,500	4	2,705	38	14,164	10
Greencastle	1943	4	9,400	2	6,000	1	400	1	3,000	2
	1944	2	5,500	1	2,500	0	0	1	3,000	1
	1945	1	4,500	0	0	1	4,500	0	0	0
Greensburg	1943	6	37,600	1	3,000	1	5,000	4	29,600	1
	1944	8	13,400	2	1,400	1	400	5	11,600	1
	1945	18	84,300	6	30,800	4	15,300	8	38,200	6
Greentree	1944	5	18,850	3	17,000	0	0	2	1,850	3
Greenville	1943	39	92,011	0	0	12	78,948	27	13,063	0
	1944	53	172,460	0	0	9	154,800	44	17,660	0
	1945	49	57,664	3	8,200	13	25,550	33	23,914	3
Grove City	1943	63	242,330	60	240,000	3	2,330	0	0	60
	1944	16	62,200	12	60,000	4	2,200	0	0	12

* In sample of 257 cities. See text and tables, pp. 12 to 16.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

MIDDLE ATLANTIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Pennsylvania—Continued										
Halifax	1943	1	$175	0	0	1	$175	0	0	0
	1944	2	700	0	0	2	700	0	0	0
	1945	1	200	0	0	1	200	0	0	0
Hallstead	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Hamburg	1944	1	500	0	0	0	0	1	$500	0
	1945	3	128,500	1	$2,800	2	125,700	0	0	3
*Harrisburg	1943	326	867,377	119	440,200	9	51,533	198	375,644	119
	1944	298	1,969,584	116	478,800	15	904,716	167	586,068	115
	1945	310	865,791	8	60,800	25	327,231	277	477,760	12
Hatboro	1943	162	343,058	90	320,850	1	200	71	22,008	90
	1944	153	427,846	114	399,000	8	3,100	31	25,746	114
	1945	71	102,915	4	27,967	14	43,043	53	31,905	6
Hatfield	1943	12	4,405	0	0	6	2,610	6	1,795	0
	1944	5	1,725	0	0	1	200	4	1,525	0
	1945	13	72,950	5	29,250	1	38,000	7	5,700	12
Haverford township	1943	300	308,703	50	201,000	5	1,210	245	106,493	50
	1944	282	108,226	1	8,500	7	2,150	274	97,576	1
	1945	468	433,549	26	223,250	25	19,675	417	190,624	26
*Hazleton	1943	26	11,611	0	0	11	8,900	15	2,711	0
	1944	34	76,835	1	3,000	19	52,890	14	20,945	1
	1945	54	162,435	4	33,000	30	97,960	20	31,475	10
Highspire	1943	1	1,000	1	1,000	0	0	0	0	1
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Hughesville	1943	5	6,925	0	0	1	200	4	6,725	0
	1944	1	200	0	0	0	0	1	200	0
	1945	1	1,500	0	0	0	0	1	1,500	0
Hummelstown	1943	4	3,900	1	2,000	3	1,900	0	0	1
	1944	8	6,200	1	3,500	6	2,200	1	500	1
	1945	7	10,900	3	9,000	4	1,900	0	0	3
Huntingdon	1943	34	493,475	0	0	3	486,000	31	7,475	0
	1944	44	29,470	0	0	0	0	44	29,470	0
	1945	93	74,600	0	0	7	7,350	86	67,250	0
Indiana	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	1	500	0	0	1	500	0	0	0
Ingram	1943	24	90,250	13	88,000	11	2,250	0	0	25
	1944	8	5,650	1	4,000	7	1,650	0	0	1
	1945	2	9,800	2	9,800	0	0	0	0	2
Jeannette	1943	39	16,795	1	300	15	3,170	23	13,325	1
	1944	33	19,660	1	200	12	3,885	20	15,575	1
	1945	46	111,005	13	31,050	13	64,800	20	15,155	13
Jenkintown	1943	20	13,913	0	0	1	1,500	19	12,413	0
	1944	33	15,425	0	0	0	0	33	15,425	0
	1945	41	71,576	0	0	6	35,900	35	35,676	0
Jersey Shore	1943	16	48,425	0	0	10	7,825	6	40,600	0
	1944	21	29,464	0	0	12	23,284	9	6,180	0
	1945	24	25,600	1	2,000	18	12,900	5	10,700	1
Johnstown	1943	378	174,571	1	2,000	83	45,668	294	126,903	1
	1944	318	578,869	1	5,000	38	377,849	279	196,020	1
	1945	477	850,731	4	16,000	87	487,640	386	347,091	5
Kennett Square	1943	26	8,235	0	0	0	0	26	8,235	0
	1944	23	29,985	0	0	8	19,250	15	10,735	0
	1945	32	78,040	2	9,400	5	35,700	25	32,940	2
Kingston	1943	24	9,488	0	0	8	1,280	16	8,208	0
	1944	29	27,215	0	0	11	23,145	18	4,070	0
	1945	36	391,120	4	167,000	14	172,895	18	51,225	3
Knox	1943	1	500	0	0	0	0	1	500	0
	1944	4	62,925	1	2,500	1	125	2	60,300	1
	1945	7	6,850	0	0	0	0	7	6,850	0
Kulpmont	1943	1	5,000	0	0	0	0	1	5,000	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Kutztown	1943	0	0	0	0	0	0	0	0	0
	1944	1	15,000	0	0	1	15,000	0	0	0
	1945	2	25,000	1	10,000	1	15,000	0	0	1
*Lancaster	1943	428	554,469	48	163,600	11	115,825	369	275,044	48
	1944	556	432,140	30	135,000	2	2,500	524	294,640	30
	1945	618	638,387	11	98,500	28	170,585	579	369,302	17
Lansdale	1943	67	237,545	0	0	26	210,350	41	27,195	0
	1944	73	44,064	0	0	20	22,650	53	21,414	0
	1945	92	469,830	7	33,000	40	403,035	45	33,795	12

* In sample of 257 cities. See text and tables, pp. 12 to 16.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

MIDDLE ATLANTIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Pennsylvania—Continued										
Lansdowne	1943	51	$78,780	0	0	7	$13,385	44	$65,395	0
	1944	0	0	0	0	0	0	0	0	0
Lansford	1943	1	40,000	0	0	1	40,000	0	0	0
	1944	3	18,600	0	0	1	100	2	18,500	0
	1945	5	19,600	1	$8,000	0	0	4	11,600	1
Laureldale	1943	85	38,271	1	3,800	2	17,900	82	16,571	1
	1944	76	17,379	0	0	13	6,075	63	11,304	0
	1945	124	56,879	4	10,900	5	20,225	115	25,754	4
Lebanon	1943	59	289,700	39	191,000	12	83,300	8	15,400	39
	1944	7	95,500	0	0	4	88,000	3	7,500	0
	1945	35	115,100	1	10,000	16	68,000	18	37,100	1
Lehighton	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Liberty	1943	24	12,080	1	6,000	7	1,030	16	5,050	1
	1944	13	16,985	4	14,500	8	1,985	1	500	4
	1945	24	32,650	4	13,300	16	18,625	4	725	4
Ligonier	1945	0	0	0	0	0	0	0	0	0
Lititz	1943	19	9,900	2	2,700	5	2,500	12	4,700	2
	1944	13	4,000	0	0	2	550	11	3,450	0
	1945	35	60,625	8	46,000	5	1,850	22	12,775	8
Littlestown	1943	0	0	0	0	0	0	0	0	0
	1944	3	450	0	0	0	0	3	450	0
Lock Haven	1943	25	64,390	2	28,737	5	8,700	18	26,953	1
	1944	46	100,387	1	5,000	10	35,440	35	59,947	1
	1945	102	253,640	5	25,000	20	126,235	77	102,405	5
Lower Merion township	1943	457	429,123	0	0	74	64,730	383	364,393	0
	1944	381	318,785	1	15,000	30	35,618	350	268,167	4
	1945	635	2,816,472	60	1,926,300	48	229,475	527	660,697	247
McDonald	1943	1	500	0	0	0	0	1	500	0
	1944	3	2,100	0	0	2	1,300	1	800	0
	1945	11	17,300	1	2,500	8	9,600	2	5,200	1
*McKeesport	1943	694	426,847	24	148,750	20	5,035	650	273,062	39
	1944	564	195,097	4	11,500	10	25,950	550	157,647	4
	1945	601	520,735	9	56,950	30	207,945	562	255,840	9
McKees Rocks	1943	7	33,950	4	33,000	2	650	1	300	14
	1944	6	34,550	0	0	5	29,550	1	5,000	0
	1945	9	190,200	0	0	3	108,000	6	82,200	0
McSherrystown	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Mahanoy City	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Malvern	1943	3	1,350	0	0	1	500	2	850	0
	1944	3	1,650	0	0	2	650	1	1,000	0
	1945	7	4,750	0	0	2	2,400	5	2,350	0
Manchester	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Manheim	1943	2	450	0	0	0	0	2	450	0
	1944	3	16,750	0	0	1	8,000	2	8,750	0
	1945	7	20,800	0	0	1	17,000	6	3,800	0
Marcus Hook	1943	23	1,963,351	0	0	9	1,736,000	14	227,351	0
	1944	39	329,950	0	0	13	242,673	26	87,277	0
	1945	46	443,535	1	5,000	25	409,850	20	28,685	2
Marietta	1943	4	600,300	0	0	3	600,000	1	300	0
	1944	1	3,000	0	0	0	0	1	3,000	0
	1945	0	0	0	0	0	0	0	0	0
Matamoras	1943	0	0	0	0	0	0	0	0	0
	1945	1	200	0	0	1	200	0	0	0
Mauch Chunk	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Meadville	1943	310	455,931	165	405,299	7	1,200	138	49,432	165
	1944	125	82,874	0	0	10	27,950	115	54,924	0
	1945	177	367,063	5	35,000	14	108,500	158	223,563	5
Mechanicsburg	1943	33	20,480	0	0	11	5,900	22	14,580	0
	1944	28	19,050	2	7,500	6	1,150	20	10,400	7
	1945	64	2,593,189	4	1,250	17	2,569,714	43	22,225	2
Media	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	27	58,800	7	30,000	4	1,300	16	27,500	7

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APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

MIDDLE ATLANTIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Pennsylvania—Continued										
Mercer	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Meyersdale	1943	0	0	0	0	0	0	0	0	0
	1944	6	$3,200	1	$300	4	$2,700	1	$200	1
	1945	6	25,000	0	0	6	25,000	0	0	0
Middletown	1943	25	1,350,731	1	5,000	15	1,189,250	9	156,481	1
	1944	39	337,220	27	200,390	3	111,550	9	25,280	52
	1945	19	281,848	7	24,000	8	32,452	4	225,396	7
Millersburg	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
Millvale	1945	0	0	0	0	0	0	0	0	0
Milton	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Minersville	1944	80	24,945	0	0	0	0	80	24,945	0
	1945	0	0	0	0	0	0	0	0	0
Mohnton	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	1	3,500	1	3,500	0	0	0	0	1
Monaca	1943	68	12,765	2	600	42	6,350	24	5,815	2
	1944	40	30,290	5	9,500	13	12,025	22	8,765	5
	1945	50	49,867	9	21,400	24	2,792	17	25,675	9
Monessen	1943	26	280,827	2	6,000	15	272,475	9	2,352	2
	1944	27	294,839	0	0	13	281,875	14	12,964	0
	1945	26	35,970	6	18,600	6	9,720	14	7,650	6
Monongahela	1943	30	5,955	0	0	9	1,515	21	4,440	0
	1944	34	13,865	1	4,000	13	4,700	20	5,165	1
	1945	51	44,670	6	21,200	7	1,900	38	21,570	6
Moosic	1943	1	150	1	150	0	0	0	0	1
	1944	2	2,500	0	0	1	500	1	2,000	0
	1945	5	7,800	1	3,000	0	0	4	4,800	1
Morrisville	1943	27	105,610	21	105,000	5	260	1	350	21
	1944	0	0	0	0	0	0	0	0	0
Morton	1943	6	3,070	0	0	2	1,075	4	1,995	0
Mount Holly Springs	1943	5	1,715	1	1,200	3	415	1	100	1
	1944	1	200	0	0	0	0	1	200	0
	1945	3	8,500	3	8,500	0	0	0	0	3
Mount Jewett	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Mount Lebanon township	1943	96	36,036	1	5,000	8	2,220	87	28,816	1
	1944	69	32,436	0	0	4	1,550	65	30,886	0
	1945	217	1,035,450	120	953,600	11	15,765	86	66,085	141
Mount Penn	1943	17	5,970	0	0	0	0	17	5,970	0
	1944	7	1,525	0	0	0	0	7	1,525	0
	1945	13	8,235	0	0	1	1,400	12	6,835	0
Munhall	1943	96	247,150	10	65,000	3	93,381	83	88,769	20
	1944	72	168,860	27	138,900	1	550	44	29,410	53
	1945	93	192,239	16	110,700	9	34,239	68	47,300	16
Myerstown	1945	11	47,450	4	43,000	1	250	6	4,200	6
Nanty-Glo	1943	1	8,000	1	8,000	0	0	0	0	1
	1944	3	9,400	0	0	0	0	3	9,400	0
	1945	3	40,500	2	5,500	1	35,000	0	0	2
Narberth	1943	38	13,138	1	2,500	0	0	37	10,638	1
	1944	53	15,158	0	0	2	1,200	51	13,958	0
	1945	41	15,517	0	0	6	3,150	35	12,367	0
Nazareth	1943	24	3,250	0	0	5	900	19	2,350	0
	1944	28	8,565	1	1,000	6	2,550	21	5,015	1
	1945	46	78,770	0	0	5	10,850	41	67,920	0
Nescopeck	1943	20	9,455	2	5,000	3	490	15	3,965	2
	1944	4	1,395	1	800	0	0	3	595	1
	1945	13	13,100	2	1,700	5	5,500	6	5,900	2
New Castle	1943	230	938,760	69	401,500	77	473,720	84	63,540	69
	1944	141	3,829,639	4	11,300	66	3,768,859	71	49,480	4
	1945	156	187,855	6	31,000	83	132,355	67	24,500	6
New Cumberland	1943	27	62,853	13	32,500	3	12,256	11	18,097	13
	1944	11	24,060	4	20,000	1	175	6	3,885	4
	1945	30	417,000	8	44,550	9	158,950	13	213,500	8
New Holland	1945	2	10,750	0	0	2	10,750	0	0	0
New Kensington	1943	41	42,153	1	2,200	6	31,938	34	8,015	1
	1944	50	380,720	4	8,275	17	263,135	29	109,310	3
	1945	107	231,017	30	147,250	19	17,550	58	66,217	30

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

MIDDLE ATLANTIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Pennsylvania—Continued										
New Oxford	1943	2	$700	0	0	2	$700	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	2	11,000	0	0	2	11,000	0	0	0
Newport	1943	1	500	0	0	0	0	1	$500	0
	1944	0	0	0	0	0	0	0	0	0
	1945	4	36,250	3	$36,000	1	250	0	0	3
Newtown	1943	3	11,150	1	10,000	0	0	2	1,150	0
	1944	2	6,000	1	3,500	1	2,500	0	0	1
	1945	13	26,700	3	7,000	4	7,000	6	12,700	2
*Norristown	1943	435	410,853	0	0	15	34,981	420	375,872	0
	1944	545	509,053	37	214,500	6	37,280	502	257,273	37
	1945	399	417,527	3	15,500	15	64,483	381	337,544	3
Northampton	1943	6	12,400	0	0	6	12,400	0	0	0
	1944	9	3,850	0	0	9	3,850	0	0	0
	1945	16	22,550	3	13,000	13	9,550	0	0	3
North Braddock	1943	9	20,310	0	0	3	850	6	19,460	0
	1944	13	9,098	1	1,500	8	4,398	4	3,200	1
	1945	9	4,725	0	0	3	2,350	6	2,375	0
North Charleroi	1943	0	0	0	0	0	0	0	0	0
	1944	3	1,400	0	0	2	600	1	800	0
	1945	5	13,800	0	0	4	11,800	1	2,000	0
North Wales	1943	29	14,740	3	3,500	14	3,690	12	7,550	3
	1944	31	21,085	0	0	15	8,885	16	12,200	0
	1945	19	29,330	2	7,000	8	17,500	9	4,830	2
North York	1943	8	4,150	0	0	2	800	6	3,350	0
	1944	31	9,125	0	0	8	3,175	23	5,950	0
	1945	45	14,725	0	0	7	9,275	38	5,450	0
Norwood	1943	27	6,019	0	0	14	1,294	13	4,725	0
	1944	32	10,291	0	0	13	4,450	19	5,841	0
	1945	28	23,490	0	0	16	19,475	12	4,015	0
Oakdale	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Oakmont	1943	33	157,585	21	144,000	7	4,610	5	8,975	21
	1944	36	68,978	9	45,000	6	12,865	21	11,113	9
	1945	33	74,045	3	21,500	8	4,690	22	47,855	5
Oil City	1943	119	62,937	0	0	6	5,900	113	57,037	0
	1944	93	64,247	2	2,100	12	6,520	79	55,627	2
	1945	234	411,278	0	0	24	296,810	210	114,468	0
Osborne	1943	0	0	0	0	0	0	0	0	0
Palmyra	1943	1	200	0	0	1	200	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	2	84,000	1	9,000	1	75,000	0	0	2
Parkesburg	1943	6	1,475	0	0	1	25	5	1,450	0
	1944	8	3,300	0	0	4	850	4	2,450	0
Parkside	1943	1	300	0	0	1	300	0	0	0
	1944	8	42,780	5	40,000	3	2,780	0	0	20
	1945	8	45,900	7	45,200	1	700	0	0	12
Paxtang	1943	2	15,000	1	7,500	0	0	1	7,500	5
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Pembrook	1943	19	12,890	0	0	2	625	17	12,265	0
	1944	10	2,735	0	0	3	675	7	2,060	0
	1945	39	60,755	2	9,500	8	38,750	29	12,505	2
Pen Argyl	1943	9	6,100	1	1,400	1	200	7	4,500	1
	1944	12	11,450	0	0	1	600	11	10,850	0
	1945	7	10,982	1	4,000	1	1,000	5	5,982	1
Pennsburg	1943	1	1,800	0	0	1	1,800	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Perkasie	1943	1	400	0	0	1	400	0	0	0
	1944	3	9,300	1	4,000	1	300	1	5,000	1
	1945	6	9,500	1	6,000	5	3,500	0	0	1
*Philadelphia	1943	6,734	23,420,204	3,918	12,115,632	144	6,762,139	2,672	4,542,433	4,015
	1944	2,888	17,424,146	170	841,200	164	11,718,210	2,554	4,864,736	170
	1945	3,753	22,631,540	650	4,044,810	286	9,903,032	2,817	8,683,698	750
Philipsburg	1943	36	16,718	1	1,000	3	1,135	32	14,583	1
	1944	81	42,214	0	0	3	17,550	78	24,664	0
	1945	51	64,312	1	29,000	2	5,100	48	30,212	4
Phoenixville	1943	36	67,315	1	4,000	12	29,100	23	34,215	1
	1944	48	142,609	1	2,500	13	68,370	34	71,739	1
	1945	80	416,420	3	9,500	18	332,170	59	74,750	3
Pitcairn	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	5	8,500	0	0	2	4,500	3	4,000	0

* In sample of 257 cities. See text and tables, pp. 12 to 16.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

MIDDLE ATLANTIC STATES—Continued

State and city	Year	All building construction: Number of buildings	All building construction: Valuation	New residential building: Number of buildings	New residential building: Valuation	New nonresidential building: Number of buildings	New nonresidential building: Valuation	Additions, alterations, and repairs: Number of buildings	Additions, alterations, and repairs: Valuation	Number of new family dwelling units
Pennsylvania—Continued										
*Pittsburgh	1943	2,614	$5,170,361	555	$2,672,220	206	$1,083,588	1,853	$1,414,553	580
	1944	2,655	3,330,462	100	593,700	145	775,750	2,410	1,961,012	213
	1945	3,426	8,233,696	153	1,121,900	260	3,191,639	3,013	3,920,157	274
Plymouth	1943	0	0	0	0	0	0	0	0	0
	1944	2	7,250	0	0	0	0	2	7,250	0
	1945	8	16,850	0	0	1	8,000	7	8,850	0
Port Carbon	[1] 1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Port Vue	1943	4	6,300	1	5,500	1	500	2	300	1
	1944	16	27,225	5	19,650	5	1,500	6	6,075	5
	1945	6	14,500	2	11,000	1	200	3	3,300	7
Pottstown	1943	479	1,710,457	179	729,530	71	506,982	229	473,945	179
	1944	304	336,110	42	165,600	40	99,410	222	71,100	42
	1945	330	2,579,165	17	103,000	64	2,252,440	249	223,725	22
Pottsville	1943	41	53,389	0	0	3	750	38	52,639	0
	1944	68	54,965	0	0	9	9,870	59	45,095	0
	1945	68	155,138	3	28,600	8	43,500	57	83,038	1
Prospect Park	1943	14	5,575	1	3,000	9	2,125	4	450	2
	1944	40	15,045	0	0	14	8,158	26	6,887	0
	1945	30	65,975	0	0	7	60,125	23	5,850	0
Punxsutawney	1943	10	2,500	0	0	6	1,450	4	1,050	0
	1944	5	3,000	1	1,500	2	800	2	700	1
	1945	17	138,100	1	4,000	13	131,250	3	2,850	2
Quakertown	1943	30	10,900	0	0	17	3,170	13	7,730	0
	1944	25	17,107	0	0	18	15,617	7	1,490	0
	1945	49	76,406	7	28,500	28	28,700	14	19,206	7
Reading	1943	1,397	775,034	0	0	6	7,535	1,391	767,499	0
	1944	1,435	552,903	0	0	4	43,500	1,431	509,403	0
	1945	1,569	1,364,474	27	139,000	28	544,025	1,514	681,449	27
Red Lion	1943	14	975	0	0	0	0	14	975	0
	1944	1	577	0	0	0	0	1	577	0
	1945	0	0	0	0	0	0	0	0	0
Renovo	1943	5	700	1	200	0	0	4	500	0
	1944	6	800	0	0	0	0	6	800	0
	1945	28	9,070	0	0	0	0	28	9,070	0
Reynoldsville	1943	8	6,250	1	1,500	2	750	5	4,000	1
	1944	12	5,450	0	0	2	250	10	5,200	0
	1945	12	8,850	1	4,000	1	1,000	10	3,850	1
Ridley Park	1943	11	13,950	0	0	4	1,325	7	12,625	0
	1944	13	16,090	0	0	6	2,890	7	13,200	0
	1945	15	43,525	0	0	7	17,800	8	25,725	0
Robesonia	1943	3	9,750	0	0	2	5,750	1	4,000	0
	1944	1	1,200	0	0	1	1,200	0	0	0
	1945	2	3,000	1	1,500	1	1,500	0	0	0
Rochester	1943	10	155,416	0	0	2	300	8	155,116	0
	1944	9	19,935	0	0	6	18,850	3	1,085	0
	1945	20	76,050	3	18,500	9	24,500	8	33,050	4
Rockwood	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Roscoe	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Roseto	1943	8	3,800	0	0	0	0	8	3,800	0
	1944	8	7,450	0	0	0	0	8	7,450	0
	1945	10	21,400	1	5,000	3	7,800	6	8,600	1
Royalton	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Royersford	1943	3	3,800	1	3,000	2	800	0	0	1
	1944	4	17,000	3	9,000	1	8,000	0	0	16
	1945	6	54,600	3	19,000	3	35,600	0	0	10
Saxton	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	4	600	0	0	0	0	4	600	0
Schuylkill Haven	1943	2	22,000	1	14,000	0	0	1	8,000	9
	1944	0	0	0	0	0	0	0	0	0
	1945	6	17,985	3	17,000	0	0	3	985	3
Scottdale	1943	8	4,175	2	3,000	5	875	1	300	2
	1944	12	13,200	1	2,000	8	3,200	3	8,000	1
*Scranton	1943	448	5,787,553	0	0	148	5,593,645	300	193,908	0
	1944	531	1,210,575	0	0	65	874,799	466	335,776	0
	1945	682	1,326,145	2	8,300	86	240,869	594	1,076,976	2

* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

MIDDLE ATLANTIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Pennsylvania—Continued										
Selinsgrove	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
Sellersville	1943	3	$2,600	0	0	0	0	3	$2,600	0
	1944	2	16,600	0	0	0	0	2	16,600	0
	1945	1	2,800	0	0	0	0	1	2,800	0
Sewickley	1943	60	484,000	55	$465,000	2	$1,000	3	18,000	100
	1944	7	168,250	3	165,000	1	500	3	2,750	6
	1945	8	10,020	1	5,000	4	1,950	3	3,070	1
Sewickley Heights	1943	0	0	0	0	0	0	0	0	0
	1944	3	700	0	0	1	100	2	600	0
	1945	5	8,500	0	0	3	1,600	2	6,900	0
Sharon	1945	75	292,838	18	99,500	32	130,925	25	62,413	18
Sharon Hill	1943	1	700	0	0	0	0	1	700	0
	1944	4	12,130	0	0	1	250	3	11,880	0
	1945	11	47,150	1	3,500	7	42,100	3	1,550	1
Sharpsburg	1943	3	1,150	0	0	0	0	3	1,150	0
	1944	15	3,750	0	0	0	0	15	3,750	0
	1945	15	18,950	2	7,000	3	5,000	10	6,950	2
Shenandoah	1943	29	12,104	0	0	0	0	29	12,104	0
	1944	46	200,154	0	0	1	1,000	45	199,154	0
	1945	36	46,705	0	0	0	0	36	46,705	0
Shillington	1943	19	3,060	0	0	2	385	17	2,675	0
	1944	22	11,650	0	0	0	0	22	11,650	0
	1945	18	131,125	2	16,000	2	56,800	14	58,325	3
Sinking Spring	1943	20	16,735	0	0	6	5,375	14	11,360	0
	1944	33	14,468	0	0	3	2,500	30	11,968	0
	1945	25	29,635	0	0	6	25,950	19	3,685	0
Slatington	1943	92	35,036	0	0	8	10,800	84	24,236	0
	1944	59	34,600	0	0	4	16,200	55	18,400	0
	1945	28	21,500	0	0	3	3,500	25	18,000	0
Souderton	1943	24	6,300	0	0	20	3,650	4	2,650	0
	1944	8	12,875	0	0	6	8,875	2	4,000	0
	1945	33	97,125	3	14,000	25	78,375	5	4,750	3
South Connellsville	1943	17	2,055	2	600	10	605	5	850	2
	1944	12	2,620	1	1,500	6	480	5	640	1
	1945	13	3,960	2	1,400	7	535	4	2,025	2
South Fork	1943	0	0	0	0	0	0	0	0	0
	1944	3	2,750	0	0	0	0	3	2,750	0
	1945	2	45,000	0	0	2	45,000	0	0	0
Southmont	1945	10	23,340	0	0	2	21,000	8	2,340	0
Southwest Greensburg	1943	6	7,200	1	2,500	0	0	5	4,700	1
	1944	13	15,600	2	5,500	5	4,200	6	5,900	2
	1945	10	14,600	1	4,000	4	2,600	5	8,000	1
South Williamsport	1943	38	9,790	0	0	12	1,550	26	8,240	0
	1944	39	5,160	2	400	13	1,460	24	3,300	2
	1945	61	60,225	5	11,550	18	3,195	38	45,480	5
Spangler	1943	1	220	0	0	1	220	0	0	0
	1944	1	1,000	0	0	0	0	1	1,000	0
	1945	5	13,100	0	0	5	13,100	0	0	0
Springdale	1943	1	500	0	0	0	0	1	500	0
	1944	11	15,250	1	4,000	7	7,800	3	3,450	1
	1945	35	99,336	12	64,300	14	14,200	9	20,836	12
Spring Grove	1943	22	5,926	0	0	0	0	22	5,926	0
	1944	24	6,800	0	0	2	4,000	22	2,800	0
	1945	10	30,350	2	15,500	8	14,850	0	0	2
State College	1943	7	515	0	0	0	0	7	515	0
	1944	9	825	0	0	1	350	8	475	0
	1945	74	631,300	50	549,200	6	47,000	18	35,100	91
Steelton	1943	8	23,900	0	0	2	450	6	23,450	0
	1944	4	1,985	0	0	1	100	3	1,885	0
	1945	18	35,950	4	18,200	1	2,000	13	15,750	4
Stowe township	1943	41	79,160	2	3,100	1	44,610	38	31,450	2
	1944	0	0	0	0	0	0	0	0	0
	1945	12	62,300	8	58,000	4	4,300	0	0	9
Sugar Notch	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Summit Hill	1943	5	1,050	0	0	3	650	2	400	0
	1944	7	4,400	0	0	2	700	5	3,700	0
	1945	21	15,100	0	0	4	3,400	17	11,700	0
Sunbury	1943	6	3,550	0	0	2	450	4	3,100	0
	1944	4	3,200	1	500	3	2,700	0	0	0
	1945	2	13,500	2	13,500	0	0	0	0	0

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

MIDDLE ATLANTIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Pennsylvania—Continued										
Swarthmore	1943	11	$127,655	0	0	0	0	11	$127,655	0
	1944	7	2,150	0	0	1	$200	6	1,950	0
	1945	15	11,544	0	0	2	1,025	13	10,519	0
Swissvale	1943	70	164,900	24	$144,000	12	5,075	34	15,825	49
	1944	49	30,855	3	11,000	2	250	44	19,605	4
	1945	85	189,290	23	118,000	14	40,175	48	31,115	24
Tamaqua	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Tarentum	1943	5	187,600	0	0	2	184,600	3	3,000	0
	1944	0	0	0	0	0	0	0	0	0
	1945	6	79,000	0	0	5	72,000	1	7,000	0
Telford	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Topton	1943	15	2,510	0	0	1	50	14	2,460	0
	1944	26	7,700	0	0	3	1,050	23	6,650	0
	1945	19	7,220	0	0	3	2,200	16	5,020	0
Towanda	1943	4	1,900	0	0	3	900	1	1,000	0
	1944	1	300	0	0	1	300	0	0	0
	1945	9	13,176	0	0	3	6,600	6	6,576	0
Trafford	1943	49	159,500	39	156,000	1	200	9	3,300	39
	1944	26	49,710	11	44,000	3	960	12	4,750	11
	1945	34	54,310	2	11,500	10	32,850	22	9,960	2
Trainer	1945	21	125,850	5	12,500	11	109,750	5	3,600	5
Tyrone	1943	5	820	0	0	2	500	3	320	0
	1944	5	2,850	1	2,000	0	0	4	850	1
	1945	11	9,850	1	6,000	2	1,000	8	2,850	0
Union City	1943	20	9,000	2	4,500	8	1,420	10	3,080	2
	1944	20	13,040	0	0	2	2,500	18	10,540	0
	1945	42	29,220	0	0	10	7,950	32	21,270	0
Uniontown	1943	38	22,015	0	0	13	4,010	25	18,005	0
	1944	28	30,941	0	0	8	14,165	20	16,776	0
	1945	40	270,500	1	5,000	18	223,900	21	41,600	1
Upland	1943	6	2,520	0	0	2	900	4	1,620	0
	1944	9	20,650	0	0	1	8,000	8	12,650	0
	1945	13	17,200	0	0	2	2,500	11	14,700	0
Upper Darby township	1943	405	1,265,600	295	1,196,000	23	23,000	87	46,600	381
	1944	170	131,277	0	0	17	37,585	153	93,692	0
	1945	364	1,068,602	157	838,700	35	77,620	172	152,282	157
Vandergrift	1943	5	34,900	0	0	1	400	4	34,500	0
	1944	11	25,150	0	0	2	17,000	9	8,150	0
	1945	5	19,000	1	2,000	2	14,000	2	3,000	1
Wall	1944	1	500	0	0	0	0	1	500	0
	1945	4	4,700	0	0	4	4,700	0	0	0
Warren	1943	25	179,190	0	0	5	112,800	20	66,390	0
	1944	42	197,874	0	0	7	128,275	35	69,599	0
	1945	29	208,290	0	0	8	117,500	21	90,790	0
Washington	1943	6	75,055	2	1,000	4	74,055	0	0	2
	1944	10	14,850	1	2,000	5	9,875	4	2,975	2
	1945	8	58,585	2	7,000	1	1,500	5	50,085	2
Waynesboro	1943	4	1,700	2	1,000	1	300	1	400	2
	1944	3	8,700	1	5,000	2	3,700	0	0	1
	1945	15	67,900	6	30,500	7	24,400	2	13,000	6
Waynesburg	1943	9	8,831	0	0	3	6,525	6	2,306	0
	1944	14	7,463	0	0	7	4,100	7	3,363	0
	1945	10	23,000	0	0	3	15,250	7	7,750	0
Weatherly	1943	19	4,060	0	0	3	130	16	3,930	0
	1944	22	26,065	0	0	4	800	18	25,265	0
	1945	45	9,765	0	0	9	1,615	36	8,150	0
Wellsboro	1943	3	3,900	0	0	0	0	3	3,900	0
	1944	12	82,400	1	2,500	3	51,000	8	28,900	1
	1945	25	67,350	5	26,500	10	32,250	10	8,600	5
Wernersville	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	2	8,500	2	8,500	0	0	0	0	2
Wesleyville	1943	19	20,600	6	18,000	1	200	12	2,400	6
	1944	37	17,907	0	0	0	0	37	17,907	0
West Chester	1943	25	82,375	0	0	1	50,000	24	32,375	0
	1944	26	11,750	0	0	7	3,550	19	8,200	0
	1945	30	230,750	1	150,000	7	47,500	22	33,250	45
West Conshohocken	1943	6	860	0	0	4	660	2	200	0
	1944	7	4,685	1	4,000	4	85	2	600	1
	1945	1	3,000	1	3,000	0	0	0	0	1

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

MIDDLE ATLANTIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Pennsylvania—Continued										
West Homestead	1943	1	$280	0	0	0	0	1	$280	0
	1944	10	37,180	0	0	1	$30,000	9	7,180	0
	1945	27	39,100	2	$22,000	0	0	25	17,100	4
West Lawn	1943	15	4,628	0	0	1	75	14	4,553	0
	1944	49	43,358	0	0	0	0	49	43,358	0
	1945	34	22,260	2	9,000	0	0	32	13,260	2
Westmont	1943	19	8,840	1	750	10	1,420	8	6,670	1
	1944	5	7,510	1	3,800	2	210	2	3,500	1
	1945	15	41,640	5	37,000	1	200	9	4,440	5
West Newton	1943	3	1,600	0	0	2	600	1	1,000	0
	1944	2	3,500	1	2,500	0	0	1	1,000	1
	1945	2	5,600	1	3,600	1	2,000	0	0	1
West Reading	1943	56	22,222	0	0	3	4,000	53	18,222	0
	1944	47	16,745	0	0	1	10,000	46	6,745	0
	1945	44	24,538	0	0	5	16,750	39	7,788	0
West View	1943	1	740	0	0	0	0	1	740	0
	1944	15	12,780	1	5,000	4	1,100	10	6,680	1
	1945	44	83,991	4	30,000	2	16,400	38	37,591	3
West Wyoming	1945	0	0	0	0	0	0	0	0	0
West York	1943	43	8,858	0	0	2	110	41	8,748	0
	1944	21	54,005	0	0	6	51,425	15	2,580	0
	1945	24	39,570	1	4,500	7	6,565	16	28,505	1
*Wilkes-Barre	1943	642	275,012	0	0	23	29,239	619	245,773	0
	1944	505	369,475	0	0	2	1,550	503	367,925	0
	1945	570	569,012	0	0	0	0	570	569,012	0
Wilkinsburg	1943	67	95,640	6	25,080	3	1,100	58	69,460	9
	1944	90	82,316	4	19,200	3	4,250	83	58,866	4
	1945	161	413,185	34	235,000	16	64,980	111	113,205	34
Williamsport	1943	832	143,406	1	2,800	49	18,422	782	122,184	1
	1944	1,056	620,440	1	100	28	339,926	1,027	280,414	1
	1945	1,129	396,089	4	20,950	55	118,773	1,070	256,366	4
Wilmerding	1943	3	610	0	0	0	0	3	610	0
	1944	0	0	0	0	0	0	0	0	0
	1945	1	2,900	0	0	1	2,900	0	0	0
Wilson	1943	0	0	0	0	0	0	0	0	0
	1944	1	300	0	0	1	300	0	0	0
	1945	4	25,500	0	0	1	20,000	3	5,500	0
Windsor	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	1	5,000	0	0	1	5,000	0	0	0
Wormleysburg	1943	1	100	0	0	0	0	1	100	0
	1944	0	0	0	0	0	0	0	0	0
Wyomissing	1943	54	6,800	0	0	0	0	54	6,800	0
	1944	56	8,003	0	0	0	0	56	8,003	0
	1945	51	28,518	1	7,000	11	11,486	39	10,032	1
Wyomissing Hills	1943	5	1,000	0	0	0	0	5	1,000	0
	1944	1	125	0	0	0	0	1	125	0
	1945	6	20,770	1	10,000	1	7,500	4	3,270	1
Yardley	1943	12	66,000	12	66,000	0	0	0	0	12
	1944	4	9,880	2	8,800	1	680	1	400	2
	1945	10	9,200	0	0	5	3,300	5	5,900	0
Yeadon	1943	126	239,905	72	230,400	0	0	54	9,505	72
	1944	61	22,215	0	0	5	1,730	56	20,485	0
	1945	59	47,253	0	0	3	2,375	56	44,878	0
*York	1943	848	381,733	50	175,000	39	19,795	759	186,938	50
	1944	846	277,822	0	0	40	31,319	806	246,503	0
	1945	1,002	765,278	13	66,500	70	267,553	919	431,225	13
Youngwood	1943	4	8,250	4	8,250	0	0	0	0	4
	1944	1	3,000	1	3,000	0	0	0	0	1
	1945	3	13,500	3	13,500	0	0	0	0	4

EAST NORTH CENTRAL STATES

Illinois:										
Alsip	1944	11	$17,494	0	0	7	$15,394	4	$2,100	0
	1945	13	6,358	0	0	9	4,266	4	2,092	0
Alton	1943	273	140,448	0	0	21	5,910	252	134,538	0
	1944	463	497,013	5	$9,444	38	278,386	420	209,183	5
	1945	430	510,097	42	141,572	32	96,504	356	272,021	43
Anna	1943	3	4,500	0	0	3	4,500	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	3	100,000	0	0	3	100,000	0	0	0

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* In sample of 257 cities. See text and tables, pp. 12 to 16.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

EAST NORTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Illinois—Continued										
Antioch	1943	17	$13,300	0	0	2	$5,400	15	$7,900	0
	1944	12	4,700	0	0	0	0	12	4,700	0
	1945	27	30,550	2	$7,100	8	11,300	17	12,150	2
Arlington Heights	1943	31	15,312	0	0	10	10,120	21	5,192	0
	1944	37	25,425	0	0	18	21,395	19	4,030	0
	1945	162	1,038,005	100	722,000	33	294,705	29	21,300	100
Assumption	1943	74	9,875	0	0	57	5,550	17	4,325	0
	1944	48	8,300	0	0	4	1,350	44	6,950	0
	1945	28	8,100	0	0	6	3,700	22	4,400	0
Astoria	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
Athens	1943	0	0	0	0	0	0	0	0	0
*Aurora	1943	503	331,761	2	5,200	70	174,733	431	151,828	2
	1944	450	260,488	13	47,700	63	20,622	374	192,166	13
	1945	583	655,332	22	97,011	77	268,142	484	290,179	22
Bannockburn	1944	0	0		0	0	0	0	0	0
	1945	1	11,000	1	11,000	0	0	0	0	1
Barrington	1943	15	10,674	0	0	2	700	13	9,974	0
	1944	15	22,650	0	0	3	10,575	12	12,075	0
	1945	14	51,600	0	0	5	44,800	9	6,800	0
Bartlett	1944	4	1,950	0	0	0	0	4	1,950	0
	1945	7	8,600	2	7,000	0	0	5	1,600	2
Bartonville	1943	5	1,300	1	500	4	800	0	0	1
	1944	2	400	0	0	1	200	1	200	0
	1945	8	12,600	1	300	2	10,000	5	2,300	1
Batavia	1943	30	8,168	1	1,200	16	4,470	13	2,498	1
	1944	56	73,020	0	0	34	57,843	22	15,177	0
	1945	90	214,806	2	9,000	43	141,360	45	64,446	2
Belleville	1944	0	0	0	0	0	0	0	0	0
	[1] 1945	137	570,222	54	173,150	37	296,266	46	100,806	57
Bellwood	1943	205	1,103,700	174	986,000	23	65,600	8	52,100	174
	1944	44	141,300	9	48,000	27	81,250	8	12,050	9
	1945	275	2,254,895	223	1,507,000	34	488,895	18	259,000	223
Bensenville	1943	17	9,215	0	0	14	5,615	3	3,600	0
	1944	65	242,009	43	236,500	12	2,124	10	3,385	43
	1945	129	442,885	65	365,500	37	55,725	27	21,660	65
Berkeley	1943	7	4,050	0	0	4	1,350	3	2,700	0
	1944	64	256,410	50	251,000	7	835	7	4,575	50
	1945	26	88,125	13	77,000	9	8,525	4	2,600	13
Berwyn	1943	112	241,681	24	193,000	30	5,379	58	43,302	42
	1944	119	432,287	29	395,600	44	14,477	46	22,210	92
	1945	215	1,014,626	95	886,000	44	45,736	76	82,890	146
Bloomingdale	1945	6	2,800	0	0	4	1,900	2	900	0
*Bloomington	1943	45	27,876	0	0	33	12,038	12	15,838	0
	1944	47	126,044	0	0	35	123,744	12	2,300	0
	1945	91	350,661	5	32,800	49	207,535	37	110,326	5
Blue Island	1943	299	216,316	5	25,000	33	105,417	261	85,899	5
	1944	275	118,627	8	9,072	24	31,845	243	77,710	2
	1945	270	610,393	14	82,400	31	426,190	225	101,803	15
Bradley	1943	19	18,300	7	10,750	7	3,900	5	3,650	7
	1944	19	11,918	0	0	3	8,738	16	3,180	0
	1945	60	134,465	19	60,100	26	67,175	15	7,190	19
Breese	1943	0	0	0	0	0	0	0	0	0
	1944	1	1,500	0	0	0	0	1	1,500	0
Broadview	1943	198	654,504	132	630,000	55	11,704	11	12,800	132
	1944	196	662,957	131	646,650	54	10,765	11	5,542	131
	1945	170	776,790	81	546,550	76	222,850	13	7,390	109
Brookfield	1943	206	873,587	130	850,000	31	13,507	45	10,080	180
	1944	137	474,184	75	439,000	34	11,054	28	24,130	91
	1945	140	475,425	43	345,200	44	102,005	53	28,220	58
Buckner	1943	6	985	0	0	1	100	5	885	0
	1944	3	475	0	0	1	75	2	400	0
	1945	0	0	0	0	0	0	0	0	0
Burnham	1945	0	0	0	0	0	0	0	0	0
Cairo	1943	5	7,802	1	2,500	3	800	1	4,502	1
	1944	5	10,550	0	0	4	10,350	1	200	0
	1945	13	13,540	2	6,800	8	5,390	3	1,350	2
Calumet City	1943	102	194,441	21	166,500	14	3,541	67	24,400	34
	1944	103	84,526	0	0	13	53,046	90	31,480	0
	1945	177	528,636	85	440,200	8	32,590	84	55,846	85
Camp Point	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0

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* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

EAST NORTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
llinois—Continued										
Canton	1943	105	$13,639	0	0	20	$2,280	85	$11,359	0
	1944	62	16,368	2	$515	13	2,350	47	13,503	2
	1945	102	43,875	2	4,000	17	13,965	83	25,910	2
Carbondale	1943	14	55,575	2	1,150	3	45,350	9	9,075	2
	1944	27	36,658	1	800	10	28,600	16	7,258	1
	1945	44	348,744	17	37,700	12	288,325	15	22,719	17
Carlyle	1943	3	510	0	0	1	150	2	360	0
	1944	6	1,400	0	0	0	0	6	1,400	0
	1945	2	20,000	0	0	1	15,000	1	5,000	0
Carpentersville	1943	9	4,650	0	0	4	1,000	5	3,650	0
	1944	1	350	0	0	0	0	1	350	0
	1945	4	10,000	0	0	2	4,000	2	6,000	0
Casey	1945	0	0	0	0	0	0	0	0	0
Catlin	1945	0	0	0	0	0	0	0	0	0
Centralia	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Champaign	1943	63	70,558	0	0	4	650	59	69,908	0
	1944	40	160,591	1	1,000	13	141,711	26	17,880	1
	1945	107	647,880	26	166,400	37	423,025	44	58,455	36
*Chicago	1943	6,288	69,775,158	3,209	17,679,160	1,158	46,412,686	1,921	5,683,312	4,065
	1944	6,715	35,751,179	3,171	16,766,210	1,172	10,740,036	2,372	8,244,933	3,970
	1945	8,669	63,093,536	4,184	24,299,707	1,734	27,561,344	2,751	11,232,485	4,727
Chicago Heights	1943	150	230,405	20	100,000	22	77,950	108	52,455	20
	1944	302	530,443	59	291,000	46	136,073	197	103,370	59
	1945	280	607,260	35	192,000	39	271,489	206	143,771	35
Chicago Ridge	1945	21	10,653	2	6,300	16	3,943	3	410	2
Christopher	1943	12	2,075	0	0	5	625	7	1,450	0
	1944	8	2,425	1	1,000	3	550	4	875	1
	1945	6	1,660	1	600	3	360	2	700	1
*Cicero	1943	310	1,446,785	172	978,600	50	88,800	88	379,385	197
	1944	345	1,413,173	189	953,000	85	267,116	71	193,057	191
	1945	447	2,747,544	223	1,141,000	150	1,282,994	74	323,550	223
Clarendon Hills	1943	11	2,577	0	0	7	1,717	4	860	0
	1944	12	6,897	1	4,500	1	1,000	10	1,397	1
	1945	27	145,190	10	74,000	7	58,890	10	12,300	10
Coulterville	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
Crete	1943	35	8,000	0	0	12	2,678	23	5,322	0
	1944	22	17,620	1	4,000	7	6,800	14	6,820	1
	1945	43	98,405	9	69,000	3	13,000	31	16,405	3
Crystal Lake	1943	39	19,915	0	0	3	520	36	19,395	0
	1944	49	33,870	0	0	10	4,780	39	29,090	0
	1945	79	187,769	14	85,000	14	25,309	51	77,460	14
*Danville	1943	56	96,054	0	0	25	39,070	31	56,984	0
	1944	8	13,800	0	0	0	0	8	13,800	0
	1945	27	220,175	2	9,000	10	138,675	15	72,500	2
*Decatur	1943	292	929,467	105	382,400	71	494,391	116	52,676	129
	1944	427	1,128,241	244	841,483	81	185,900	102	100,858	244
	1945	286	605,784	50	208,300	108	160,854	128	236,630	50
Deerfield	1943	24	8,380	0	0	16	4,405	8	3,975	0
	1944	19	6,525	0	0	10	2,225	9	4,300	0
	1945	36	25,290	1	6,000	12	6,600	23	12,690	1
De Kalb	1943	16	41,625	7	40,000	5	850	4	775	11
	1944	18	21,825	1	3,700	12	14,975	5	3,150	1
	1945	29	67,225	2	3,500	23	59,725	4	4,000	2
Des Plaines	1943	589	1,701,371	332	1,567,600	58	16,785	199	116,986	332
	1944	406	1,239,233	242	1,154,200	56	14,878	108	70,155	242
	1945	286	938,965	93	710,850	51	113,695	142	114,420	92
Dixon	1944	19	6,089,300	17	89,100	2	6,000,200	0	0	17
	1945	18	41,200	8	15,000	5	12,000	5	14,200	8
Dolton	1943	73	89,781	17	75,000	18	4,600	38	10,181	17
	1944	116	280,146	59	262,300	7	1,800	50	16,046	59
	1945	121	353,834	42	210,300	23	118,856	56	24,678	42
Downers Grove	1943	87	34,980	2	10,000	34	9,068	51	15,912	2
	1944	81	44,441	2	12,500	21	5,173	58	26,768	2
	1945	143	164,891	11	65,245	37	35,394	95	64,252	11
Du Quoin	1943	73	18,675	0	0	2	225	71	18,450	0
	1944	81	24,050	0	0	3	4,300	78	19,750	0
	1945	70	51,530	7	30,000	0	0	63	21,530	7
Dwight	1943	1	300	0	0	1	300	0	0	0
	1944	1	1,500	0	0	1	1,500	0	0	0
	1945	13	23,500	3	17,000	7	4,000	3	2,500	3

* In sample of 257 cities. See text and tables, pp. 12 to 16.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

EAST NORTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Illinois—Continued										
East Moline	1943	413	$142,246	1	$200	21	$56,387	391	$85,659	1
	1944	452	125,311	1	2,000	27	46,842	424	76,469	1
East Peoria	1943	30	191,305	1	2,500	14	147,715	15	41,090	1
	1944	32	145,635	0	0	16	74,135	16	71,500	0
	1945	60	331,885	5	13,700	19	302,210	36	15,975	5
*East St. Louis	1943	408	682,293	2	7,000	35	452,275	371	223,018	2
	1944	465	665,635	9	14,400	52	241,855	404	409,380	11
	1945	438	1,675,280	48	109,400	94	893,410	296	672,470	49
Edwardsville	1943	3	1,950	0	0	3	1,950	0	0	0
	1944	8	54,715	0	0	4	47,865	4	6,850	0
	1945	12	46,685	3	14,300	6	26,750	3	5,635	3
Elburn	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	7	14,600	3	9,000	4	5,600	0	0	3
*Elgin	1943	313	114,368	0	0	36	12,423	277	101,945	0
	1944	310	324,177	1	2,500	39	190,940	270	130,737	1
	1945	463	562,477	33	183,772	55	149,815	375	228,890	33
Elmhurst	1943	77	172,633	25	135,000	34	30,303	18	7,330	25
	1944	74	159,900	25	139,000	32	10,900	17	10,000	25
	1945	90	530,497	17	142,000	49	362,372	24	26,125	17
Elmwood Park	1943	120	44,007	0	0	62	19,355	58	24,652	0
	1944	95	84,741	10	50,000	24	6,690	61	28,051	10
	1945	217	794,188	88	661,600	45	68,001	84	64,587	96
*Evanston	1943	171	129,743	0	0	70	29,998	101	99,745	0
	1944	184	717,997	31	154,900	38	407,014	115	156,083	31
	1945	360	4,425,442	99	3,084,600	71	668,350	190	672,492	159
Evergreen Park	1943	64	231,200	48	228,000	16	3,200	0	0	48
	[2]1945	148	735,575	116	709,500	23	19,850	9	6,225	116
Fairfield	1943	2	1,400	0	0	1	500	1	900	0
	1944	6	25,200	0	0	4	21,800	2	3,400	0
	1945	9	39,500	0	0	2	27,500	7	12,000	0
Flossmoor	1943	2	400	0	0	1	100	1	300	0
	1944	1	250	0	0	1	250	0	0	0
	1945	9	32,800	0	0	0	0	9	32,800	0
Forest Park	1943	172	42,910	0	0	1	500	171	42,410	0
	1944	176	121,732	16	69,800	0	0	160	51,932	16
	1945	287	1,019,456	1	10,000	6	878,920	280	130,536	2
Forest View	1945	1	3,000	0	0	0	0	1	3,000	0
Forreston	1943	0	0	0	0	0	0	0	0	0
	1944	1	1,000	0	0	1	1,000	0	0	0
	1945	7	22,300	0	0	6	21,300	1	1,000	0
Franklin Park	1943	132	481,925	71	379,500	58	46,425	3	56,000	84
	1944	267	1,210,085	237	1,197,185	21	7,000	9	5,900	237
	1945	297	1,634,475	237	1,223,375	52	352,300	8	58,800	237
Freeburg	1943	2	2,000	2	2,000	0	0	0	0	2
	1944	5	1,050	0	0	3	400	2	650	0
	1945	10	15,700	2	13,500	7	1,950	1	250	2
Freeport	1943	35	63,160	0	0	13	7,225	22	55,935	0
	1944	33	38,070	1	1,048	19	23,300	13	13,722	1
	1945	92	87,430	4	13,600	35	36,555	53	37,275	4
Galesburg	1943	96	70,025	2	6,000	77	60,675	17	3,350	2
	1944	93	429,218	1	1,200	57	346,922	35	81,096	1
	1945	163	947,385	45	193,550	80	463,597	38	290,238	45
Geneva	1943	34	20,875	0	0	13	2,140	21	18,735	0
	1944	45	50,859	0	0	21	2,834	24	48,025	0
	1945	161	808,155	96	508,700	18	144,095	47	155,360	96
Genoa	1943	6	18,000	6	18,000	0	0	0	0	6
	1944	0	0	0	0	0	0	0	0	0
Gilman	1945	0	0	0	0	0	0	0	0	0
Glen Carbon	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Glencoe	1943	24	7,081	0	0	8	1,100	16	5,981	0
	1944	25	13,460	0	0	4	710	21	12,750	0
	1945	43	70,065	2	20,000	9	3,670	32	46,395	2
Glen Ellyn	1943	31	11,427	0	0	12	3,005	19	8,422	0
	1944	42	14,778	1	4,300	14	2,477	27	8,001	1
	1945	55	113,941	7	64,000	14	12,336	34	37,605	7
Glenview	1943	8	34,615	0	0	7	31,615	1	3,000	0
	1944	27	158,325	11	56,000	11	94,188	5	8,137	11
	1945	96	839,423	66	649,271	13	128,657	17	61,495	66
Glenwood	1945	5	1,675	0	0	1	350	4	1,325	0

* In sample of 257 cities. See text and tables, pp. 12 to 16.

[2] 10 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

EAST NORTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
llinois—Continued										
Granite City	1943	54	$3,128,817	41	$162,275	12	$2,955,220	1	$11,322	41
	1944	14	529,348	0	0	11	504,650	3	24,698	0
	1945	42	1,141,313	7	21,900	28	1,090,553	7	28,860	7
Grays Lake	1944	14	28,300	2	4,000	4	7,800	8	16,500	2
	1945	27	74,250	7	26,700	3	21,500	17	26,050	7
Greenfield	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Greenville	1943	9	18,650	0	0	8	17,900	1	750	0
	1944	11	18,600	4	8,900	4	6,900	3	2,800	4
	1945	15	102,550	4	10,500	8	85,850	3	6,200	4
Griggsville	1943	1	250	0	0	0	0	1	250	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Gurnee	1943	12	8,250	0	0	4	1,150	8	7,100	0
	1944	10	15,150	2	6,400	4	5,800	4	2,950	2
	1945	18	25,900	6	14,200	4	1,950	8	9,750	6
Hamilton	1943	0	0	0	0	0	0	0	0	0
Hanna City	1945	0	0	0	0	0	0	0	0	0
Hanover	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Hartford	1944	0	0	0	0	0	0	0	0	0
	1945	2	4,400	1	4,000	0	0	1	400	1
Harvey	1943	345	473,217	35	125,000	58	262,048	252	86,169	35
	1944	479	665,189	109	468,750	42	85,734	328	110,705	109
	1945	487	616,499	58	253,050	96	189,475	333	173,974	58
Hazel Crest	1943	14	2,100	0	0	11	1,600	3	500	0
	1944	14	5,600	0	0	6	1,150	8	4,450	0
	1945	29	38,635	1	5,500	5	25,875	23	7,260	1
Highland Park	1943	68	26,992	0	0	26	3,474	42	23,518	0
	1944	70	66,363	1	4,865	20	5,513	49	55,985	1
	1945	143	383,632	24	241,164	29	28,899	90	113,569	24
Highwood	1943	20	55,914	1	4,500	3	46,700	16	4,714	1
	1944	20	12,700	0	0	0	0	20	12,700	0
	1945	15	47,800	1	17,000	0	0	14	30,800	7
Hillside	1943	15	6,100	0	0	13	4,100	2	2,000	0
	1944	17	10,225	0	0	9	6,125	8	4,100	0
	1945	31	100,950	13	77,000	11	16,100	7	7,850	13
Hinsdale	1943	20	8,677	0	0	11	3,665	9	5,012	0
	1944	27	19,889	0	0	8	7,095	19	12,794	0
	1945	34	99,892	4	54,900	9	17,090	21	27,902	4
Homewood	1943	78	35,277	0	0	18	6,041	60	29,236	0
	1944	57	37,807	1	6,300	12	17,599	44	13,908	1
	1945	176	173,792	18	118,500	18	11,895	140	43,397	18
Hurst	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Itasca	1943	10	3,900	0	0	6	1,050	4	2,850	0
	1944	17	4,100	0	0	6	1,000	11	3,100	0
	1945	13	73,400	8	70,400	3	1,200	2	1,800	8
Joliet	1943	579	225,380	1	3,000	26	9,750	552	212,630	1
	1944	699	657,009	15	90,000	47	226,483	637	340,526	15
	1945	679	636,520	4	61,500	73	236,850	602	338,170	4
Jonesboro	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Justice	1945	0	0	0	0	0	0	0	0	0
Kankakee	1943	135	56,122	1	190	17	7,359	117	48,573	1
	1944	181	230,561	8	12,975	38	96,549	135	121,037	8
	1945	384	782,360	31	349,100	65	163,610	288	269,650	56
Kenilworth	1943	11	2,745	0	0	1	195	10	2,550	0
	1944	24	4,033	0	0	3	535	21	3,498	0
	1945	20	135,584	5	93,154	3	25,400	12	17,030	5
Kinmundy	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
La Grange	1943	67	122,145	16	80,000	18	3,969	33	38,176	16
	1944	71	128,056	18	95,500	17	4,303	36	28,253	19
	1945	139	492,016	72	410,200	19	7,650	48	74,166	72
La Grange Park	1943	3	9,400	0	0	0	0	3	9,400	0
	1944	2	25,000	0	0	1	12,000	1	13,000	0
	1945	85	1,004,200	78	671,500	4	330,950	3	1,750	78

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

EAST NORTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Illinois—Continued										
Lake Bluff	1943	38	$32,186	5	$22,400	4	$1,915	29	$7,871	5
	1944	36	12,881	0	0	1	400	35	12,481	0
	1945	33	17,666	1	7,100	2	1,000	30	9,566	1
Lake Forest	1943	83	52,373	1	4,000	8	8,563	74	39,810	1
	1944	67	88,520	1	5,500	12	16,020	54	67,000	1
	1945	74	134,222	3	24,500	10	24,027	61	85,695	3
Lansing	1943	171	392,117	72	352,400	81	15,117	18	24,600	72
	1944	83	86,962	4	18,500	63	65,012	16	3,450	4
	1945	120	368,013	13	82,600	69	240,163	38	45,250	13
Lawrenceville	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
Lebanon	1943	2	1,100	0	0	0	0	2	1,100	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Libertyville	1943	78	111,860	16	80,000	18	13,405	44	18,455	16
	1944	54	22,873	0	0	10	3,200	44	19,673	0
	1945	93	326,149	8	41,000	30	205,516	55	79,633	10
Lincolnwood	1943	23	155,700	0	0	15	152,800	8	2.900	0
	1944	34	195,925	30	186,500	2	400	2	9,025	30
	1945	35	745,765	13	159,455	9	570,510	13	15,800	13
Livingston	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Lombard	1943	38	14,077	0	0	22	4,512	16	9,565	0
	1944	48	19,002	0	0	32	8,667	16	10,335	0
	1945	128	457,926	52	392,481	42	38,235	34	27,210	52
Lyons	1943	109	370,380	51	349,200	6	1,185	52	19,995	76
	1944	71	161,705	29	141,800	6	1,250	36	18,655	30
	1945	155	349,745	37	258,900	28	44,920	90	45,925	38
Marengo	1943	7	6,050	0	0	5	5,300	2	750	0
	1944	8	4,450	0	0	6	3,150	2	1,300	0
	1945	49	94,352	13	66,500	13	8,450	23	19,402	13
Marion	1943	4	3,400	3	2,400	0	0	1	1,000	3
	1944	5	7,367	0	0	2	650	3	6,717	0
	1945	1	500	0	0	0	0	1	500	0
Markham	1943	119	27,528	1	2,000	92	18,456	26	7,072	1
	1944	37	13,606	2	1,400	23	6,479	12	5,727	1
	1945	67	78,490	3	6,000	38	17,560	26	54,930	3
Mascoutah	1943	36	9,213	0	0	0	0	36	9,213	0
	1944	51	17,728	1	3,500	8	2,058	42	12,170	1
	1945	44	46,695	4	26,000	11	12,500	29	8,195	4
Matteson	1943	5	7,300	1	3,000	0	0	4	4,300	1
	1944	9	30,950	1	5,000	3	23,250	5	2,700	1
	1945	9	12,250	1	5,000	2	2,300	6	4,950	1
Maywood	1943	273	106,947	1	5,500	26	7,060	246	94,387	1
	1944	305	94,952	0	0	20	23,325	285	71,627	0
	1945	363	818,275	1	9,500	32	686,390	330	122,385	1
Melrose Park	1943	400	946,900	126	600,000	75	24,995	199	321,905	150
	1944	226	64,983	0	0	52	6,565	174	58,418	0
	1945	295	859,390	55	280,600	34	458,220	206	120,570	63
Midlothian	1943	76	17,307	0	0	33	5,537	43	11,770	0
	1944	74	20,587	1	3,900	18	2,500	55	14,187	1
	1945	60	39,768	1	16,000	19	3,775	40	19,993	1
Mokena	1943	2	3,200	0	0	1	200	1	3,000	0
	1944	0	0	0	0	0	0	0	0	0
	1945	8	15,550	3	9,500	5	6,050	0	0	4
*Moline	1943	1,933	325,255	0	0	82	37,280	1,851	287,975	0
	1944	1,883	733,706	0	0	75	301,969	1,808	431,737	0
	1945	2,015	830,799	15	97,690	102	259,138	1,898	473,971	15
Montgomery	1944	3	44,650	0	0	1	42,000	2	2,650	0
	1945	10	33,250	1	4,500	4	6,900	5	21,850	1
Morris	1943	13	4,602	1	1,000	1	900	11	2,702	1
	1944	10	32,290	6	30,000	2	1,115	2	1,175	6
	1945	11	65,820	0	0	5	61,500	6	4,320	0
Morton	1945	30	155,250	9	54,300	10	93,400	11	7,550	9
Morton Grove	1943	3	13,500	3	13,500	0	0	0	0	3
	1944	21	91,360	10	56,000	7	23,460	4	11,900	10
	1945	58	247,920	12	87,500	32	46,120	14	114,300	12
Mound City	1943	6	1,385	3	1,000	1	35	2	350	3
	1944	5	1,825	2	1,225	0	0	3	600	2
	1945	12	9,078	6	3,500	1	5,000	5	578	6
Mounds	1943	0	0	0	0	0	0	0	0	0
	1944	5	40,500	4	10,500	1	30,000	0	0	4
	1945	2	4,500	1	2,000	1	2,500	0	0	1

* In sample of 257 cities. See text and tables, pp. 12 to 16.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

EAST NORTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
llinois—Continued										
Mount Olive	1943	41	$6,410	0	0	0	0	41	$6,410	0
	1944	78	16,570	0	0	0	0	78	16,570	0
	1945	52	27,250	0	0	0	0	52	27,250	0
Mount Prospect	1943	42	113,751	20	$108,000	12	$4,086	10	1,665	20
	1944	15	5,176	0	0	9	3,711	6	1,465	0
	1945	65	384,505	35	296,900	19	73,785	11	13,820	35
Mt. Pulaski	1943	1	300	0	0	0	0	1	300	0
	1944	5	34,000	0	0	2	31,000	3	3,000	0
	1945	1	1,000	0	0	0	0	1	1,000	0
Mount Sterling	1945	2	8,000	0	0	2	8,000	0	0	0
Mundelein	1943	75	290,825	64	288,900	11	1,925	0	0	64
	1944	4	1,800	0	0	3	600	1	1,200	0
	1945	27	21,575	0	0	14	4,675	13	16,900	0
Murphysboro	1943	0	0	0	0	0	0	0	0	0
	1944	3	9,800	0	0	1	5,000	2	4,800	0
	1945	0	0	0	0	0	0	0	0	0
Naperville	1943	67	14,617	1	1,400	35	4,946	31	8,271	2
	1944	61	64,440	3	15,000	17	25,675	41	23,765	4
	1945	106	304,914	18	112,025	38	105,789	50	87,100	19
New Athens	1943	2	1,300	0	0	2	1,300	0	0	0
	1944	4	5,300	0	0	4	5,300	0	0	0
	1945	8	18,750	5	16,500	3	2,250	0	0	5
Niles	1943	41	22,946	0	0	39	16,796	2	6,150	0
	1944	19	15,590	1	6,000	11	2,300	7	7,290	1
	1945	63	305,265	41	240,400	15	57,865	7	7,000	41
Nokomis	1943	2	1,100	0	0	2	1,100	0	0	0
	1944	3	10,500	2	4,000	0	0	1	6,500	2
	1945	2	3,000	1	2,500	0	0	1	500	1
Normal	1943	14	11,105	0	0	5	3,700	9	7,405	0
	1944	18	8,545	1	300	9	4,100	8	4,145	1
	1945	37	110,035	9	83,150	18	13,050	10	13,835	16
North Aurora	1943	1	200	0	0	1	200	0	0	0
	1944	5	5,550	0	0	1	200	4	5,350	0
	1945	9	10,400	4	3,500	3	6,500	2	400	4
Northbrook	1943	21	4,766	0	0	14	2,505	7	2,261	0
	1944	35	19,852	0	0	8	7,850	27	12,002	0
	1945	35	117,389	6	62,000	11	42,100	18	13,289	6
North Chicago	1943	133	537,696	0	0	15	498,325	118	39,371	0
	1944	120	199,014	4	16,500	14	140,400	102	42,114	4
	1945	140	820,334	3	17,000	19	739,319	118	64,015	3
North Riverside	1945	39	240,300	34	238,500	4	1,500	1	300	34
Oak Lawn	1943	38	11,129	0	0	29	8,059	9	3,070	0
	1944	18	8,795	1	2,500	9	2,220	8	4,075	1
	1945	73	203,725	21	98,600	27	94,885	25	10,240	21
*Oak Park	1943	208	152,035	14	67,200	23	4,260	171	80,575	14
	1944	254	182,195	0	0	30	6,215	224	175,980	0
	1945	299	570,503	5	73,500	36	122,130	258	374,873	16
Odin	1943	0	0	0	0	0	0	0	0	0
	1944	6	1,400	0	0	0	0	6	1,400	0
	1945	6	5,300	0	0	1	500	5	4,800	0
Oglesby	1944	13	7,525	0	0	7	2,225	6	5,300	0
	1945	20	39,985	5	25,000	12	12,835	3	2,150	5
Ottawa	1943	9	170,095	2	7,000	4	156,170	3	6,925	3
	1944	123	243,906	120	193,187	1	43,548	2	7,171	120
	1945	5	91,101	0	0	5	91,101	0	0	0
Palatine	1943	3	1,250	0	0	1	500	2	750	0
	1944	26	114,550	21	113,400	2	400	3	750	21
	1945	67	343,225	50	325,000	11	9,775	6	8,450	50
Paris	1944	32	43,145	3	1,600	15	29,640	14	11,905	3
	1945	207	243,704	8	29,800	101	165,511	98	48,393	8
Park Ridge	1943	322	758,293	126	695,200	11	9,399	185	53,694	126
	1944	304	833,049	143	762,200	44	21,750	117	49,099	143
	1945	374	1,345,540	104	1,042,750	41	134,390	229	168,400	104
*Peoria	1943	1,728	497,130	1	5,000	64	21,223	1,663	470,907	1
	1944	1,231	992,426	1	2,400	40	253,055	1,190	736,971	1
	1945	964	2,317,819	51	302,400	80	1,293,651	833	721,768	51
Peoria Heights	1943	34	26,191	0	0	16	5,185	18	21,006	0
	1944	98	313,330	62	295,100	12	4,340	24	13,890	62
	1945	62	126,623	6	39,900	21	33,785	35	52,938	6
Petersburg	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Plainfield	1943	3	575	0	0	1	25	2	550	0
	1944	1	150	0	0	1	150	0	0	0
	1945	8	16,850	1	10,000	5	6,250	2	600	1

* In sample of 257 cities. See text and tables, pp. 12 to 16.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

EAST NORTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Illinois—Continued										
Posen	1943	8	$3,000	0	0	7	$2,700	1	$300	0
	1944	2	4,000	2	$4,000	0	0	0	0	2
	1945	8	15,400	6	14,600	1	500	1	300	6
Princeton	1944	16	36,230	0	0	10	32,815	6	3,415	0
	1945	26	105,200	4	19,500	16	77,400	6	8,300	4
*Quincy	1943	64	47,346	1	2,000	32	14,910	31	30,436	1
	1944	46	167,150	2	400	28	163,600	16	3,150	2
	1945	91	173,938	8	26,100	43	85,143	40	62,695	8
Richton Park	1945	5	21,500	2	10,500	0	0	3	11,000	3
Riverdale	1943	52	201,263	34	170,000	14	30,590	4	673	34
	1944	118	645,838	90	449,400	13	182,573	15	13,865	90
	1945	86	1,101,357	56	318,550	22	775,067	8	7,740	56
River Forest	1943	30	42,618	0	0	8	37,375	22	5,243	0
	1944	31	25,596	0	0	6	2,160	25	23,436	0
	1945	41	368,490	11	330,000	5	2,950	25	35,540	46
River Grove	1943	60	9,430	0	0	18	2,795	42	6,635	0
	1944	80	116,819	15	90,000	13	8,110	52	18,709	15
	1945	104	111,523	15	74,500	16	17,970	73	19,053	15
Riverside	1943	38	40,860	2	28,000	14	1,829	22	11,031	8
	1944	41	71,464	5	48,000	5	1,170	31	22,294	10
	1945	60	234,627	17	213,200	5	925	38	20,502	21
Rockdale	1943	38	10,370	0	0	0	0	38	10,370	0
	1944	30	5,380	0	0	0	0	30	5,380	0
	1945	9	1,200	0	0	0	0	9	1,200	0
*Rockford	1943	531	732,393	49	214,000	65	175,405	417	342,988	61
	1944	709	1,108,710	81	320,500	84	268,779	544	519,431	83
	1945	765	2,325,336	126	556,000	119	890,356	520	878,980	131
*Rock Island	1943	2,091	849,522	65	286,298	217	61,353	1,809	501,871	65
	1944	2,061	848,067	20	96,000	166	294,705	1,875	457,362	20
	1945	2,133	2,258,149	72	420,449	178	360,064	1,883	1,477,636	72
Roodhouse	1943	4	3,000	0	0	0	0	4	3,000	0
	1944	10	5,200	0	0	1	500	9	4,700	0
	1945	26	22,700	0	0	0	0	26	22,700	0
Roselle	1943	8	1,500	0	0	8	1,500	0	0	0
	1944	3	4,050	1	3,500	2	550	0	0	1
	1945	8	16,400	1	4,800	7	11,600	0	0	1
Rosiclare	1943	0	0	0	0	0	0	0	0	0
	1944	1	8,000	0	0	1	8,000	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Roundlake	[1]1945	15	21,755	2	9,000	6	11,305	7	1,450	2
Roundlake Beach	[1]1945	40	25,740	0	0	12	4,855	28	20,885	0
St. Charles	1944	37	64,507	0	0	9	1,800	28	62,707	0
	1945	33	131,300	4	20,000	14	79,500	15	31,800	4
Salem	1943	41	25,090	0	0	7	3,400	34	21,690	0
	1944	25	27,400	0	0	12	22,100	13	5,300	0
	1945	84	141,012	22	78,500	25	24,390	37	38,122	19
Schiller Park	1943	3	523	0	0	3	523	0	0	0
	1944	12	9,972	0	0	6	3,312	6	6,660	0
	1945	13	25,000	3	17,400	8	2,400	2	5,200	3
Silvis	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	78	74,355	2	7,500	3	42,800	73	24,055	2
Skokie	1943	78	234,154	40	220,000	27	5,463	11	8,691	60
	1944	43	99,758	13	78,000	13	2,408	17	19,350	[illegible]
	1945	167	1,152,115	125	1,055,400	26	69,440	16	27,275	[illegible]
South Beloit	1943	12	4,114	2	500	4	585	6	3,029	[illegible]
	1944	9	6,473	1	1,800	0	0	8	4,673	[illegible]
	1945	8	4,495	0	0	6	2,295	2	2,200	[illegible]
South Chicago Heights	1945	22	12,635	0	0	17	10,335	5	2,300	[illegible]
South Elgin	1945	24	13,660	3	8,500	5	2,445	16	2,715	[illegible]
South Holland	1943	50	20,937	1	5,000	27	9,515	22	6,422	
	1944	43	28,160	0	0	19	19,905	24	8,255	
	1945	39	32,290	1	4,500	19	12,770	19	15,020	
South Pekin	1943	6	1,700	0	0	2	300	4	1,400	
	1944	3	2,000	0	0	1	200	2	1,800	
	1945	1	500	0	0	0	0	1	500	
Sparta	1943	3	2,068	0	0	2	700	1	1,368	
	1944	2	6,000	0	0	0	0	2	6,000	
	1945	9	51,550	1	9,000	2	10,700	6	31,850	
*Springfield	1943	311	188,702	16	52,165	43	10,635	252	125,902	[illegible]
	1944	387	425,061	10	21,175	53	162,685	324	241,201	[illegible]
	1945	539	816,261	39	147,150	64	193,970	436	475,141	[illegible]

* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

EAST NORTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
llinois—Continued										
Steger	1945	0	0	0	0	0	0	0	0	0
Sterling	1943	269	$123,175	15	$75,000	68	$30,370	186	$17,805	15
	1944	202	207,860	13	73,500	24	89,315	165	45,045	13
	1945	256	263,730	18	93,500	52	47,625	186	122,605	28
Stickney	1943	10	2,975	0	0	4	1,900	6	1,075	0
	1944	55	234,700	43	223,600	5	8,500	7	2,600	43
	1945	58	225,182	30	198,900	15	21,550	13	4,732	30
Stockton	1943	0	0	0	0	0	0	0	0	0
Streator	1943	53	28,654	2	3,000	11	4,324	40	21,330	2
	1944	39	39,214	1	1,800	14	20,100	24	17,314	1
	1945	24	53,515	5	15,500	5	9,800	14	28,215	7
Summit	1943	30	59,560	10	50,000	8	970	12	8,590	10
	1944	25	23,803	1	4,000	10	8,698	14	11,105	1
	1945	40	527,193	3	18,500	25	504,101	12	4,592	5
Swansea	[1]1945	1	1,000	0	0	0	0	1	1,000	0
Sycamore	1943	22	90,308	13	54,650	2	8,000	7	27,658	13
	1944	15	52,365	2	1,000	5	41,665	8	9,700	2
Taylorville	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Thornton	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	4	6,400	1	3,000	3	3,400	0	0	1
Tilton	1943	1	200	0	0	1	200	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Tinley Park	1943	9	1,600	0	0	4	700	5	900	0
	1944	6	11,500	2	7,500	3	500	1	3,500	2
	1945	19	54,050	6	36,500	9	14,750	4	2,800	6
Urbana	1943	26	37,865	0	0	4	700	22	37,165	0
	1944	31	41,055	0	0	4	4,000	27	37,055	0
	1945	84	309,870	18	85,140	13	150,100	53	74,630	18
Villa Grove	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Villa Park	1943	50	17,350	1	4,500	36	6,655	13	6,195	1
	1944	41	20,380	2	6,600	15	2,530	24	11,250	2
	1945	78	150,115	16	90,710	26	16,235	36	43,170	16
Warren	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	5	36,000	3	19,000	0	0	2	17,000	3
Washington Park	1943	9	27,000	9	27,000	0	0	0	0	9
	1944	3	4,500	3	4,500	0	0	0	0	3
	1945	28	38,425	10	20,500	12	12,975	6	4,950	10
Watseka	1943	3	4,000	0	0	0	0	3	4,000	0
	1944	10	14,500	1	700	5	1,450	4	12,350	1
	1945	17	35,650	3	3,700	5	10,400	9	21,550	3
Waukegan	1943	514	571,413	38	186,500	56	165,503	420	219,410	44
	1944	465	582,803	54	237,000	24	77,048	387	268,755	54
	1945	504	747,840	65	293,500	48	154,410	391	299,930	73
Westchester	1943	68	228,000	43	215,000	20	4,000	5	9,000	43
	1944	102	356,200	70	350,000	28	5,600	4	600	70
	1945	184	786,550	111	741,800	37	11,800	36	32,950	111
West Chicago	1943	3	4,750	1	4,000	1	250	1	500	1
	1944	17	21,950	3	12,000	11	4,750	3	5,200	3
	1945	36	88,446	6	28,000	17	52,325	13	8,121	6
West Dundee	1943	36	6,774	0	0	2	800	34	5,974	0
	1944	31	10,523	0	0	3	1,150	28	9,373	0
	1945	40	20,375	2	7,500	9	7,025	29	5,850	2
Western Springs	1943	38	11,258	0	0	15	2,605	23	8,653	0
	1944	42	163,920	19	148,000	6	1,250	17	14,670	24
	1945	88	344,170	31	274,600	26	43,220	31	26,350	31
Westmont	1944	31	11,100	0	0	9	4,100	22	7,000	0
	1945	42	87,300	6	30,000	16	30,800	20	26,500	6
Wheaton	1943	42	21,600	3	9,000	20	4,020	19	8,580	3
	1944	61	55,325	3	14,500	18	20,742	40	20,083	3
	1945	58	320,626	12	260,300	19	12,241	27	48,085	11
Wheeling	1943	3	1,075	0	0	2	850	1	225	0
	1944	2	4,800	0	0	2	4,800	0	0	0
	1945	7	9,750	1	5,000	4	2,250	2	2,500	1
Willow Springs	1943	1	600	0	0	1	600	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0

[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

EAST NORTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Illinois—Continued										
Wilmette	1943	49	$11,844	0	0	12	$2,412	37	$9,432	0
	1944	56	15,405	0	0	7	1,025	49	14,380	0
	1945	100	500,775	26	$369,200	18	59,700	56	71,875	26
Winnetka	1943	34	11,110	0	0	8	1,560	26	9,550	0
	1944	30	43,715	0	0	6	21,000	24	22,715	0
	1945	77	279,055	7	107,000	14	87,430	56	84,625	7
Winthrop Harbor	1945	7	9,000	7	9,000	0	0	0	0	7
Wood Dale	1945	50	59,135	10	37,550	22	11,185	18	10,400	12
Worth	1943	9	5,150	0	0	7	2,000	2	3,150	0
	1944	6	10,400	2	9,000	1	100	3	1,300	2
	1945	14	21,125	5	16,500	7	3,675	2	950	5
Zion	1943	53	14,863	1	195	31	11,034	21	3,634	1
	1944	75	58,263	7	10,220	14	35,187	54	12,856	7
	1945	126	128,045	21	65,000	37	32,810	68	30,235	21
Indiana:										
*Anderson	1943	106	427,335	48	186,400	14	221,425	44	19,510	51
	1944	63	495,140	39	143,200	8	338,500	16	13,440	45
	1945	669	1,225,340	182	597,115	100	452,810	387	175,415	185
Angola	1943	2	900	0	0	1	800	1	100	0
	1944	4	11,800	0	0	2	11,000	2	800	0
Attica	1943	5	1,350	1	300	3	800	1	250	1
	1944	6	12,100	0	0	4	9,800	2	2,300	0
	1945	16	39,600	1	10,000	12	24,900	3	4,700	1
Auburn	1943	10	6,775	0	0	5	1,525	5	5,250	0
	1944	4	41,100	2	25,200	1	900	1	15,000	1
	1945	9	68,950	2	4,500	4	61,350	3	3,100	2
Batesville	1943	4	650	0	0	2	340	2	310	0
	1944	17	19,905	0	0	10	17,015	7	2,890	0
	1945	29	200,150	0	0	23	195,600	6	4,550	0
Bedford	1943	9	61,087	0	0	4	41,362	5	19,725	0
	1944	13	200,590	0	0	8	186,535	5	14,055	0
Beech Grove	1943	79	23,788	2	8,000	7	1,470	70	14,318	2
	1944	143	305,086	61	285,500	11	2,325	71	17,261	61
	[1] 1945	116	184,741	26	149,070	21	11,057	69	24,614	27
Bluffton	1943	33	7,675	0	0	2	350	31	7,325	0
	1944	37	13,650	3	900	4	1,550	30	11,200	3
	[2] 1945	72	154,145	10	35,200	16	105,325	46	13,620	10
Chesterton	1943	73	13,831	1	1,200	15	4,115	57	8,516	1
	1944	47	30,500	2	5,700	3	9,350	42	15,450	2
	1945	68	82,685	7	35,500	9	9,545	52	37,640	7
Crawfordsville	1943	31	4,043	0	0	3	550	28	3,493	0
	1944	47	118,284	0	0	18	112,675	29	5,609	0
	1945	72	1,236,789	19	70,400	15	1,095,600	38	70,789	19
Decatur	1943	14	3,105	2	900	4	655	8	1,550	2
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
*East Chicago	1943	304	1,765,295	8	27,550	58	1,527,050	238	210,695	8
	1944	291	1,046,380	42	199,760	50	679,077	199	167,543	42
	1945	284	2,435,663	18	68,400	64	1,474,823	202	892,440	18
East Gary	1943	33	18,596	5	7,500	11	4,426	17	6,670	5
	1944	33	34,615	6	17,800	11	3,840	16	12,975	6
	1945	44	44,840	8	21,700	14	8,250	22	14,890	8
Elkhart	1943	436	149,949	1	450	29	14,448	406	135,051	1
	1944	718	418,301	16	47,425	48	41,565	654	329,311	16
Evansville	1943	1,983	4,116,248	1,777	3,804,280	21	70,515	185	241,453	1,918
	1944	1,577	1,531,572	351	795,404	121	246,946	1,105	489,222	351
	1945	1,853	2,598,904	73	371,000	230	1,283,170	1,550	944,734	123
Farmersburg	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
*Fort Wayne	1943	668	1,157,737	80	383,750	120	503,212	468	270,775	82
	1944	666	1,094,362	105	545,150	112	182,865	449	366,347	118
	1945	936	2,254,790	139	824,304	183	522,380	614	908,106	142
Frankfort	1943	36	4,390	1	400	4	480	31	3,510	1
	1944	8	6,680	2	2,150	2	1,400	4	3,130	2
	1945	25	83,190	11	18,050	12	58,800	2	6,340	11
Franklin	1943	62	55,822	6	7,350	8	37,967	48	10,505	6
	1944	103	38,047	7	14,100	7	1,330	89	22,617	7
	1945	136	85,398	11	29,850	19	29,823	106	25,725	11
Garrett	1943	17	20,500	0	0	6	16,100	11	4,400	0
	1944	15	30,600	3	6,000	7	18,100	5	6,500	2
	1945	17	14,000	0	0	11	3,800	6	10,200	0

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* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

[2] 10 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

EAST NORTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Indiana—Continued										
*Gary	1943	677	$1,632,237	81	$282,832	152	$1,081,604	444	$267,801	84
	1944	952	2,221,081	335	1,328,636	159	426,872	458	465,573	337
	1945	924	3,061,827	302	1,340,720	201	1,024,241	421	696,866	303
Goshen	1943	77	83,635	5	4,199	26	8,175	46	71,261	5
	1944	108	163,273	1	1,800	40	100,588	67	60,885	1
	1945	157	446,528	29	122,260	40	151,405	88	172,863	29
Greenfield	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	5	38,000	2	3,000	3	35,000	0	0	2
Greensburg	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Greenwood	1943	2	700	0	0	0	0	2	700	0
	1944	9	2,470	0	0	7	2,120	2	350	0
	1945	48	38,143	5	22,100	5	1,775	38	14,268	5
Griffith	1943	26	15,000	2	9,000	21	4,750	3	1,250	2
	1944	23	35,850	0	0	18	31,650	5	4,200	0
	1945	52	154,650	5	23,500	27	120,650	20	10,500	5
*Hammond	1943	1,303	2,394,800	135	763,000	284	1,125,500	884	506,300	164
	1944	1,291	1,963,800	166	873,000	206	485,600	919	605,200	166
	1945	1,383	6,062,935	225	1,305,000	387	4,219,935	771	538,000	227
Highland	1943	57	21,820	1	6,000	41	9,525	15	6,295	1
	1944	49	59,420	9	41,500	21	12,425	19	5,495	9
	1945	81	178,273	16	91,900	40	58,673	25	27,700	16
Hobart	1943	52	89,267	12	8,290	14	72,057	26	8,920	12
	1944	120	326,455	41	261,000	45	42,565	34	22,890	41
	1945	186	403,115	52	291,000	57	65,525	77	46,590	52
Huntington	1943	24	8,730	0	0	12	5,025	12	3,705	0
	1944	34	133,325	21	87,225	4	25,250	9	20,850	21
	1945	89	232,065	36	142,200	36	63,425	17	26,440	36
*Indianapolis	1943	2,241	2,997,251	211	818,101	392	1,378,946	1,638	800,204	308
	1944	1,868	6,048,693	431	1,473,380	16	3,392,111	1,421	1,183,202	494
	1945	2,389	6,873,891	477	2,449,080	42	1,218,117	1,870	3,206,694	523
Jasper	1943	19	4,780	0	0	6	675	13	4,105	0
	1944	22	14,430	0	0	7	8,600	15	5,830	0
	1945	20	35,869	1	12,000	9	14,200	10	9,669	1
Jeffersonville	1943	40	166,950	8	8,200	20	117,467	12	41,283	8
	1944	20	79,647	9	24,450	2	51,982	9	3,215	10
	1945	57	592,956	40	128,700	15	440,859	2	23,397	39
*Kokomo	1943	202	202,175	8	16,385	30	64,030	164	121,760	12
	1944	196	380,374	45	153,085	43	178,036	108	49,253	58
	1945	267	646,736	31	41,025	94	202,775	142	402,936	32
Lafayette	1943	45	174,000	27	144,900	0	0	18	29,100	48
	1944	52	191,990	23	89,200	3	33,000	26	69,790	23
	1945	157	484,145	75	353,700	13	46,050	69	84,395	75
Lakeland	1943	62	13,699	6	3,050	38	8,679	18	1,970	6
	1944	42	10,780	6	2,550	23	6,015	13	2,215	6
	1945	40	18,050	6	5,500	14	3,100	20	9,450	6
La Porte	1943	172	74,865	6	4,500	54	18,045	112	52,320	6
	1944	136	105,063	5	2,850	21	47,190	110	55,023	5
	1945	172	205,315	5	8,300	51	137,450	116	59,565	5
Linton	1943	33	15,200	0	0	0	0	33	15,200	0
	1944	54	20,000	0	0	5	1,300	49	18,700	0
Logansport	1943	44	17,335	0	0	3	540	41	16,795	0
	1944	37	89,780	0	0	5	82,100	32	7,680	0
	1945	79	133,685	13	80,700	16	17,275	50	35,710	13
Marion	1943	116	259,009	13	3,035	27	50,304	76	205,670	13
	1944	136	145,478	31	83,390	23	40,849	82	21,239	31
	1945	193	165,912	23	43,165	45	62,112	125	60,635	23
Michigan City	1943	288	99,752	15	48,000	129	20,831	144	30,921	17
	1944	268	106,375	1	850	64	45,420	203	60,105	1
	1945	354	622,344	32	149,600	82	344,099	240	128,645	31
Mishawaka	1943	535	143,298	13	6,600	71	28,191	451	108,507	13
	1944	419	201,722	22	41,735	74	53,088	323	106,899	22
	1945	418	365,788	48	115,315	96	130,421	274	120,052	48
Montpelier	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	1	8,000	0	0	0	0	1	8,000	0
*Muncie	1943	410	70,797	0	0	66	9,631	344	61,166	0
	1944	416	458,124	25	69,900	64	234,114	327	154,110	25
	1945	649	611,585	77	211,100	132	237,290	440	163,195	77
Munster	1943	61	200,058	20	190,000	28	5,788	13	4,270	40
	1944	59	93,581	11	63,000	24	14,306	24	16,275	11
	1945	92	249,253	35	206,500	26	24,762	31	17,991	35

* In sample of 257 cities. See text and tables, pp. 12 to 16.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

EAST NORTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Indiana—Continued										
Nappanee	1943	11	$4,075	0	0	7	$3,025	4	$1,050	0
	1944	13	3,790	0	0	4	1,800	9	1,990	0
	1945	33	106,030	4	$9,700	12	78,730	17	17,600	4
New Albany	1943	34	22,202	7	2,950	10	5,250	17	14,002	7
	1944	59	52,335	12	7,700	24	40,840	23	3,795	12
	1945	97	142,298	34	64,300	31	51,155	32	26,843	34
New Castle	1943	45	124,025	28	115,400	9	6,175	8	2,450	32
	1944	27	20,348	8	5,075	7	6,328	12	8,945	3
	1945	79	159,290	31	85,850	29	29,340	19	44,100	31
New Haven	1943	4	117,032	1	2,500	3	114,532	0	0	1
	1944	6	22,000	5	21,000	0	0	1	1,000	5
	1945	18	74,100	8	45,200	5	11,900	5	17,000	8
Noblesville	1943	11	2,980	0	0	3	1,080	8	1,900	0
	1944	20	11,668	2	3,000	4	1,050	14	7,618	2
	1945	27	39,465	6	17,000	9	11,425	12	11,040	6
North Manchester	1943	12	34,900	1	2,800	6	26,300	5	5,800	4
	1944	6	38,400	0	0	2	32,600	4	5,800	0
	1945	11	77,200	4	26,000	6	51,000	1	200	4
North Vernon	1943	17	10,700	5	6,500	10	3,500	2	700	5
	1944	8	7,600	3	3,700	5	3,900	0	0	3
	1945	36	72,500	9	25,500	20	31,400	7	15,600	9
Peru	1943	99	30,833	0	0	4	4,075	95	26,758	0
	1944	109	57,710	1	16,000	6	2,100	102	39,610	0
	1945	98	69,234	5	14,000	4	1,500	89	53,734	5
*Richmond	1943	249	222,405	61	159,800	13	8,285	175	54,320	61
	1944	311	135,742	5	6,000	5	23,930	301	105,812	5
	1945	376	368,922	24	58,550	49	123,885	303	186,487	24
Rocky Ripple	1943	0	0	0	0	0	0	0	0	0
	1944	8	14,550	5	13,000	1	400	2	1,150	5
	1945	6	6,129	1	3,800	2	739	3	1,590	1
Seymour	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Shelbyville	1943	148	11,471	32	4,238	0	0	116	7,233	32
	1944	113	62,636	10	3,099	1	12,000	102	47,537	0
	1945	113	112,756	0	0	8	64,000	105	48,756	0
*South Bend	1943	1,784	2,694,465	77	362,250	34	1,918,545	1,673	413,670	101
	1944	1,975	3,039,527	483	1,789,409	14	462,328	1,478	787,790	483
	1945	2,282	6,437,110	390	2,041,795	49	2,713,750	1,843	1,681,565	398
Speedway	1943	10	59,097	8	58,900	1	10	1	187	13
	1944	12	31,285	3	12,600	4	17,075	5	1,610	3
	1945	6	86,700	3	20,000	1	60,000	2	6,700	3
Tell City	1943	59	536,245	0	0	41	529,510	18	6,735	0
	1944	70	209,730	16	54,650	37	146,470	17	8,610	16
	1945	121	165,469	24	61,800	44	74,500	53	29,169	23
*Terre Haute	1943	336	373,468	2	4,500	50	294,771	284	74,197	2
	1944	297	490,595	0	0	43	185,618	254	304,977	0
	1945	343	596,108	0	0	79	387,755	264	208,353	0
Thorntown	1943	2	500	0	0	1	250	1	250	0
	1944	3	1,600	0	0	1	1,200	2	400	0
	1945	5	4,600	0	0	2	3,300	3	1,300	0
Tipton	1943	6	1,100	0	0	1	50	5	1,050	0
	1944	22	8,170	5	1,425	11	3,995	6	2,750	5
	1945	25	16,120	0	0	8	3,920	17	12,200	0
Valparaiso	1943	104	114,267	5	3,600	24	87,787	75	22,880	5
	1944	148	96,155	2	9,000	42	55,804	104	31,351	2
	1945	135	323,414	25	114,400	25	180,800	85	28,214	26
Vevay	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Washington	1943	56	6,812	0	0	11	1,680	45	5,132	0
	1944	90	14,889	1	700	20	5,620	69	8,569	1
Westfield	1944	57	12,200	0	0	5	1,000	52	11,200	0
	1945	0	0	0	0	0	0	0	0	0
West Lafayette	1943	3	5,850	0	0	2	5,650	1	200	0
	1944	2	1,300	0	0	1	1,000	1	300	0
	[1]1945	25	131,761	13	107,011	3	5,800	9	18,950	16
Whiting	1943	49	14,563	0	0	1	300	48	14,263	0
	1944	65	39,092	0	0	5	5,692	60	33,400	0
	1945	79	138,700	2	9,500	4	8,400	73	120,800	5
Woodruff Place	1943	2	200	0	0	2	200	0	0	0
	1944	1	3,000	0	0	0	0	1	3,000	0
	1945	8	17,200	0	0	1	200	7	17,000	0

* In sample of 257 cities. See text and tables, pp. — to —.

[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

EAST NORTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Michigan:										
Adrian	1943	528	$1,807,505	440	$1,712,100	5	$31,200	83	$64,205	468
	1944	125	169,032	6	17,400	26	88,200	93	63,432	3
	1945	211	308,125	0	0	76	230,500	135	77,625	0
Algonac	1943	18	4,875	1	1,000	9	1,925	8	1,950	1
	1944	41	17,125	4	4,000	11	2,925	26	10,200	4
	1945	38	51,860	12	20,650	13	20,485	13	10,725	12
Allen Park	1943	232	1,065,586	201	1,019,900	13	2,920	18	42,766	201
	1944	50	172,450	15	75,000	23	83,100	12	14,350	15
	1945	218	905,637	93	649,775	102	238,287	23	17,575	93
Alpena	1943	32	7,600	2	1,000	4	2,050	26	4,550	2
	1944	45	43,050	1	6,000	18	26,625	26	10,425	1
	1945	95	117,245	17	55,250	27	15,050	51	46,945	17
Ann Arbor	1943	633	606,200	32	165,896	31	60,599	570	379,705	32
	1944	587	714,352	6	30,000	31	141,156	550	543,196	6
	1945	752	1,839,108	25	1,238,400	44	103,590	683	497,118	37
Augusta	1943	0	0	0	0	0	0	0	0	0
	1944	1	1,500	0	0	1	1,500	0	0	0
*Battle Creek	1943	451	1,471,135	137	357,172	91	820,380	223	293,583	137
	1944	33	80,740	0	0	4	32,290	29	48,450	0
	1945	378	595,490	36	151,300	134	230,800	208	213,390	36
*Bay City	1943	1,435	2,161,824	508	1,160,400	145	785,146	782	216,278	508
	1944	807	365,180	13	34,050	68	39,452	726	291,678	13
	1945	1,100	1,111,314	60	230,570	139	449,640	901	431,104	60
Belding	1943	5	1,850	1	500	1	350	3	1,000	1
	1944	15	5,550	2	800	5	1,300	8	3,450	2
	[2] 1945	12	16,850	1	1,000	9	15,200	2	650	1
Belleville	1943	13	6,290	0	0	4	3,100	9	3,190	0
	1944	19	11,500	0	0	10	7,150	9	4,350	0
	1945	10	17,675	3	6,575	3	10,000	4	1,100	3
Benton Harbor	1943	681	907,132	214	722,296	54	43,945	413	140,891	214
	1944	480	312,421	10	38,750	37	125,870	433	147,801	10
	1945	622	629,319	51	238,550	59	231,242	512	159,527	51
Berkley	1943	238	717,421	156	678,200	34	8,324	48	30,897	156
	1944	125	240,842	30	133,500	34	79,422	61	27,920	30
	1945	269	778,248	71	427,000	128	320,594	70	30,654	71
Birmingham	1943	164	391,828	65	339,900	12	3,865	87	48,063	65
	1944	114	181,074	24	132,000	11	9,844	79	39,230	24
	1945	172	596,625	53	428,055	36	95,340	83	73,230	53
Bloomfield Hills	1943	6	5,650	0	0	5	5,150	1	500	0
	1944	5	18,700	0	0	1	1,200	4	17,500	0
	1945	10	124,500	2	55,000	3	10,500	5	59,000	2
Bridgman	1943	7	21,400	0	0	2	19,300	5	2,100	0
	1944	5	8,600	3	7,900	1	200	1	500	3
	1945	13	32,050	4	15,500	6	13,050	3	3,500	4
Carleton	1943	12	3,350	4	1,850	6	1,300	2	200	4
Cass City	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Clare	1943	4	1,385	0	0	2	1,200	2	185	0
	1944	32	23,510	1	3,000	18	14,350	13	6,160	1
	1945	35	74,200	12	33,700	13	33,750	10	6,750	12
Clawson	1943	114	59,455	2	8,900	19	12,600	93	37,955	2
	1944	102	32,004	0	0	19	8,800	83	23,204	0
	1945	111	171,405	11	55,900	26	91,275	74	24,230	11
Dearborn	1943	1,505	12,905,329	1,114	4,817,300	104	7,889,960	287	198,069	1,146
	1944	625	2,191,528	74	498,500	182	1,455,422	369	237,606	119
	1945	1,045	6,771,004	161	1,122,900	489	5,302,613	395	345,491	162
*Detroit	1943	15,534	46,977,764	8,672	36,462,055	775	3,689,881	6,087	6,825,828	9,166
	1944	10,428	34,160,608	3,400	16,591,648	877	9,368,523	6,151	8,200,437	3,709
	1945	14,760	67,974,844	3,799	27,657,120	3,833	27,565,886	7,128	12,751,838	4,027
East Detroit	1943	537	1,978,785	399	1,936,550	69	14,935	69	27,300	399
	1944	420	1,455,745	238	1,184,000	99	220,635	83	51,110	238
	1945	479	1,405,295	130	814,400	248	491,785	101	99,110	130
East Grand Rapids	1943	31	4,439	0	0	2	400	29	4,039	0
	1944	47	45,875	8	39,500	1	200	38	6,175	8
	1945	88	167,885	22	137,000	0	0	66	30,885	22
East Jordan	1943	4	3,300	0	0	2	1,000	2	2,300	0
	1944	14	10,300	0	0	1	400	13	9,900	0
	1945	7	7,300	6	6,900	1	400	0	0	4
East Lansing	1943	8	2,740	0	0	0	0	8	2,740	0
	1944	14	5,043	0	0	1	200	13	4,843	0
	1945	42	205,250	15	125,000	5	54,200	22	26,050	18
Ecorse	1943	658	1,540,026	553	1,497,180	32	7,830	73	35,016	553
	1944	374	1,277,506	243	944,890	41	199,812	90	132,804	243
	1945	359	775,202	93	418,700	169	289,700	97	66,802	93

* In sample of 257 cities. See text and tables, pp. 12 to 16.

[2] 10 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

EAST NORTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Michigan—Continued										
Escanaba	1943	31	$7,570	0	0	3	$350	28	$7,220	0
	1944	23	6,240	0	0	1	200	22	6,040	0
	1945	97	95,456	18	$34,400	39	35,135	40	25,921	18
Essexville	1943	2	460	0	0	0	0	2	460	0
	1944	6	6,500	1	2,000	2	4,000	3	500	1
	1945	32	61,800	13	54,800	9	4,500	10	2,500	13
Farwell	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	1	1,500	1	1,500	0	0	0	0	1
Fennville	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	1	25,000	0	0	1	25,000	0	0	0
Ferndale	1943	501	1,141,409	196	958,550	84	32,121	221	150,738	196
	1944	409	538,774	41	186,430	40	82,151	328	270,193	41
	1945	547	1,356,564	51	320,110	167	786,599	329	249,855	51
*Flint	1943	4,235	3,672,233	456	1,965,700	453	651,765	3,326	1,054,768	456
	1944	4,203	3,329,827	299	1,369,500	302	727,765	3,602	1,232,562	301
	1945	4,491	6,422,382	243	1,061,850	553	2,795,584	3,695	2,564,948	243
Frankfort	1943	0	0	0	0	0	0	0	0	0
	1944	3	6,600	0	0	1	6,000	2	600	0
	1945	4	13,435	1	6,000	3	7,435	0	0	1
Fremont	1943	32	19,156	0	0	8	6,350	24	12,806	0
	1944	62	74,750	18	64,200	15	3,250	29	7,300	17
	1945	62	100,800	18	67,100	23	25,500	21	8,200	16
Garden City	1943	520	1,552,765	376	1,513,000	83	15,915	61	23,850	376
	1944	145	151,079	10	39,600	46	37,763	89	73,716	10
	1945	179	259,940	14	58,400	112	159,759	53	41,781	14
Gladstone	1943	40	10,365	1	1,000	2	450	37	8,915	1
	1944	15	9,900	0	0	2	1,700	13	8,200	0
	1945	37	22,890	8	7,075	8	5,615	21	10,200	3
Grand Blanc	1943	2	250	0	0	1	150	1	100	0
	1944	5	11,425	0	0	2	10,400	3	1,025	0
	1945	9	109,800	0	0	5	106,500	4	3,300	0
Grand Haven	1943	48	142,679	3	10,500	19	58,899	26	73,280	3
	1944	58	21,703	1	2,600	24	9,355	33	9,748	1
	1945	109	263,030	18	71,300	51	78,570	40	113,160	17
*Grand Rapids	1943	1,721	1,044,020	0	0	247	649,895	1,474	394,125	0
	1944	2,088	1,236,190	33	161,200	225	453,410	1,830	621,580	33
	1945	3,009	5,431,201	331	1,683,100	301	2,204,830	2,377	1,543,271	331
Grandville	1943	14	1,555	0	0	10	1,005	4	550	0
	1944	7	11,285	0	0	4	10,435	3	850	0
	1945	13	63,255	2	9,000	5	30,505	6	23,750	2
Grayling	1943	8	950	2	260	2	160	4	530	2
	1944	3	1,625	1	600	2	1,025	0	0	1
	[1] 1945	7	8,850	2	2,300	3	6,350	2	200	2
Grosse Pointe	1943	10	4,675	0	0	1	200	9	4,475	0
	1944	11	29,160	0	0	0	0	11	29,160	0
	1945	27	175,592	5	146,840	7	15,896	15	12,856	24
Gross Pointe Farms	1943	15	14,460	0	0	0	0	15	14,460	0
	1944	11	10,800	0	0	0	0	11	10,800	0
Gross Pointe Park	1943	7	1,490	0	0	0	0	7	1,490	0
	1944	4	4,856	0	0	1	656	3	4,200	0
	1945	20	176,500	10	106,050	6	61,350	4	9,100	10
Grosse Pointe Shores	1943	2	4,300	0	0	0	0	2	4,300	0
	1944	5	6,150	0	0	2	800	3	5,350	0
	1945	8	32,500	2	22,000	3	2,400	3	8,100	2
Grosse Pointe Woods	1943	51	61,164	11	45,700	13	3,870	27	11,594	11
	1944	46	24,325	2	14,000	20	4,275	24	6,050	2
*Hamtramck	1943	338	214,594	1	3,850	7	2,935	330	207,809	1
	1944	353	1,490,381	0	0	21	1,207,290	332	283,091	0
	1945	480	900,681	13	78,470	62	261,768	405	560,443	13
Hancock	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	[2] 1945	0	0	0	0	0	0	0	0	0
Harbor Beach	1943	9	2,700	0	0	9	2,700	0	0	0
	1944	9	1,900	0	0	7	1,500	2	400	0
	1945	22	38,600	7	17,300	13	20,500	2	800	6
Hart	1943	0	0	0	0	0	0	0	0	0
	1944	3	1,800	2	1,500	1	300	0	0	2
*Highland Park	1943	145	535,235	0	0	16	346,155	129	189,080	0
	1944	132	661,450	0	0	5	392,146	127	269,304	0
	1945	223	2,192,219	3	32,500	104	1,891,683	116	268,036	3

* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

[2] 10 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

EAST NORTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Michigan—Continued										
Hillsdale	1943	18	$13,315	0	0	7	$10,050	11	$3,265	0
	1944	14	13,750	0	0	5	8,550	9	5,200	0
	1945	47	179,320	10	$43,500	32	128,900	5	6,920	10
Holland	1943	424	161,537	24	78,700	46	12,494	354	70,343	24
	1944	407	149,481	0	0	28	39,195	379	110,286	0
	1945	549	291,839	13	47,600	73	114,589	463	129,650	13
Huntington Woods	1943	21	5,640	0	0	7	2,345	14	3,295	0
	1944	15	2,370	0	0	1	200	14	2,170	0
	1945	124	600,480	71	537,700	28	55,000	25	7,780	71
Ionia	1943	21	11,160	1	500	7	2,950	13	7,710	1
	1944	33	24,125	5	18,700	8	1,220	20	4,205	5
	1945	41	28,900	2	8,000	10	12,065	29	8,335	2
Iron Mountain	1943	11	2,100	0	0	6	775	5	1,325	0
	1944	10	197,100	1	3,000	6	192,475	3	1,625	1
	1945	30	30,150	6	18,600	12	5,175	12	6,375	5
Ironwood	1943	284	39,897	0	0	20	2,915	264	36,982	0
	1944	148	38,704	0	0	20	3,270	128	35,434	0
	1945	149	203,665	15	57,700	18	102,750	116	43,215	15
*Jackson	1943	318	181,510	13	55,000	94	28,160	211	98,350	13
	1944	343	330,947	20	88,400	85	121,400	238	121,147	20
	1945	446	717,682	33	148,850	142	255,865	271	312,967	33
*Kalamazoo	1943	792	264,105	1	500	86	34,725	705	228,880	1
	1944	792	571,858	3	4,900	60	244,822	729	322,136	3
	[1]1945	895	2,061,161	4	20,400	100	1,592,568	791	448,193	4
L'Anse	1943	0	0	0	0	0	0	0	0	0
	1944	5	1,600	0	0	1	300	4	1,300	0
	1945	7	1,550	0	0	5	950	2	600	0
Lake Odessa	1943	24	4,440	0	0	2	340	22	4,100	0
	1944	32	5,750	0	0	7	1,475	25	4,275	0
	1945	36	42,225	4	10,500	6	22,650	26	9,075	4
*Lansing	1943	581	864,633	46	188,000	114	479,639	421	196,994	46
	1944	706	1,516,852	30	129,400	146	1,157,720	530	229,732	30
	1945	938	1,969,319	71	309,000	179	1,158,170	688	502,149	71
Lincoln Park	1943	543	1,781,566	382	1,725,150	54	13,280	107	43,136	382
	1944	322	680,026	111	524,220	117	121,071	94	34,735	111
	1945	612	1,558,709	65	407,589	365	976,956	182	174,164	65
Lowell	1943	3	1,900	0	0	3	1,900	0	0	0
	1944	5	900	0	0	4	700	1	200	0
	1945	10	39,850	3	20,000	7	19,850	0	0	3
Ludington	1943	48	14,170	5	5,425	31	7,420	12	1,325	5
	1944	41	13,872	2	2,100	16	7,727	23	4,045	2
Mackinaw City	1943	3	500	0	0	3	500	0	0	0
	1944	1	300	0	0	0	0	1	300	0
	1945	3	3,300	2	3,000	1	300	0	0	2
Marquette	1943	32	10,485	3	600	16	2,995	13	6,890	3
	1944	21	17,125	6	2,850	5	2,800	10	11,475	6
	1945	44	166,097	22	27,000	8	129,200	14	9,897	22
Marysville	1943	40	97,636	15	90,000	18	4,384	7	3,252	15
	1944	23	15,410	4	11,000	8	2,075	11	2,335	4
	1945	51	52,575	12	32,753	23	12,930	16	6,892	8
Melvindale	1943	503	2,006,821	470	1,944,500	10	47,645	23	14,676	469
	1944	107	385,169	52	226,600	25	77,205	30	81,364	52
	[1]1945	146	448,487	20	113,500	92	272,537	34	62,450	20
Midland	1943	466	1,326,855	380	1,154,950	24	155,525	62	16,380	380
	1944	77	114,866	10	42,300	27	60,596	40	11,970	12
	1945	133	365,489	15	79,500	39	159,122	79	126,867	15
Monroe	1943	689	6,227,546	595	1,854,375	17	4,269,480	77	103,691	601
	1944	126	1,033,195	12	37,915	29	942,660	85	52,620	12
	1945	127	417,722	7	16,600	37	305,440	83	95,682	6
Mount Clemens	1943	51	93,685	1	20,000	27	68,960	23	4,725	12
	1944	67	30,075	1	2,000	33	20,725	33	7,350	1
	1945	150	660,100	21	88,800	79	534,225	50	37,075	27
Mount Pleasant	1943	21	9,554	0	0	4	2,850	17	6,704	0
	1944	43	20,683	1	4,000	7	4,550	35	12,133	1
	1945	77	132,228	13	33,200	12	50,400	52	48,628	13
*Muskegon	1943	1,330	7,075,275	485	1,223,323	90	5,288,199	755	563,753	485
	1944	1,145	2,294,557	126	435,300	96	1,521,142	923	338,115	129
	1945	1,265	1,088,707	55	189,100	160	461,736	1,050	437,871	55
Muskegon Heights	1944	651	926,199	11	25,818	101	800,195	539	100,186	11
	1945	755	436,681	38	80,270	133	227,510	584	128,901	38
New Baltimore	1943	16	19,660	3	16,000	3	360	10	3,300	3
	1944	29	22,836	8	7,050	9	3,865	12	11,921	8

* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

EAST NORTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Michigan—Continued										
Niles	1943	104	$76,789	15	$52,640	21	$6,342	68	$17,807	16
	1944	178	432,965	24	74,900	24	304,892	130	53,173	24
	[1]1945	213	266,551	32	115,025	49	57,365	132	94,161	32
North Muskegon	1943	40	79,055	16	53,200	12	4,885	12	20,970	16
	1944	50	31,025	5	17,500	13	4,890	32	8,635	5
	1945	64	85,186	12	56,500	28	19,641	24	9,045	12
Oak Park	1943	15	25,879	3	15,000	9	10,229	3	650	3
	1944	28	20,428	2	6,000	16	12,073	10	2,355	2
	1945	62	612,328	16	78,708	33	520,620	13	13,000	16
Otsego	1943	12	5,350	0	0	6	3,500	6	1,850	0
	1944	12	12,900	2	3,500	4	3,700	6	5,700	2
	[2]1945	32	51,000	6	18,000	15	20,150	11	12,850	6
Owosso	1943	68	12,576	10	3,300	28	3,286	30	5,990	10
	1944	91	64,800	21	44,950	29	6,245	41	13,605	21
	[2]1945	105	155,898	39	78,638	29	13,860	37	63,400	39
Pinconning	1943	4	730	0	0	1	250	3	480	0
	1944	21	55,465	1	200	6	50,550	14	4,715	1
	1945	37	54,127	5	8,000	22	42,697	10	3,430	5
Plainwell	1943	32	15,811	2	3,400	2	5,130	28	7,281	2
	1944	46	41,170	3	4,700	1	1,200	42	35,270	3
	1945	41	22,050	4	4,400	4	900	33	16,750	4
Pleasant Ridge	1943	6	2,990	0	0	0	0	6	2,990	0
	1944	14	4,015	0	0	3	1,000	11	3,015	0
	1945	18	30,370	0	0	5	17,250	13	13,120	0
Plymouth	1943	246	512,842	92	465,300	2	3,200	152	44,342	92
	1944	120	89,518	1	3,000	3	2,450	116	84,068	1
	1945	165	243,866	19	130,997	5	24,900	141	87,969	19
*Pontiac	1943	1,364	1,247,756	172	671,500	148	135,374	1,044	440,882	172
	1944	1,243	1,597,669	214	840,603	112	300,401	917	456,665	214
	1945	1,386	8,777,165	84	416,260	252	7,808,317	1,050	552,588	84
*Port Huron	1943	117	699,664	9	1,800	35	681,675	73	16,189	9
	1944	178	151,994	11	4,000	27	95,282	140	52,712	11
	1945	326	345,069	30	40,500	97	194,785	199	109,784	31
River Rouge	1943	193	246,253	67	210,245	38	7,080	88	28,928	69
	1944	331	1,522,484	230	703,175	26	748,349	75	70,960	230
	1945	212	587,845	70	339,445	59	103,220	83	145,180	74
Rochester	1943	9	5,997	0	0	2	500	7	5,497	0
	1944	10	99,141	3	3,400	5	95,391	2	350	3
	1945	27	77,220	6	24,850	12	47,350	9	5,020	6
Rockford	1943	2	250	0	0	2	250	0	0	0
	1944	4	525	0	0	2	240	2	285	0
	1945	20	77,105	0	0	9	74,030	11	3,075	0
Rogers City	1943	22	4,225	0	0	5	800	17	3,425	0
	1944	29	8,280	0	0	4	3,900	25	4,380	0
Royal Oak	1943	440	1,496,080	260	1,416,300	89	43,395	91	36,385	280
	1944	1,682	5,234,998	1,528	4,729,483	56	455,865	98	49,650	1,539
	1945	571	2,085,635	193	1,363,905	203	507,290	175	214,440	192
*Saginaw	1943	1,094	2,294,782	323	919,445	204	1,075,282	567	300,055	333
	1944	909	1,216,043	120	332,090	203	463,708	586	420,245	120
	1945	968	1,857,034	77	148,750	245	1,107,550	646	600,734	81
St. Clair	1943	19	7,000	0	0	7	3,525	12	3,475	0
	1944	34	19,634	0	0	12	8,704	22	10,930	0
St. Clair Shores	1943	201	149,549	16	56,050	80	25,134	105	68,365	16
	1944	311	161,230	12	38,730	82	37,841	217	84,659	12
	1945	501	1,022,743	75	406,525	171	424,758	255	191,460	75
St. Joseph	1943	137	249,462	33	181,500	23	39,390	81	28,572	33
	1944	166	385,935	53	304,500	8	4,300	105	77,135	53
	1945	174	973,655	54	322,000	27	622,850	93	28,805	54
Sault Sainte Marie	1943	189	422,765	23	21,138	51	264,760	115	136,867	22
	1944	84	28,307	12	10,425	44	5,465	28	12,417	12
	1945	76	784,368	17	25,790	32	689,353	27	69,225	15
Scottville	1943	7	5,790	1	1,500	4	3,290	2	1,000	1
	1944	9	6,900	0	0	4	2,100	5	4,800	0
	1945	13	9,050	1	2,500	6	3,250	6	3,300	1
Shelby	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
South Range	1943	8	900	1	150	3	350	4	400	1
	1944	8	3,760	1	3,000	1	150	6	610	1
	1945	15	6,125	0	0	10	4,025	5	2,100	[illegible]
Spring Lake	1943	13	5,810	0	0	9	2,760	4	3,050	[illegible]
	1944	15	11,070	2	6,000	6	1,525	7	3,545	[illegible]
	1945	11	17,000	2	10,500	4	4,850	5	1,650	[illegible]
Sturgis	1943	10	2,725	0	0	5	1,425	5	1,300	[illegible]
	1944	31	22,595	4	8,100	10	9,475	17	5,020	[illegible]
	1945	52	129,548	7	17,200	9	96,350	36	15,998	[illegible]

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APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

EAST NORTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Michigan—Continued										
Sylvan Lake	1943	29	$5,975	0	0	2	$400	27	$5,575	0
	1944	29	8,450	1	$3,000	1	200	27	5,250	1
	1945	38	31,695	1	4,000	3	18,200	34	9,495	1
Tawas City	1943	9	2,600	1	2,000	7	350	1	250	1
	1944	3	325	0	0	2	225	1	100	0
	1945	45	124,400	30	68,000	10	53,900	5	2,500	20
Three Oaks	1943	14	3,170	0	0	7	1,940	7	1,230	0
	1944	19	8,940	1	2,000	4	1,490	14	5,450	1
	1945	12	11,290	0	0	3	7,050	9	4,240	0
Three Rivers	1943	19	4,070	2	550	8	2,105	9	1,415	2
	1944	19	3,530	2	730	7	1,150	10	1,650	2
	1945	51	77,325	9	24,500	18	35,400	24	17,425	9
Traverse City	1943	65	49,925	5	1,460	34	38,995	26	9,470	5
	1944	239	118,141	9	7,900	32	12,775	198	97,466	9
	1945	302	424,210	25	61,700	60	241,725	217	120,785	25
Trenton	1943	31	60,225	4	11,800	16	44,205	11	4,220	4
	1944	37	117,995	4	12,000	23	102,395	10	3,600	5
	1945	41	116,849	10	57,300	19	48,274	12	11,275	13
Utica	1943	10	15,775	0	0	2	7,000	8	8,775	0
	1944	27	26,565	2	5,500	10	17,355	15	3,710	2
	1945	48	63,963	8	27,900	10	20,800	30	15,263	8
Wakefield	1943	39	11,160	1	4,000	11	2,400	27	4,760	1
	1944	42	7,660	1	1,500	7	915	34	5,245	1
	1945	79	40,665	4	9,900	20	8,950	55	21,815	4
Warren	1943	7	11,600	0	0	7	11,600	0	0	0
	1944	6	15,800	0	0	5	15,500	1	300	0
	1945	13	38,100	0	0	12	34,100	1	4,000	0
Watervliet	1943	11	10,000	1	500	0	0	10	9,500	1
	1944	19	17,200	0	0	0	0	19	17,200	0
	1945	27	181,900	1	2,500	5	150,400	21	29,000	1
Wayne	1943	1,010	4,556,390	959	3,648,300	18	874,312	33	33,778	959
	1944	73	168,659	18	72,000	19	36,800	36	59,859	18
	1945	114	382,776	2	11,000	65	300,017	47	71,759	2
Wyandotte	1943	394	1,485,874	280	1,416,635	27	5,832	87	63,407	300
	1944	263	816,745	156	756,830	39	9,100	68	50,815	156
	1945	279	1,097,995	87	547,597	102	425,961	90	124,437	87
Ypsilanti	1943	526	1,155,281	136	641,030	42	356,326	348	157,925	135
	1944	274	245,729	22	30,600	34	74,112	218	141,017	22
	1945	303	392,067	37	91,100	73	151,885	193	149,082	37
Zeeland	1943	71	31,325	2	5,500	10	11,155	59	14,670	2
	1944	91	24,875	0	0	6	4,270	85	20,605	0
	1945	127	75,405	4	14,000	20	32,990	103	28,415	4
Ohio:										
Addyston	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	[2] 1945	0	0	0	0	0	0	0	0	0
*Akron	1943	6,176	15,925,702	2,520	7,704,981	761	4,979,680	[illegible],895	3,241,041	2,520
	1944	3,870	7,837,925	637	3,111,087	441	2,266,674	2,792	2,460,164	635
	1945	3,788	10,299,968	518	4,425,720	545	3,211,795	2,725	2,662,453	850
Alliance	1943	92	422,925	39	170,650	21	237,980	32	14,295	48
	1944	126	504,900	84	414,950	18	72,915	24	17,035	83
	1945	64	148,255	10	36,100	29	63,185	25	48,970	10
Arlington Heights	1943	0	0	0	0	0	0	0	0	0
	1944	13	14,950	0	0	5	12,400	8	2,550	0
	1945	0	0	0	0	0	0	0	0	0
Ashland	1943	20	4,720	0	0	8	760	12	3,960	0
	1944	38	194,785	3	2,540	22	164,235	13	28,010	3
	[1] 1945	63	200,410	9	18,535	30	31,575	24	150,300	9
Ashtabula	1943	121	62,121	1	5,500	15	4,125	105	52,496	1
	1944	136	215,397	7	31,700	14	89,750	115	93,947	7
	1945	236	204,189	14	67,200	47	21,484	175	115,505	14
Athens	1943	8	12,205	0	0	5	11,825	3	380	0
	1944	18	5,285	0	0	5	2,100	13	3,185	0
	1945	20	90,470	1	4,000	7	76,500	12	9,970	1
Barberton	1943	436	1,205,106	299	884,112	64	270,181	73	50,813	299
	1944	97	786,174	35	113,624	30	655,190	32	17,360	36
Bay	1943	26	16,400	2	8,800	12	1,895	12	5,705	2
	1944	37	36,534	4	17,900	2	375	31	18,259	4
	1945	135	695,863	71	602,650	18	4,203	46	89,010	71
Bedford	1943	141	594,780	73	364,800	47	199,910	21	30,070	73
	1944	88	111,663	4	20,000	47	70,493	37	21,170	4
	1945	122	259,547	17	109,400	63	98,637	42	51,510	17
Bellefontaine	1943	11	516,350	0	0	6	515,650	5	700	0
	1944	2	7,500	1	4,000	1	3,500	0	0	1
	[2] 1945	37	43,900	4	12,300	19	25,725	14	5 875	4

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* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

[2] 10 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

EAST NORTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Ohio—Continued										
Berea	1943	622	$2,126,959	587	$2,109,269	20	$4,160	15	$13,530	638
	1944	59	615,955	14	80,500	29	517,305	16	18,150	16
	1945	34	92,740	11	68,600	20	22,540	3	1,600	11
Bexley	1943	37	47,750	14	41,550	15	3,975	8	2,225	14
	1944	53	76,215	12	57,050	12	3,260	29	15,905	12
	1945	85	256,365	25	201,200	22	8,320	38	46,345	36
Bowling Green	1943	12	6,825	0	0	12	6,825	0	0	0
	1944	55	72,690	0	0	33	54,115	22	18,575	0
Bradford	1943	1	500	0	0	1	500	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	1	250	1	250	0	0	0	0	1
Bratenahl	1943	6	2,000	0	0	1	200	5	1,800	0
	1944	2	2,350	0	0	0	0	2	2,350	0
	1945	5	13,150	0	0	0	0	5	13,150	0
Brecksville	1943	66	9,465	0	0	56	7,528	10	1,937	0
	1944	43	20,180	2	6,000	24	6,540	17	7,640	2
	1945	56	91,935	14	71,700	20	5,035	22	15,200	13
Broadview Heights	1943	0	0	0	0	0	0	0	0	0
	1944	33	36,650	12	23,500	16	9,350	5	3,800	12
	1945	39	89,665	17	73,500	14	7,765	8	8,400	18
Brookville	1943	21	13,350	3	6,600	13	5,150	5	1,600	4
	1944	30	44,685	6	27,500	17	13,185	7	4,000	6
Bryan	1943	26	7,668	0	0	6	1,510	20	6,158	0
	1944	40	53,350	2	4,600	12	37,390	26	11,360	3
	[1]1945	59	154,168	8	23,415	21	124,435	30	6,318	8
Bucyrus	1943	3	350	0	0	3	350	0	0	0
	1944	10	1,800	0	0	10	1,800	0	0	0
Caldwell	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Cambridge	1943	6	2,200	0	0	6	2,200	0	0	0
	[1]1945	43	290,074	2	5,000	34	226,691	7	58,383	3
Campbell	1943	42	11,327	0	0	18	3,640	24	7,687	0
	1944	20	3,820	0	0	9	1,385	11	2,435	0
	1945	27	14,095	1	5,000	9	2,220	17	6,875	1
*Canton	1943	1,483	2,785,195	397	1,380,212	199	922,387	887	482,596	405
	1944	1,101	1,147,485	48	338,700	117	324,689	936	484,096	54
	1945	1,150	2,139,066	125	845,000	198	638,315	827	655,751	128
Chagrin Falls	1943	8	10,050	1	4,500	3	950	4	4,600	1
	1944	3	22,000	1	2,000	1	17,000	1	3,000	1
	1945	6	5,400	0	0	5	4,200	1	1,200	0
Cheviot	1943	60	14,746	0	0	0	0	60	14,746	0
	1944	46	15,996	0	0	0	0	46	15,996	0
*Cincinnati	1943	2,099	2,139,552	18	95,000	144	718,865	1,937	1,325,687	24
	1944	2,580	2,460,087	9	36,500	110	463,327	2,461	1,960,260	9
	1945	3,809	7,517,010	231	2,153,050	250	2,105,630	3,328	3,258,330	410
*Cleveland	1943	5,845	23,774,330	2,437	11,540,900	854	7,931,150	2,554	4,302,280	3,011
	1944	4,566	22,271,161	1,317	6,885,800	746	8,594,576	2,503	6,790.785	1,821
	1945	4,474	24,872,412	682	6,688,500	947	12,072,683	2,845	6,111,229	881
Cleveland Heights	1943	101	509,446	27	453,800	27	4,547	47	51,099	123
	1944	140	304,372	29	234,250	33	6,031	78	64,091	49
	1945	490	2,398,180	202	2,028,000	184	195,330	104	174,850	236
Cleves	1943	0	0	0	0	0	0	0	0	0
	1944	1	2,000	1	2,000	0	0	0	0	1
	1945	0	0	0	0	0	0	0	0	0
Clyde	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
*Columbus	1943	1,145	2,066,093	242	1,421,100	286	213,437	617	431,556	363
	1944	1,303	1,731,663	65	282,500	330	605,742	908	843,421	69
	1945	2,273	7,443,749	426	2,852,400	673	1,826,670	1,174	2,764,679	498
Conneaut	1943	79	28,264	0	0	31	21,382	48	6,882	0
	1944	79	146,585	3	13,500	22	122,015	54	11,070	3
	1945	100	255,796	24	187,200	29	38,185	47	30,411	40
Coshocton	1943	13	7,880	0	0	9	2,450	4	5,430	0
	1944	9	11,646	1	96	5	9,950	3	1,600	1
	1945	20	39,850	0	0	7	5,350	13	34,500	0
Covington	1943	10	1,964	0	0	3	89	7	1,875	0
	1944	15	12,539	1	3,000	5	6,569	9	2,970	1
	1945	12	25,200	2	7,250	8	15,450	2	2,500	2
Crestline	1943	4	11,000	0	0	1	150	3	10,850	0
	1944	2	2,800	0	0	2	2.800	0	0	0
	1945	11	35,575	0	0	8	29,375	3	6,200	0

* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

EAST NORTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Ohio—Continued										
Cuyahoga Falls	1943	129	$416,916	90	$380,871	16	$2,430	23	$33,615	102
	1944	572	2,019,912	492	1,873,580	34	91,200	46	55,132	501
	1945	337	1,077,259	107	737,100	100	258,959	130	81,200	118
Dalton	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
*Dayton	1943	3,137	10,168,109	2,235	8,941,006	249	451,930	653	775,173	2,968
	1944	1,412	3,350,323	282	1,401,125	269	639,406	861	1,309,792	323
	1945	1,906	12,465,947	598	3,169,417	374	4,997,011	934	4,299,519	652
Defiance	1943	46	12,214	0	0	8	1,520	38	10,694	0
	1944	51	9,915	1	800	8	1,165	42	7,950	1
	1945	79	68,210	6	4,000	13	15,950	60	48,260	6
Delphos	1943	11	7,150	1	4,000	2	950	8	2,200	1
*East Cleveland	1943	106	920,664	23	690,500	19	26,720	64	203,444	165
	1944	79	479,562	5	370,000	14	3,305	60	106,257	88
	1945	71	213,035	5	70,000	13	17,700	53	125,335	10
Elmwood Place	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	12	25,520	0	0	1	16,000	11	9,520	0
Elyria	1943	288	567,410	87	412,700	81	50,485	120	104,225	88
	1944	292	447,649	48	211,522	72	104,201	172	131,926	48
	1945	370	2,052,728	40	212,000	109	1,654,695	221	186,033	40
Englewood	1943	0	0	0	0	0	0	0	0	0
	1944	3	1,175	0	0	3	1,175	0	0	0
	1945	9	40,300	5	33,300	1	4,000	3	3,000	5
Euclid	1943	683	5,508,434	489	3,592,900	152	1,696,924	42	218,610	762
	1944	642	4,932,652	452	4,393,300	138	396,837	52	142,515	899
	[1]1945	400	2,874,566	144	1,119,400	193	1,318,110	63	437,056	148
Fairview	1943	53	33,000	6	30,000	0	0	47	3,000	6
	1944	37	16,885	1	5,500	0	0	36	11,385	1
	1945	123	681,424	69	628,900	2	20,000	52	32,524	69
Findlay	1943	18	3,225	0	0	10	1,850	8	1,375	0
	1944	21	19,025	2	1,000	13	16,975	6	1,050	2
Fostoria	1943	32	26,385	0	0	9	4,835	23	21,550	0
	1944	35	9,084	0	0	12	2,084	23	7,000	0
	1945	96	83,720	4	18,050	37	34,225	55	31,445	4
Franklin	1943	14	2,685	0	0	6	1,160	8	1,525	0
	1944	17	12,680	2	4,000	4	975	11	7,705	3
Fredericktown	1943	5	1,375	0	0	4	1,075	1	300	0
	1944	5	6,225	2	4,200	2	225	1	1,800	3
	1945	1	150	0	0	1	150	0	0	0
Fremont	1943	21	14,105	4	4,000	14	6,725	3	3,380	4
	1944	35	59,975	0	0	31	56,425	4	3,550	0
	1945	54	127,150	7	28,500	31	70,475	16	28,175	7
Galion	1943	30	20,500	2	600	19	17,675	9	2,225	2
	1944	26	21,950	3	1,800	15	15,950	8	4,200	3
	1945	55	188,625	15	69,000	26	108,175	14	11,450	15
Garfield Heights	1943	280	1,087,565	190	960,150	56	97,905	34	29,510	190
	1944	236	722,315	123	656,300	82	39,200	31	26,815	124
	1945	209	751,404	109	686,992	58	24,802	42	39,610	109
Garrettsville	1943	2	350	0	0	2	350	0	0	0
	1944	5	70,000	2	7,000	2	61,500	1	1,500	2
	1945	6	8,700	1	1,000	4	5,700	1	2,000	1
Geneva	1943	4	450	0	0	2	100	2	350	0
	1944	11	15,525	1	3,000	5	6,150	5	6,375	1
	1945	8	9,846	1	5,000	1	66	6	4,780	1
Gibsonburg	1943	1	500	0	0	0	0	1	500	0
	1944	10	4,510	0	0	4	1,710	6	2,800	0
	1945	4	19,500	0	0	4	19,500	0	0	0
Girard	1943	13	2,495	0	0	6	725	7	1,770	0
	1944	16	19,187	0	0	12	17,937	4	1,250	0
	1945	31	291,600	2	12,500	20	268,880	9	10,220	2
Glendale	1944	10	7,725	0	0	5	2,850	5	4,875	0
	1945	14	20,950	1	4,000	0	0	13	16,950	1
Grandview Heights	1943	53	272,975	35	258,800	4	1,550	14	12,625	50
	1944	5	17,900	0	0	2	17,000	3	900	0
	1945	41	701,400	19	127,300	13	559,300	9	14,800	25
*Hamilton	1943	251	503,280	30	127,025	47	94,320	174	281,935	33
	1944	295	149,893	1	190	63	47,399	231	102,304	1
	1945	421	542,354	65	249,300	92	185,180	264	107,874	43
Highland Heights	1944	0	0	0	0	0	0	0	0	0
Hunting Valley	1944	0	0	0	0	0	0	0	0	0
	1945	1	10,000	0	0	0	0	1	10.000	0

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* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

EAST NORTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Ohio—Continued										
Independence	1943	44	$37,385	2	$10,200	38	$9,945	4	$17,240	2
	1944	40	55,540	1	4,500	27	37,340	12	13,700	1
	1945	90	288,460	24	159,300	53	112,910	13	16,250	24
Indian Hills	1945	25	100,900	4	60,000	10	8,800	11	32,100	4
Ironton	1943	63	72,630	19	54,700	18	13,495	26	4,435	22
	1944	56	21,380	3	2,100	11	2,250	42	17,030	3
	1945	104	114,295	17	53,725	34	43,985	53	16,585	24
Jewett	1943	9	2,525	1	300	7	1,875	1	350	1
	1944	9	3,270	0	0	8	2,670	1	600	0
	1945	3	380	0	0	2	180	1	200	0
Kingston	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
*Lakewood	1943	174	879,755	36	750,900	42	15,230	96	113,625	217
	1944	115	199,798	5	38,500	43	78,940	67	82,358	7
	1945	191	667,377	22	222,200	71	319,675	98	125,502	32
Lancaster	1943	114	26,475	3	2,700	55	9,068	56	14,707	3
	1944	89	55,502	11	10,790	30	30,837	48	13,875	11
	1945	101	148,812	13	39,650	39	65,086	49	44,076	13
*Lima	1943	427	989,307	172	744,580	48	10,380	207	234,347	255
	1944	270	500,711	46	151,100	63	194,914	161	154,697	46
	[2] 1945	300	378,323	32	70,150	75	105,180	193	202,993	32
Linndale	1944	1	1,000	0	0	0	0	1	1,000	0
	1945	2	2,150	0	0	0	0	2	2,150	0
Lockland	1943	29	88,325	12	63,400	5	9,920	12	15,005	12
	1945	34	313,259	3	14,700	12	267,998	19	30,561	6
*Lorain	1943	742	520,290	2	2,200	90	343,569	650	174,521	2
	1944	915	1,070,330	180	771,878	56	47,441	679	251,011	180
	1945	857	1,859,906	49	230,750	106	1,265,002	702	364,154	49
Loveland	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Lyndhurst	1943	73	120,711	20	104,500	37	6,511	16	9,700	20
	1944	156	586,360	107	560,800	31	10,225	18	15,335	107
	1945	148	693,370	77	664,475	46	16,890	25	12,005	77
McConnelsville	1943	2	350	0	0	1	200	1	150	0
	1944	0	0	0	0	0	0	0	0	0
	1945	7	15,950	1	700	6	15,250	0	0	1
Madeira	1943	4	22,000	4	22,000	0	0	0	0	4
	1944	0	0	0	0	0	0	0	0	0
	1945	9	17,450	2	15,500	5	1,200	2	750	2
*Mansfield	1943	124	548,417	27	149,500	25	190,630	72	208,287	27
	1944	112	360,950	29	291,980	21	15,478	62	53,492	58
	1945	264	1,937,241	68	696,000	85	1,139,951	111	101,290	103
Maple Heights	1943	513	2,082,110	438	2,057,700	60	16,225	15	8,185	438
	1944	200	550,004	53	255,500	117	250,289	30	44,215	53
	1945	190	431,757	38	232,050	122	67,750	30	131,957	38
Marietta	1943	33	13,046	0	0	9	7,340	24	5,706	0
	1945	77	115,220	7	25,200	18	41,675	52	48,345	7
*Marion	1943	254	318,811	37	146,500	88	124,304	129	48,007	74
	1944	140	126,417	0	0	30	111,702	110	14,715	0
	1945	236	323,005	6	19,000	61	208,965	169	95,040	6
Martins Ferry	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	17	312,445	5	29,800	7	278,445	5	4,200	5
Marysville	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	[1] 1945	3	13,500	0	0	3	13,500	0	0	0
Massillon	1943	546	1,874,201	242	700,750	48	981,637	256	191,814	242
	1944	280	216,819	31	69,050	39	73,005	210	74,764	31
	1945	451	1,161,746	66	440,800	81	574,240	304	146,706	65
Maumee	1943	21	5,825	0	0	11	1,850	10	3,975	0
	1945	46	382,225	9	30,100	23	340,335	14	11,790	9
Mayfield Heights	1943	89	86,544	15	75,000	41	4,652	33	6,892	15
	1944	33	17,855	1	5,000	17	3,015	15	9,840	1
	1945	58	151,370	20	130,300	13	6,525	25	14,545	20
Mentor	1943	25	15,750	2	10,000	19	4,950	4	800	2
	1944	14	4,800	0	0	9	4,100	5	700	0
	1945	36	42,025	3	27,000	15	4,325	18	10,700	3
Mentor-On-The-Lake	1943	10	12,018	0	0	1	300	9	11,718	0
	1944	33	40,100	5	23,500	3	700	25	15,900	5
	1945	30	25,400	5	14,000	0	0	25	11,400	5
Miamisburg	1943	43	28,123	1	3,000	11	1,210	31	23,913	1
	1944	54	51,835	0	0	7	13,925	47	37,910	0
	1945	82	74,451	7	39,800	14	15,609	61	19,042	7

* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

[2] 10 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

EAST NORTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Ohio—Continued										
Middleburg Heights	1943	34	$17,915	2	$10,000	28	$6,540	4	$1,375	2
	1944	47	22,986	2	9,300	35	8,509	10	5,177	2
	1945	83	175,050	22	152,900	47	15,150	14	7,000	22
Middletown	1943	303	664,600	43	189,200	47	373,181	213	102,219	43
	1944	345	323,726	12	50,400	47	97,300	286	176,026	12
	1945	458	893,702	17	106,200	64	399,439	377	388,063	17
Minerva	1943	1	100	0	0	1	100	0	0	0
	1944	2	1,200	0	0	2	1,200	0	0	0
	1945	8	18,820	3	12,500	2	1,100	3	5,220	3
Montgomery	1944	0	0	0	0	0	0	0	0	0
	1945	12	19,260	1	7,000	1	4,000	10	8,260	1
Moreland Hills	1943	7	5,750	1	4,800	6	950	0	0	1
	1944	6	4,450	0	0	6	4,450	0	0	0
	1945	4	12,158	1	9,000	2	2,558	1	600	1
Mount Healthy	1943	7	12,500	2	9,600	2	1,400	3	1,500	2
	1944	12	8,400	0	0	4	1,800	8	6,600	0
	1945	43	152,300	23	126,500	15	18,400	5	7,400	23
Navarre	1943	0	0	0	0	0	0	0	0	0
	1944	3	3,750	1	1,500	1	2,000	1	250	1
	1945	9	30,500	3	9,000	6	21,500	0	0	3
*Newark	1943	151	808,690	106	747,850	30	58,110	15	2,730	213
	1944	52	115,718	13	4,150	17	22,800	22	88,768	13
	1945	97	1,033,213	27	58,700	41	936,400	29	38,113	27
New Boston	1943	26	8,406	0	0	1	260	25	8,146	0
	1944	38	4,838	0	0	4	430	34	4,408	0
	1945	77	22,983	0	0	13	12,353	64	10,630	0
Newburgh Heights	1943	6	1,550	0	0	5	1,050	1	500	0
	1944	7	17,350	0	0	4	5,200	3	12,150	0
	1945	3	7,700	1	6,000	1	200	1	1,500	1
Newcomerstown	1943	0	0	0	0	0	0	0	0	0
	1944	3	770	0	0	2	400	1	370	0
New Straitsville	1943	0	0	0	0	0	0	0	0	0
	1944	1	1,000	0	0	1	1,000	0	0	0
	1945	1	1,500	1	1,500	0	0	0	0	1
Newton Falls	1943	10	15,625	1	6,500	5	625	4	8,500	1
	1944	15	15,341	1	450	5	1,091	9	13,800	0
	[1]1945	18	13,650	0	0	8	6,400	10	7,250	0
Niles	1943	70	337,981	14	56,300	19	254,850	37	26,831	14
	1944	71	133,030	21	97,184	10	3,175	40	32,671	21
	1945	109	206,884	29	140,300	36	38,085	44	28,499	29
North Canton	1943	10	44,650	8	44,000	1	200	1	450	8
	1944	21	167,450	16	96,000	2	60,000	3	11,450	16
	1945	4	6,200	1	4,500	3	1,700	0	0	1
North College Hill	1943	62	82,964	16	68,000	3	615	43	14,349	16
	1944	71	10,995	0	0	1	250	70	10,745	0
	1945	62	162,615	17	82,500	5	71,750	40	8,365	17
North Olmsted	1943	81	62,320	8	40,500	64	13,770	9	8,050	8
	1944	56	58,330	7	31,800	35	12,390	14	14,140	7
	1945	113	384,350	45	287,350	53	80,550	15	16,450	45
North Royalton	1943	229	78,560	7	25,000	191	42,320	31	11,240	7
	1944	232	183,882	28	113,950	158	43,832	46	26,100	30
	1945	322	262,815	26	159,250	230	71,720	66	31,845	26
Norwalk	1943	26	6,275	0	0	14	3,145	12	3,130	0
	1944	49	92,340	2	4,000	27	20,940	20	67,400	2
	1945	74	163,109	8	53,430	41	65,099	25	44,580	8
Norwood	1944	178	137,310	0	0	9	68,860	169	68,450	0
	1945	252	1,575,441	0	0	34	1,465,243	218	110,198	0
Oakwood	1943	48	205,630	31	196,400	10	3,480	7	5,750	49
	1944	51	221,575	41	210,000	4	2,200	6	9,375	43
	1945	72	441,400	53	414,700	8	5,325	11	21,375	58
Oberlin	1943	12	2,160	0	0	8	1,080	4	1,080	0
	1944	12	3,959	1	1,200	6	1,335	5	1,424	1
	1945	18	25,950	5	10,100	7	12,700	6	3,150	6
Olmsted Falls	1943	13	5,195	1	2,500	12	2,695	0	0	1
	1944	14	11,175	2	4,700	8	1,925	4	4,550	2
	1945	15	34,650	4	30,900	7	1,750	4	2,000	4
Ottawa Hills	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Oxford	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1915	0	0	0	0	0	0	0	0	0
Painesville	1943	85	59,920	6	19,600	44	18,220	35	22,100	17
	1944	252	1,020,400	194	953,600	26	37,225	32	29,575	194
	1945	113	217,300	29	111,000	50	69,350	34	36,950	30

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* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

EAST NORTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Ohio—Continued										
Parma	1943	261	$898,788	130	$723,200	7	$109,681	124	$65,907	169
	1944	189	357,347	57	258,400	86	72,557	46	26,390	60
	1945	273	987,050	142	852,000	93	126,450	38	8,600	142
Pepper Pike	1944	0	0	0	0	0	0	0	0	0
	1945	14	159,600	12	155,000	0	0	2	4,600	12
Piqua	1943	251	576,763	201	535,068	26	18,430	24	23,265	205
	1944	59	61,775	14	10,700	25	41,275	20	9,800	14
	1945	92	107,912	22	34,565	30	28,557	40	44,790	22
Port Clinton	1943	205	410,900	201	400,000	2	10,000	2	900	204
	1944	3	18,200	1	5,800	1	8,000	1	4,400	1
	1945	9	26,800	1	3,200	7	23,100	1	500	1
*Portsmouth	1943	423	,90,712	0	0	73	16,842	350	73,870	0
	1944	608	118,347	3	1,600	91	23,343	514	93,404	3
	1945	972	283,290	12	34,150	127	107,275	833	141,865	12
Ravenna	1943	84	102,081	16	72,900	14	13,375	54	15,806	16
	1944	65	472,874	14	66,100	21	395,342	30	11,432	13
	1945	83	104,255	3	15,000	38	60,925	42	28,330	3
Reading	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	31	544,995	9	30,750	18	504,745	4	9,500	12
Rocky River	1943	63	182,699	19	150,200	25	10,749	19	21,750	33
	1944	51	152,344	6	121,800	22	13,759	23	16,785	26
	1945	153	1,126,513	94	907,800	43	189,213	16	29,500	104
St. Bernard	1943	9	139,000	0	0	9	139,000	0	0	0
	1944	10	48,000	0	0	10	48,000	0	0	0
	1945	15	525,137	0	0	14	511,753	1	13,384	0
Salem	1943	50	20,865	0	0	8	6,385	42	14,480	0
	1944	41	48,599	0	0	10	34,165	31	14,434	0
	1945	116	255,880	4	7,850	17	184,400	95	63,630	4
Sandusky	1943	201	450,181	113	376,288	46	41,943	42	31,950	113
	1944	98	55,146	11	9,900	47	18,711	40	26,535	11
	1945	189	416,090	22	74,650	75	191,010	92	150,430	22
Sebring	1943	5	3,735	0	0	5	3,735	0	0	0
	1944	9	2,100	1	200	5	1,000	3	900	1
	1945	13	18,500	0	0	6	6,500	7	12,000	0
Seven Hills	1944	22	18,353	2	10,000	12	2,550	8	5,803	2
	1945	39	102,755	12	92,500	24	6,705	3	3,550	12
Seven Mile	1944	0	0	0	0	0	0	0	0	0
	1945	3	1,450	0	0	3	1,450	0	0	0
Shadyside	1944	15	9,250	6	8,050	5	750	4	450	6
	1945	31	95,900	20	78,200	6	1,000	5	16,700	20
Shaker Heights	1943	95	668,327	50	642,800	14	2,535	31	22,992	135
	1944	84	944,305	25	896,500	18	23,215	41	24,590	167
	1945	199	2,971,340	117	2,519,550	28	378,745	54	73,045	257
Sharonville	1945	4	1,800	2	1,200	1	300	1	300	2
Shelby	1943	36	17,821	2	1,050	17	12,774	17	3,997	2
	1944	43	785,802	24	272,584	11	7,675	8	505,543	23
	1945	50	102,229	12	55,500	23	40,629	15	6,100	12
Sidney	1944	2	1,450	1	900	1	550	0	0	1
	1945	11	30,350	6	20,550	5	9,800	0	0	6
Silver Lake	1943	0	0	0	0	0	0	0	0	0
	1944	2	1,100	0	0	0	0	2	1,100	0
	1945	3	20,500	3	20,500	0	0	0	0	3
Silverton	1943	3	555	0	0	1	190	2	365	0
	1944	9	4,700	0	0	4	1,150	5	3,550	0
	1945	36	164,750	18	153,400	9	4,350	9	7,000	33
Solon	1943	31	14,035	1	5,700	19	3,710	11	4,625	1
	1944	16	20,990	16	20,990	0	0	0	0	5
	1945	62	223,465	24	161,500	35	57,890	3	4,075	25
South Euclid	1943	85	263,139	43	247,200	35	7,539	7	8,400	47
	1944	79	267,935	42	236,800	33	9,810	4	21,325	42
	[1]1945	256	2,009,130	199	1,835,100	32	152,375	25	21,655	213
South Zanesville	1943	5	775	0	0	2	200	3	575	0
Spencer	1944	0	0	0	0	0	0	0	0	0
	1945	2	4,500	2	4,500	0	0	0	0	2
*Springfield	1943	422	1,065,075	112	602,520	95	102,399	215	360,156	179
	1944	495	830,309	68	219,485	110	364,741	317	246,083	68
	1945	566	2,216,776	29	103,400	166	1,501,054	371	612,322	29
Steubenville	1943	16	282,108	0	0	2	275,133	14	6,975	0
	1944	21	28,000	3	4,500	10	18,300	8	5,200	3
	1945	48	241,510	7	32,050	21	192,400	20	17,060	7

* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

EAST NORTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Ohio—Continued										
Strongsville	1943	111	$63,015	11	$41,000	94	$18,865	6	$3,150	11
	1944	74	69,615	8	37,000	60	28,465	6	4,150	8
	[2]1945	159	230,035	23	135,500	98	61,730	38	32,805	23
Struthers	1943	26	5,745	1	200	16	1,570	9	3,975	1
	1944	18	4,846	0	0	10	1,838	8	3,008	0
	1945	37	52,472	13	37,650	14	10,582	10	4,240	13
Sylvania	1943	24	5,207	0	0	14	1,977	10	3,230	0
	1944	17	8,380	1	3,500	5	2,330	11	2,550	1
	1945	13	27,265	2	8,000	2	13,000	9	6,265	2
Tiffin	1943	62	70,300	0	0	32	35,780	30	34,520	0
	1944	67	24,790	0	0	29	8,580	38	16,210	0
	1945	88	1,642,167	2	4,000	40	1,611,510	46	26,657	2
*Toledo	1943	594	1,987,583	0	0	259	1,509,311	335	478,272	0
	1944	858	2,179,482	104	579,400	307	1,232,946	447	367,136	157
	1945	1,419	5,752,310	275	1,897,400	506	2,414,440	638	1,440,470	358
Troy	1943	92	91,605	16	62,250	30	12,680	46	16,675	21
	1944	116	283,681	55	268,000	22	7,041	39	8,640	55
	1945	97	324,695	11	25,000	42	271,545	44	28,150	11
University Heights	1943	26	7,741	0	0	2	375	24	7,366	0
	1944	50	154,695	11	100,250	11	48,130	28	6,315	14
	1945	260	2,278,959	218	2,159,850	16	108,749	26	10,360	223
Upper Arlington	1943	16	70,167	4	68,200	0	0	12	1,967	16
	1944	9	3,964	0	0	0	0	9	3,964	0
	1945	61	503,515	34	487,740	0	0	27	15,775	56
Upper Sandusky	1943	5	8,500	0	0	2	3,500	3	5,000	0
	1944	5	32,300	1	1,500	4	30,800	0	0	1
	1945	11	12,950	1	2,500	5	2,250	5	8,200	1
Vermilion	1943	6	3,475	2	900	1	750	3	1,825	2
	1944	4	2,785	1	1,500	1	500	2	785	1
	1945	15	51,500	2	5,000	5	6,700	8	39,800	2
Wadsworth	1943	37	56,180	10	27,900	19	24,280	8	4,000	10
	1944	31	43,180	12	31,700	11	2,100	8	9,380	15
	1945	39	449,100	9	47,150	15	377,200	15	24,750	9
*Warren	1943	1,520	5,076,286	771	2,275,743	117	2,538,340	632	262,203	847
	1944	845	1,033,155	14	47,300	62	479,070	769	506,785	14
	1945	929	1,287,451	83	470,300	105	377,220	741	439,931	86
Washington Court House	1943	6	1,950	1	150	1	200	4	1,600	1
	1944	9	25,600	2	7,000	3	18,200	4	400	2
	1945	54	147,000	23	46,200	16	88,300	15	12,500	23
Waterville	1943	2	600	0	0	0	0	2	600	0
	1944	2	1,000	0	0	2	1,000	0	0	0
	1945	14	27,325	1	2,000	8	6,325	5	19,000	1
Wellington	1943	15	2,700	0	0	3	400	12	2,300	0
	1944	26	10,750	0	0	7	1,400	19	9,350	0
	1945	26	64,050	4	13,500	12	34,875	10	15,675	5
West Carrollton	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
Westerville	1943	10	3,125	0	0	4	775	6	2,350	0
	1944	14	8,700	1	4,000	6	2,000	7	2,700	1
	1945	33	93,410	8	47,000	9	23,060	16	23,350	8
Westlake	1945	37	49,085	5	25,500	27	15,965	5	7,620	5
Wickliffe	1943	100	345,792	62	322,800	34	21,612	4	1,380	69
	1944	49	24,063	2	8,000	45	15,783	2	280	2
	1945	66	107,955	13	80,400	43	20,470	10	7,085	13
Williamsburg	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
Willoughby	1943	33	107,100	12	80,000	14	23,600	7	3,500	12
	1944	13	32,100	0	0	7	2,100	6	30,000	0
Willowick	1943	61	263,000	52	260,300	0	0	9	2,700	52
	1944	51	255,000	51	255,000	0	0	0	0	51
	1945	24	141,600	24	141,600	0	0	0	0	24
Wilmington	1943	68	17,347	4	2,700	6	2,865	58	11,782	4
	1944	66	21,478	0	0	21	12,320	45	9,158	0
	1945	77	96,384	4	1,900	17	79,170	56	15,314	4
Woodsfield	1943	9	3,825	2	1,200	5	625	2	2,000	2
	1944	5	5,500	1	1,000	3	4,000	1	500	1
	1945	8	2,100	0	0	6	1,500	2	600	0
Wooster	1943	28	11,072	0	0	3	1,382	25	9,690	0
	1944	28	45,185	0	0	6	39,225	22	5,960	0
	1945	36	93,900	2	13,000	9	21,575	25	59,325	2
Worthington	1943	0	0	0	0	0	0	0	0	0
	1944	1	700	0	0	1	700	0	0	0
	[2]1945	0	0	0	0	0	0	0	0	0
Wyoming	1943	4	14,500	3	13,500	0	0	1	1,000	3
	1944	30	120,000	30	120,000	0	0	0	0	30
	[1]1945	21	135,750	13	122,750	2	1,000	6	12,000	24

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[1] 11 months only.

[2] 10 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

EAST NORTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Ohio—Continued										
Xenia	1943	0	0	0	0	0	0	0	0	0
	1944	32	$36,850	7	$15,600	6	$13,400	19	$7,850	7
	1945	46	87,275	5	17,800	24	55,800	17	13,675	5
*Youngstown	1943	601	399,554	13	19,435	141	122,094	447	258,025	12
	1944	414	606,770	8	2,890	114	383,925	292	219,955	8
	1945	612	1,914,490	60	317,840	178	1,098,545	374	498,105	60
*Zanesville	1943	83	12,518	1	2,000	30	3,302	52	7,216	1
	1944	99	20,026	1	800	40	10,240	58	8,986	1
	1945	172	87,790	15	22,849	50	27,125	107	37,816	15
Wisconsin:										
Algoma	1944	0	0	0	0	0	0	0	0	0
	1945	54	215,300	16	74,600	28	135,650	10	5,050	16
Altoona	[1]1943	5	1,100	0	0	5	1,100	0	0	0
	1944	8	1,575	2	400	6	1,175	0	0	2
	1945	14	8,900	6	7,300	3	600	5	1,000	6
Amery	1943	4	55,750	0	0	3	55,550	1	200	0
	1944	0	0	0	0	0	0	0	0	0
	1945	9	45,000	8	33,000	1	12,000	0	0	8
Amherst	1943	1	3,000	0	0	1	3,000	0	0	0
	1944	7	4,700	1	1,000	1	200	5	3,500	1
	1945	13	9,400	0	0	2	5,500	11	3,900	0
Antigo	1943	12	3,650	1	800	8	2,200	3	650	1
	1944	19	77,950	1	1,500	14	72,900	4	3,550	1
	1945	83	110,300	20	69,000	26	22,550	37	18,750	20
Appleton	1943	211	112,517	0	0	59	33,790	152	78,727	0
	1944	230	132,661	3	3,890	70	104,761	157	24,010	4
	1945	330	987,271	45	229,500	111	623,360	174	134,411	45
Ashland	1943	6	1,150	0	0	3	325	3	825	0
	1944	19	17,745	0	0	10	4,760	9	12,985	0
	1945	29	46,400	2	4,500	14	12,550	13	29,350	2
Augusta	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	[1]1945	1	14,000	0	0	0	0	1	14,000	0
Baraboo	1943	85	22,870	0	0	21	8,225	64	14,645	0
	1944	93	823,295	7	33,600	20	769,780	66	19,915	7
	[1]1945	75	103,163	10	26,150	22	52,300	43	24,713	7
Beaver Dam	1943	20	3,159	1	200	15	2,407	4	552	1
	1944	30	26,625	1	4,500	18	20,120	11	2,005	1
Beloit	1943	166	362,870	85	314,775	33	6,575	48	41,520	87
	1944	149	369,889	22	88,140	54	235,995	73	45,754	22
	1945	174	840,872	37	165,200	67	621,078	70	54,594	37
Black River Falls	1943	3	975	2	375	1	600	0	0	2
	1944	2	500	1	300	1	200	0	0	1
	1945	3	2,400	0	0	2	900	1	1,500	0
Bloomer	1943	15	2,995	0	0	10	1,545	5	1,450	0
	1944	22	10,040	3	6,000	10	1,615	9	2,425	3
	1945	28	129,400	10	26,875	11	95,575	7	6,950	10
Bonduel	1944	0	0	0	0	0	0	0	0	0
	1945	11	36,600	5	27,000	3	5,600	3	4,000	5
Boscobel	1943	21	4,470	1	800	4	330	16	3,340	1
	1944	22	7,400	1	1,500	8	1,900	13	4,000	1
	1945	19	14,400	1	1,000	7	9,500	11	3,900	1
Boyd	1943	1	500	0	0	1	500	0	0	0
	1944	8	35,500	0	0	4	30,500	4	5,000	0
Brillion	1943	23	51,830	5	26,500	8	23,350	10	1,980	5
	1944	27	54,580	3	16,900	8	26,550	16	11,130	3
	1945	43	60,250	6	34,900	9	6,900	28	18,450	6
Butler	1943	6	6,945	0	0	3	4,045	3	2,900	0
	1944	3	4,950	1	4,500	2	450	0	0	1
	1945	0	0	0	0	0	0	0	0	0
Chetek	1943	14	5,190	0	0	7	3,700	7	1,490	0
	1944	13	3,750	0	0	4	1,000	9	2,750	0
	1945	23	41,700	6	17,500	12	11,200	5	13,000	6
Chilton	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Chippewa Falls	1943	11	11,295	1	3,500	10	7,795	0	0	1
	1944	35	101,590	4	14,000	21	17,190	10	70,400	4
	1945	41	93,290	14	33,000	14	39,550	13	20,740	14
Clintonville	1943	54	184,990	41	140,440	11	43,050	2	1,500	41
	1944	25	58,400	15	56,800	10	1,600	0	0	15
	1945	64	128,925	18	71,100	39	49,025	7	8,800	18
Coleman	1943	9	8,425	0	0	8	8,025	1	400	0
	1944	15	19,150	1	2,000	5	14,000	9	3,150	1
	1945	19	30,800	4	11,000	5	14,300	10	5,500	8

* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

EAST NORTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Wisconsin—Continued										
Columbus	1943	1	$120	0	0	1	$120	0	0	0
	1944	4	5,150	1	$4,800	2	250	1	$100	1
	1945	8	9,195	1	6,000	7	3,195	0	0	1
Cornell	1943	9	2,050	0	0	6	1,900	3	150	0
	1944	6	5,580	0	0	2	5,230	4	350	0
	1945	18	74,000	3	15,000	4	46,500	11	12,500	3
Cuba City	1944	0	0	0	0	0	0	0	0	0
	1945	14	28,800	14	28,800	0	0	0	0	8
Cudahy	1943	132	1,092,400	57	264,600	19	760,806	56	66,994	57
	1944	107	96,628	0	0	12	8,515	95	88,113	0
	1945	121	228,966	8	53,500	28	69,970	85	105,496	14
Delavan	1943	22	94,850	15	29,500	1	60,000	6	5,350	15
	1944	20	16,700	11	12,800	8	3,500	1	400	11
	1945	7	8,300	1	3,500	6	4,800	0	0	1
Dodgeville	1943	12	8,930	0	0	5	7,250	7	1,680	0
	1944	7	9,650	1	2,500	5	6,900	1	250	1
	1945	19	36,585	6	14,200	10	17,885	3	4,500	6
Durand	1943	13	1,650	0	0	4	500	9	1,150	0
	1944	9	4,000	0	0	6	3,550	3	450	0
	1945	17	9,360	2	4,300	9	4,475	6	585	2
Eagle River	1943	0	0	0	0	0	0	0	0	0
	1944	5	2,250	0	0	0	0	5	2,250	0
	1945	23	31,500	5	12,500	6	12,000	12	7,000	5
Eau Claire	1943	135	1,140,785	1	600	58	1,105,935	76	34,250	1
	1944	202	2,592,530	24	75,650	44	2,449,920	134	66,960	24
	1945	430	1,822,355	169	375,955	103	1,244,375	158	202,025	169
Edgar	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	2	2,500	0	0	0	0	2	2,500	0
Fond du Lac	1943	127	88,033	0	0	34	40,080	93	47,953	0
	1944	112	110,537	1	1,500	35	12,370	76	96,667	1
	1945	193	373,929	12	49,900	63	69,530	118	254,499	12
Fort Atkinson	1943	125	20,026	0	0	15	2,345	110	17,681	0
	1944	88	29,688	1	2,500	9	2,425	78	24,763	1
	1945	103	110,449	2	9,000	28	77,716	73	23,733	2
Fox Point	1943	23	3,305	0	0	12	1,685	11	1,620	0
	1944	15	3,532	0	0	5	970	10	2,562	0
	1945	46	234,622	22	221,100	11	4,927	13	8,595	22
Grafton	1943	1	300	0	0	0	0	1	300	0
	1944	4	450	0	0	0	0	4	450	0
	1945	35	100,850	7	38,000	2	28,000	26	34,850	7
Green Bay	1943	280	174,320	1	1,000	154	81,822	125	91,498	1
	1944	256	342,972	3	8,300	73	126,890	180	207,782	6
	1945	479	1,543,636	104	507,750	137	810,531	238	225,355	108
Green Lake	1943	0	0	0	0	0	0	0	0	0
	1944	3	1,085	0	0	3	1,085	0	0	0
	1945	5	4,750	1	1,200	3	3,450	1	100	1
Hartford	1943	48	8,400	0	0	2	600	46	7,800	0
	1944	33	146,270	1	2,800	10	139,625	22	3,845	1
	1945	34	98,872	1	6,000	13	80,672	20	12,200	1
Horicon	1943	3	3,600	0	0	2	600	1	3,000	0
	1944	12	36,000	0	0	6	11,000	6	25,000	0
	1945	4	87,000	3	18,000	1	69,000	0	0	3
Hudson	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	[2]1945	15	79,950	5	23,000	10	56,950	0	0	5
Iola	1943	10	2,250	0	0	1	100	9	2,150	0
	1944	7	9,050	0	0	1	8,000	6	1,050	0
	1945	0	0	0	0	0	0	0	0	0
Janesville	1943	42	32,405	0	0	16	7,725	26	24,680	0
	1944	53	81,475	1	5,000	16	3,375	36	73,100	1
	1945	126	333,735	12	53,500	41	166,880	73	113,355	12
Kaukauna	1943	71	13,691	0	0	51	4,761	20	8,930	0
	1944	60	41,801	0	0	24	20,366	36	21,435	0
	1945	66	100,369	3	16,400	24	65,550	39	18,419	3
*Kenosha	1943	822	2,931,254	322	1,082,650	119	1,660,487	381	188,117	331
	1944	563	699,908	62	409,500	80	24,905	421	265,503	95
	1945	668	1,492,057	74	488,400	135	539,505	459	464,152	76
Kewaunee	1943	16	4,997	0	0	10	1,037	6	3,960	0
	1944	21	59,403	1	3,000	5	51,980	15	4,423	1
	1945	22	14,200	0	0	13	7,600	9	6,600	0
Kiel	1943	45	12,575	0	0	2	2,300	43	10,275	0
	1944	43	22,735	2	5,700	6	9,950	35	7,085	2
	1945	51	52,019	1	5,000	5	24,125	45	22,894	1

* In sample of 257 cities. See text and tables, pp. 12 to 16.

[2] 10 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

EAST NORTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Wisconsin—Continued										
Kohler	1943	49	$5,300	0	0	0	0	49	$5,300	0
	1944	18	4,590	0	0	1	$2,500	17	2,090	0
	1945	27	7,743	0	0	0	0	27	7,743	0
La Crosse	1943	242	135,040	8	$3,125	92	51,728	142	80,187	8
	1944	213	144,634	2	2,500	87	111,790	124	30,344	2
	1945	354	942,498	93	363,845	100	518,528	161	60,125	97
Ladysmith	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	5	55,000	0	0	3	45,000	2	10,000	0
Lake Geneva	1943	2	300	0	0	2	300	0	0	0
	1944	5	4,500	0	0	0	0	5	4,500	0
	1945	10	15,964	3	12,000	5	1,079	2	2,885	3
Lancaster	1943	52	7,304	0	0	49	7,149	3	155	0
	1944	14	2,471	0	0	14	2,471	0	0	0
Loyal	1943	2	125	0	0	1	75	1	50	0
	1944	1	4,800	0	0	1	4,800	0	0	0
	[1]1945	2	6,200	0	0	1	5,000	1	1,200	0
*Madison	1943	1,064	1,394,205	67	260,500	42	429,309	955	704,396	73
	1944	989	829,694	4	76,000	36	84,235	949	669,459	25
	1945	1,317	2,620,840	85	804,300	107	791,225	1,125	1,025,315	215
Manitowoc	1943	299	191,659	9	36,997	128	76,700	162	77,962	17
	1944	265	311,865	2	325	60	148,055	203	163,485	2
	1945	330	406,378	5	14,600	76	80,770	249	311,008	5
Maple Bluff	1943	1	195	0	0	1	195	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	7	38,030	4	32,000	1	500	2	5,530	4
Marinette	1943	96	21,717	0	0	44	5,423	52	16,294	0
	1944	140	40,163	0	0	33	9,635	107	30,528	0
	1945	160	159,003	5	9,150	54	110,846	101	39,007	5
Marshfield	1943	153	123,810	1	200	56	92,710	96	30,900	1
	1944	201	139,577	2	1,200	46	97,290	153	41,087	2
	1945	233	349,270	30	110,020	51	144,230	152	95,020	30
Mellen	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Menasha	1943	111	12,215	1	450	74	7,340	36	4,425	1
	1944	82	142,440	0	0	34	134,910	48	7,530	0
	1945	128	241,465	10	52,500	63	163,460	55	25,505	10
Menomonce Falls	1943	16	7,775	0	0	11	2,500	5	5,275	0
Milton	1943	0	0	0	0	0	0	0	0	0
	1944	5	3,900	0	0	3	1,300	2	2,600	0
	1945	8	11,600	0	0	3	5,200	5	6,400	0
*Milwaukee	1943	3,355	7,076,912	472	2,911,305	459	1,423,948	2,424	2,741,659	767
	1944	3,853	6,368,405	280	1,768,443	347	701,568	3,226	3,898,394	402
	1945	5,471	16,656,589	893	6,624,552	676	4,604,782	3,902	5,427,255	1,125
Mineral Point	1943	5	1,550	0	0	2	325	3	1,225	0
	1944	5	9,225	0	0	4	7,725	1	1,500	0
	1945	13	7,900	1	1,000	10	5,000	2	1,900	1
Monroe	1944	38	176,900	3	12,200	27	122,100	8	42,600	3
	1945	59	399,700	17	101,700	36	270,500	6	27,500	17
Montello	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
Mosinee	1943	0	0	0	0	0	0	0	0	0
	1944	1	1,500	0	0	0	0	1	1,500	0
	1945	8	60,500	3	8,500	5	52,000	0	0	3
Mount Horeb	1943	1	3,500	1	3,500	0	0	0	0	1
	1944	4	1,250	0	0	1	150	3	1,100	0
	1945	8	20,050	4	19,000	2	500	2	550	4
Neenah	1943	101	20,350	0	0	47	9,703	54	10,647	0
	1944	92	55,832	0	0	20	4,572	72	51,260	0
	1945	139	338,694	13	80,000	41	41,895	85	216,799	12
North Fond du Lac	1943	2	235	0	0	0	0	2	235	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Oconto	1943	2	2,000	0	0	1	500	1	1,500	0
	1944	3	2,000	0	0	1	1,500	2	500	0
	1945	2	19,000	0	0	2	19,000	0	0	0
Oconto Falls	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Oregon	1943	3	3,800	0	0	2	3,300	1	500	0
	1944	3	1,250	0	0	2	1,200	1	50	0
	1945	7	12,300	2	6,500	3	3,100	2	2,700	2

* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

EAST NORTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Wisconsin—Continued										
*Oshkosh	1943	350	$128,659	3	$1,220	52	$8,396	295	$119,043	3
	1944	413	315,131	6	2,800	43	174,318	364	138,013	6
	1945	587	618,021	27	51,255	79	327,065	481	239,701	27
Osseo	1943	5	1,500	0	0	2	800	3	700	0
	1944	8	8,250	1	1,000	5	4,000	2	3,250	1
	1945	11	19,400	2	4,000	9	15,400	0	0	2
Owen	1943	4	575	0	0	1	100	3	475	0
	1944	10	1,085	0	0	7	735	3	350	0
	1945	17	25,085	2	1,000	11	23,050	4	1,035	2
Peshtigo	1943	18	2,210	0	0	13	1,435	5	775	0
	1944	16	4,370	1	1,200	5	420	10	2,750	1
	1945	28	16,575	3	4,800	10	4,950	15	6,825	3
Pewaukee	1943	4	605	0	0	1	150	3	455	0
	1944	8	2,205	0	0	1	150	7	2,055	0
Platteville	1943	7	1,510	0	0	7	1,510	0	0	0
	1944	15	13,751	2	2,000	12	10,551	1	1,200	2
	1945	37	41,245	6	27,000	23	12,095	8	2,150	5
Port Washington	1943	16	22,518	4	20,000	0	0	12	2,518	4
	1944	33	15,276	0	0	14	7,500	19	7,776	0
Prairie du Sac	1943	4	850	0	0	2	250	2	600	0
	1944	17	16,165	2	11,000	5	1,335	10	3,830	2
	1945	12	5,250	0	0	5	3,000	7	2,250	0
*Racine	1943	397	709,423	81	407,490	73	14,257	243	287,676	87
	1944	768	1,749,174	221	1,140,375	67	36,502	480	572,297	225
	1945	754	2,138,546	145	891,900	135	694,015	474	552,631	157
Reedsburg	1943	284	43,987	1	3,500	1	650	282	39,837	1
	1944	274	38,566	0	0	0	0	274	38,566	0
	1945	266	122,561	12	41,900	1	10,000	253	70,661	12
Rhinelander	1943	19	4,975	0	0	2	1,200	17	3,775	0
	1944	28	10,560	0	0	16	7,760	12	2,800	0
	[1]1945	47	49,850	7	20,300	23	19,350	17	10,200	7
Ripon	1943	21	6,645	0	0	17	6,110	4	535	0
	1944	15	7,850	0	0	12	7,250	3	600	0
	1945	37	132,550	5	11,000	26	114,550	6	7,000	5
River Hills	1943	8	3,138	0	0	7	2,638	1	500	0
	1944	1	4,500	0	0	0	0	1	4,500	0
	1945	0	0	0	0	0	0	0	0	0
Rothschild	1943	16	1,266	0	0	9	581	7	685	0
	1944	19	4,587	1	600	7	837	11	3,150	1
	1945	31	53,645	8	18,030	10	3,060	13	32,555	8
St. Croix Falls	1943	1	250	0	0	1	250	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	6	15,900	1	7,000	2	900	3	8,000	2
Sauk City	1943	27	13,925	0	0	18	9,775	9	4,150	0
	1944	30	21,150	2	4,500	8	6,450	20	10,200	2
	1945	32	27,500	0	0	16	20,850	16	6,650	0
Schofield	1943	15	2,352	0	0	11	1,555	4	797	0
	1944	14	6,875	2	3,650	4	525	8	2,700	2
	1945	19	15,570	3	5,500	8	6,570	8	3,500	3
Shawano	1943	47	10,105	0	0	6	640	41	9,465	0
	1944	68	17,510	0	0	0	0	68	17,510	0
	1945	69	167,745	20	60,600	17	90,695	32	16,450	20
*Sheboygan	1943	756	185,689	0	0	68	10,538	688	175,151	0
	1944	725	294,326	0	0	70	44,778	655	249,548	0
	1945	861	893,766	15	80,285	84	405,791	762	407,690	15
Sheboygan Falls	1943	62	11,588	0	0	14	3,143	48	8,445	0
	1944	56	8,699	0	0	6	960	50	7,739	0
	1945	99	55,326	2	9,000	11	8,220	86	38,106	2
Shorewood	1943	47	350,226	32	341,800	2	345	13	8,081	106
	1944	31	119,319	7	95,900	9	2,103	15	21,316	26
	1945	64	432,288	30	409,000	10	3,675	24	19,613	81
South Milwaukee	1943	91	43,688	0	0	13	2,375	78	41,313	0
	1944	117	61,355	1	9,500	9	11,494	107	40,361	4
	1945	131	232,521	11	63,100	19	118,119	101	51,302	11
Spooner	1943	2	2,000	0	0	1	800	1	1,200	0
	1944	5	7,300	1	2,500	4	4,800	0	0	1
	1945	7	17,100	0	0	3	6,500	4	10,600	0
Stanley	1943	56	30,350	0	0	3	3,100	53	27,250	0
	1944	97	51,325	0	0	0	0	97	51,325	0
	1945	86	78,685	0	0	1	2,800	85	75,885	0
Stevens Point	1943	78	12,265	0	0	23	3,355	55	8,910	0
	1944	112	36,310	0	0	43	6,430	69	29,880	0
	1945	150	233,240	11	38,700	40	8,750	99	185,790	11
Sturgeon Bay	1943	81	189,743	3	10,790	29	120,899	49	58,054	4
	1944	100	86,562	12	26,250	38	29,555	50	30,757	12

* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

EAST NORTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Wisconsin—Continued										
*Superior	1943	524	$542,770	72	$209,210	83	$21,690	369	$311,870	69
	1944	847	637,393	7	16,750	83	55,960	757	564,683	8
	1945	656	523,758	10	31,500	82	160,853	564	331,405	10
Thiensville	1945	18	50,877	4	15,727	9	33,550	5	1,600	4
Two Rivers	1943	241	72,138	1	1,500	48	7,476	192	63,162	1
	1944	252	65,073	0	0	33	17,035	219	48,038	0
	1945	257	163,273	6	23,900	32	62,115	219	77,258	6
Valders	1943	6	1,543	0	0	2	940	4	603	0
	1944	2	6,220	0	0	0	0	2	6,220	0
	1945	5	9,500	1	4,000	2	1,900	2	3,600	1
Verona	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	3	7,000	0	0	2	6,500	1	500	0
Waukesha	1943	105	205,949	5	41,500	28	125,239	72	39,210	10
	1944	202	627,664	68	385,950	32	150,759	102	90,955	74
	1945	365	1,305,758	120	453,248	60	589,395	185	263,115	120
Waupun	1943	13	2,053	0	0	4	563	9	1,490	0
	1944	24	17,003	0	0	8	10,815	16	6,188	0
	1945	38	34,135	3	15,100	14	6,350	21	12,685	3
Wausau	1943	176	51,163	2	400	71	11,265	103	39,498	2
	1944	156	258,985	2	400	66	231,850	88	26,735	2
	1945	215	541,970	39	134,360	96	356,110	80	51,500	38
Wauwatosa	1943	104	129,044	10	79,500	22	3,278	72	46,266	23
	1944	115	207,169	17	133,300	20	31,650	78	42,219	33
	1945	255	1,674,142	132	1,127,000	54	482,437	69	64,705	231
West Allis	1943	451	1,812,516	105	582,100	132	265,860	214	964,556	132
	1944	376	1,088,470	48	253,300	69	498,261	259	336,909	51
	1945	571	1,255,943	116	684,245	106	228,778	349	342,920	119
West Bend	1943	49	19,120	0	0	26	12,580	23	6,540	0
	1944	44	42,850	0	0	9	35,595	35	7,255	0
	1945	56	681,415	19	116,900	22	559,065	15	5,450	18
West Milwaukee	1943	44	95,763	6	32,900	10	38,570	28	24,293	5
	1944	42	130,270	7	55,900	6	52,250	29	22,120	13
	1945	50	377,369	5	46,800	15	96,845	30	233,724	8
Whitefish Bay	1943	80	294,611	51	289,300	12	2,194	17	3,117	64
	1944	61	108,278	20	101,500	20	3,662	21	3,116	20
	1945	220	1,342,151	152	1,148,706	30	166,293	38	27,152	155
Wisconsin Dells	1943	77	17,870	0	0	19	11,675	58	6,195	0
	1944	40	37,575	1	3,000	14	28,900	25	5,675	1
	1945	12	28,000	11	8,000	1	20,000	0	0	1
Wisconsin Rapids	1943	63	108,831	0	0	44	100,064	19	8,767	0
	1944	105	70,258	0	0	44	33,576	61	36,682	0
	1945	177	661,550	27	103,700	59	451,760	91	106,090	27

WEST NORTH CENTRAL STATES

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Iowa:										
Algona	1943	21	$2,965	0	0	10	$1,765	11	$1,200	0
	1944	41	187,715	21	$140,500	1	19,000	19	28,215	21
	[1]1945	21	38,800	2	7,800	6	22,000	13	9,000	2
Ames	1943	47	21,019	0	0	17	3,534	30	17,485	0
	1944	67	35,331	1	4,750	8	1,950	58	28,631	4
	1945	196	422,800	94	276,950	27	86,500	75	59,350	119
Atlantic	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Audubon	1943	0	0	0	0	0	0	0	0	0
	1944	6	22,500	0	0	3	7,500	3	15,000	0
Bettendorf	1943	143	266,393	52	173,422	20	80,405	71	12,566	52
	1944	81	69,988	2	6,500	14	45,659	65	17,829	2
	1945	102	115,718	7	38,100	22	55,665	73	21,953	7
Buffalo	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Burlington	1943	81	356,712	5	4,700	57	346,849	19	5,163	5
	1944	70	386,644	5	102,600	37	221,735	28	62,309	7
	1945	89	169,805	4	10,000	38	53,230	47	106,575	4
*Cedar Rapids	1943	1,585	974,413	9	1,470	232	705,429	1,344	267,514	9
	1944	1,462	1,169,812	60	195,325	134	588,304	1,268	386,183	60
	1945	1,796	2,218,035	121	407,550	276	1,300,452	1,399	510,033	119
Chariton	1943	0	0	0	0	0	0	0	0	0
	1944	1	1,000	1	1,000	0	0	0	0	1
	1945	4	13,000	0	0	2	10,000	2	3.000	0

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* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

WEST NORTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Iowa—Continued										
Clarksville	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
*Council Bluff	1943	64	$227,491	0	0	23	$182,714	41	$44,777	0
	1944	168	251,171	32	$99,775	27	27,074	109	124,322	32
	1945	234	593,206	16	67,600	82	395,016	136	130,590	16
*Davenport	1943	1,785	628,579	8	28,210	137	218,017	1,640	382,352	8
	1944	1,856	552,705	8	35,915	130	120,994	1,718	395,796	8
	1945	1,992	1,474,842	92	488,982	186	380,530	1,714	605,330	92
Decorah	1943	4	4,000	0	0	2	2,000	2	2,000	0
	1944	5	4,500	0	0	1	500	4	4,000	0
	1945	16	143,600	0	0	12	116,600	4	27,000	0
*Des Moines	1943	721	316,474	11	4,900	303	183,670	407	127,904	11
	1944	925	3,473,904	14	30,575	218	2,905,421	693	537,908	15
	1945	1,278	3,979,745	121	488,400	465	2,942,367	692	548,978	114
*Dubuque	1943	398	142,171	0	0	33	60,019	365	82,152	0
	1944	434	288,960	2	390	37	30,111	395	258,459	2
	1945	580	620,970	47	199,250	48	50,147	485	371,573	47
Durant	1943	17	16,319	0	0	5	12,425	12	3,894	0
	1944	15	10,400	1	1,000	6	6,895	8	2,505	1
Eldora	1943	4	2,250	0	0	2	1,800	2	450	0
	1944	6	3,600	0	0	0	0	6	3,600	0
Elkhart	1944	0	0	0	0	0	0	0	0	0
Farmington	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Fort Dodge	1943	222	167,410	0	0	20	34,585	202	132,825	0
	1944	305	306,801	2	1,700	28	83,575	275	221,526	2
	1945	435	614,063	30	131,150	61	234,398	344	248,515	30
Hampton	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Harlan	1943	8	2,950	0	0	8	2,950	0	0	0
	1944	11	4,250	2	900	8	3,150	1	200	2
	1945	19	25,300	4	16,000	14	8,550	1	750	4
Ida Grove	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
Iowa City	1943	37	7,850	0	0	25	5,790	12	2,060	0
	1944	42	271,593	2	6,500	24	254,563	16	10,530	2
	1945	98	158,620	5	21,300	39	71,785	54	65,535	5
Keokuk	1943	23	35,390	2	275	5	4,940	16	30,175	2
	1944	25	26,990	5	1,950	10	9,510	10	15,530	5
	1945	24	39,415	4	3,315	11	30,550	9	5,550	4
Lake Mills	1943	4	2,200	0	0	2	1,700	2	500	0
	1944	2	35,000	0	0	2	35,000	0	0	0
	1945	14	33,700	4	15,500	6	13,700	4	4,500	4
Mapleton	1943	3	450	0	0	3	450	0	0	0
	1944	7	6,350	0	0	4	1,150	3	5,200	0
	1945	8	2,900	0	0	6	1,500	2	1,400	0
Marion	1943	42	5,176	0	0	11	1,209	31	3,967	0
	1944	27	10,943	1	200	7	5,950	19	4,793	1
	1945	57	68,442	8	31,000	17	15,642	32	21,800	8
Marshalltown	1943	100	50,435	1	200	58	41,905	41	8,330	1
	1944	109	159,990	1	200	45	146,700	63	13,090	1
	1945	183	216,600	17	81,500	60	65,050	106	70,050	17
Mason City	1943	375	109,753	0	0	34	38,455	341	71,298	0
	1944	431	166,406	0	0	35	36,171	396	130,235	0
	1945	563	511,657	15	75,560	73	145,726	475	290,371	15
Muscatine	1943	224	1,283,770	6	1,150	43	1,256,140	175	26,480	6
	1944	245	647,526	5	1,150	33	558,047	207	88,329	5
	1945	304	213,888	14	24,900	56	135,428	234	53,560	14
Nashua	1943	3	650	0	0	1	250	2	400	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
New Hampton	1943	1	500	0	0	0	0	1	500	0
	1944	4	1,150	0	0	0	0	4	1,150	0
	1945	16	24,450	0	0	15	23,950	1	500	0
New London	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
Newton	1943	72	227,747	50	200,000	5	1,535	17	26,212	50
	1944	122	370,895	105	279,500	7	82,865	10	8,530	105
	1945	19	109,675	0	0	9	90,200	10	19,475	0
Orange	1943	5	1,435	0	0	4	1,300	1	135	0
	1944	0	0	0	0	0	0	0	0	0
	1945	3	2,200	0	0	3	2,200	0	0	0

* In sample of 257 cities. See text and tables, pp. 12 to 16.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

WEST NORTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Iowa—Continued										
Oskaloosa	1943	4	$7,088	0	0	3	$6,688	1	$400	0
	1944	10	50,374	0	0	8	47,874	2	2,500	0
	1945	22	119,471	0	0	18	111,975	4	7,496	0
Ottumwa	1943	165	79,475	16	$19,350	41	14,425	108	45,700	16
	1944	188	520,750	75	334,050	42	80,050	71	106,650	75
	1945	258	952,000	63	266,050	55	514,800	140	171,150	63
Perry	1943	4	7,745	0	0	1	900	3	6,845	0
	1944	7	4,110	0	0	5	3,710	2	400	0
	1945	18	127,025	8	35,900	10	91,125	0	0	8
Pocahontas	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	16	44,500	7	15,850	9	28,650	0	0	7
Rock Rapids	1943	11	7,400	0	0	2	1,200	9	6,200	0
	1944	13	3,900	0	0	3	1,300	10	2,600	0
	1945	21	61,675	2	9,000	10	23,075	9	29,600	2
Sioux Center	1943	6	13,900	0	0	3	13,500	3	400	0
	1944	7	2,950	0	0	2	1,250	5	1,700	0
	1945	16	33,400	13	32,200	0	0	3	1,200	10
*Sioux City	1943	138	109,347	1	200	87	65,700	50	43,447	1
	1944	207	600,633	5	8,650	86	519,633	116	72,350	5
	1945	387	1,184,100	28	123,135	177	695,980	182	364,985	37
Tipton	1943	4	10,700	0	0	4	10,700	0	0	0
	1944	7	12,000	0	0	6	2,000	1	10,000	0
	1945	7	18,700	1	2,000	5	16,200	1	500	2
Urbandale	1943	0	0	0	0	0	0	0	0	0
	1944	6	8,500	1	2,500	1	5,000	4	1,000	1
	1945	6	22,700	1	2,500	4	19,600	1	600	1
Villisca	1943	1	500	0	0	1	500	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
*Waterloo	1943	397	290,498	1	1,000	103	69,562	293	219,936	1
	1944	678	756,673	23	102,750	144	293,690	511	360,233	23
	1945	975	2,846,546	165	658,020	215	1,622,282	595	566,244	165
Webster City	1943	14	11,450	0	0	3	435	11	11,015	0
	1944	7	76,667	1	175	2	76,000	4	492	1
	1945	34	101,087	8	24,800	13	34,075	13	42,212	7
West Des Moines	1943	8	7,485	0	0	3	5,150	5	2,335	0
	1944	9	4,860	1	500	2	1,760	6	2,600	1
	1945	27	67,200	5	25,000	16	39,400	6	2,800	5
Winterset	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Williamsburg	1943	0	0	0	0	0	0	0	0	0
	1944	5	5,300	0	0	3	1,300	2	4,000	0
Woodbine	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Woodward	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Kansas:										
Abilene	1943	23	3,750	1	200	16	1,890	6	1,660	1
	1944	41	57,910	17	47,850	16	7,935	8	2,125	18
	[1] 1945	30	35,030	7	11,550	21	18,900	2	4,580	7
Anthony	1943	0	0	0	0	0	0	0	0	0
	1944	4	5,500	0	0	4	5,500	0	0	0
	1945	12	21,400	6	14,500	6	6,900	0	0	6
Arkansas City	1943	23	3,535	0	0	7	1,434	16	2,101	0
	1944	24	7,102	1	1,000	15	2,017	8	4,085	1
	1945	80	90,828	7	31,350	37	32,063	36	27,415	7
Atchinson	1943	12	62,600	0	0	8	60,700	4	1,900	0
	1944	17	29,950	0	0	11	15,850	6	14,100	0
Augusta	1943	4	5,800	1	3,500	0	0	3	2,300	1
	1944	8	6,900	0	0	1	5,000	7	1,900	0
	1945	14	9,700	2	4,000	1	100	11	5,600	2
Baxter Springs	1943	1	300	0	0	1	300	0	0	0
	1944	2	250	0	0	2	250	0	0	0
	1945	7	10,225	2	5,000	5	5,225	0	0	2
Beloit	1943	3	3,400	1	3,000	1	200	1	200	2
	1944	3	9,500	1	5,000	0	0	2	4,500	1
	1945	1	30,000	0	0	1	30,000	0	0	0
Bonner Springs	1943	27	6.150	1	1,000	13	3,050	13	2,100	1
	1944	3	3,200	1	2,000	2	1,200	0	0	1
	1945	0	0	0	0	0	0	0	0	0

* In sample of 257 cities. See text and tables, pp. 12 to 16.

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APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

WEST NORTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Kansas—Continued										
Caney	1943	71	$30,000	0	0	0	0	71	$30,000	0
	1944	72	36,500	0	0	0	0	72	36,500	0
	1945	96	47,000	0	0	1	$5,000	95	42,000	0
Chapman	1943	2	2,625	0	0	2	2,625	0	0	0
	1944	1	2,000	1	$2,000	0	0	0	0	1
	1945	5	1,550	0	0	2	300	3	1,250	0
Cherryvale	1943	0	0	0	0	0	0	0	0	0
	1944	1	100	0	0	1	100	0	0	0
	1945	17	9,990	2	4,300	10	3,990	5	1,700	2
Coffeyville	1943	334	202,023	39	100,585	43	25,666	252	75,772	45
	1944	228	84,820	6	3,200	28	44,163	194	37,457	6
	1945	249	241,523	20	70,950	37	64,686	192	105,887	20
Dodge City	1943	135	422,955	23	87,400	32	44,436	80	291,119	30
	1944	75	124,970	16	75,500	13	5,625	46	43,845	16
	1945	146	341,165	36	99,000	37	103,430	73	138,735	10
El Dorado	1943	121	13,545	0	0	18	1,375	103	12,170	0
	1944	120	20,865	0	0	5	205	115	20,660	0
	1945	147	311,900	55	237,350	8	27,875	84	46,675	49
Elkhart	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Ellis	1943	30	11,300	0	0	4	1,160	26	10,140	0
	1944	20	16,445	0	0	0	0	20	16,445	0
	[1] 1945	24	32,000	3	6,800	1	1,300	20	23,900	3
Emporia	1943	22	12,025	0	0	0	0	22	12,025	0
	1944	28	12,505	0	0	3	3,800	25	8,705	0
	[1] 1945	55	94,650	7	22,200	6	40,550	42	31,900	7
Eureka	1943	1	250	0	0	1	250	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Fort Scott	1943	7	12,350	1	1,000	5	10,850	1	500	1
	1944	15	64,600	1	2,000	6	57,600	8	5,000	1
	1945	23	50,500	3	6,300	9	24,700	11	19,500	3
Fredonia	1943	4	1,065	0	0	2	465	2	600	0
	1944	5	4,200	1	500	1	350	3	3,350	1
	[1] 1945	11	72,650	2	4,300	9	68,350	0	0	2
Garden City	1943	442	589,090	253	533,692	60	10,845	129	44,553	256
Glasco	1943	1	12,000	0	0	1	12,000	0	0	0
	1944	1	1,000	0	0	0	0	1	1,000	0
	1945	3	16,000	0	0	2	8,500	1	7,500	0
Goodland	1943	12	2,575	1	200	7	1,625	4	750	1
	1944	5	1,000	0	0	0	0	5	1,000	0
	1945	16	62,650	2	7,000	12	54,950	2	700	2
Harper	1943	29	3,930	0	0	26	3,630	3	300	0
	1944	29	15,270	1	200	16	9,920	12	5,150	1
	1945	23	22,775	5	10,100	10	10,000	8	2,675	5
Hays	1943	132	160,226	26	98,400	8	4,872	98	56,954	26
	1944	138	85,783	20	37,470	14	2,060	104	46,253	20
	1945	111	184,903	19	67,600	28	81,990	64	35,313	19
Herington	1943	28	7,450	0	0	13	5,365	15	2,085	0
	1945	19	6,080	0	0	13	4,905	6	1,175	0
Humboldt	1943	2	394	0	0	2	394	0	0	0
	1944	1	1,000	0	0	1	1,000	0	0	0
	1945	2	167	0	0	1	60	1	107	0
Hutchinson	1943	349	71,105	2	1,071	96	16,555	251	53,479	2
	1944	323	588,702	2	1,100	56	532,220	265	55,382	2
	1945	549	487,764	88	282,525	96	88,945	365	116,294	88
Independence	1943	62	143,750	34	73,900	7	1,475	21	68,375	47
	1944	33	29,124	2	1,300	17	8,150	14	19,674	2
	1945	50	30,775	3	3,800	8	4,850	39	22,125	3
Junction City	1943	99	25,700	8	10,000	20	1,500	71	14,200	8
	1944	0	0	0	0	0	0	0	0	0
*Kansas City	1943	468	612,088	123	281,025	85	102,320	260	228,743	124
	1944	599	2,671,842	192	1,537,525	94	801,266	313	333,051	519
	1945	642	2,076,080	89	258,473	148	1,412,521	405	405,086	117
Kingman	1943	2	1,072	0	0	0	0	2	1,072	0
	1944	0	0	0	0	0	0	0	0	0
	1945	29	26,205	6	8,700	10	11,630	13	5,875	6
Kiowa	1943	2	1,075	0	0	1	75	1	1,000	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Lawrence	1943	84	62,885	8	40,400	29	4,920	47	17,565	15
	1944	101	198,580	29	139,900	27	8,465	45	50,215	30
	1945	134	187,605	9	39,000	45	63,300	80	85,305	9

* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

WEST NORTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Kansas—Continued										
Leavenworth	1943	98	$251,066	53	$237,600	6	$848	39	$12,618	106
	1944	39	95,338	3	4,148	6	9,769	30	81,421	3
	1945	79	124,111	6	14,500	26	19,913	47	89,698	6
Lindsborg	1943	18	9,795	2	4,500	12	3,300	4	1,995	2
	1944	17	11,770	1	2,000	10	7,270	6	2,500	1
	1945	30	20,525	1	2,500	11	9,800	18	8,225	1
Lyons	1943	18	3,410	0	0	16	2,110	2	1,300	0
	1944	7	5,100	0	0	6	4,900	1	200	0
	1945	54	98,040	16	56,600	27	33,690	11	7,750	16
McPherson	1943	130	20,910	0	0	37	7,549	93	13,361	0
	1944	164	162,984	26	100,100	28	17,047	110	45,837	25
	1945	231	171,026	2	2,700	24	100,370	205	67,956	2
Manhattan	1943	96	41,624	7	28,700	25	3,080	64	9,844	10
	1944	86	36,293	7	19,100	11	3,300	68	13,893	7
	1945	290	430,148	57	234,750	35	116,300	198	79,098	57
Marion	1943	91	8,425	0	0	2	250	89	8,175	0
	1944	124	16,888	0	0	8	8,255	116	8,633	0
	1945	120	18,785	0	0	5	7,100	115	11,685	0
Newton	1943	99	34,030	1	1,600	14	4,434	84	27,996	1
	1944	107	54,050	0	0	12	8,895	95	45,155	0
	1945	170	124,510	12	17,000	33	19,755	125	87,755	12
Nicherson	[1]1945	7	12,345	1	4,500	1	5,895	5	1,950	1
Norton	1943	31	9,249	1	1,000	22	4,589	8	3,660	1
	1944	21	25,300	1	6,000	9	14,725	11	4,575	2
	1945	62	76,040	4	6,500	27	48,890	31	20,650	4
Oberlin	1943	3	5,200	0	0	3	5,200	0	0	0
	1944	5	20,400	1	3,000	2	16,250	2	1,150	1
	1945	21	15,450	4	5,000	7	2,450	10	8,000	4
Osborne	1944	4	4,900	0	0	1	400	3	4,500	0
	1945	5	7,300	5	7,300	0	0	0	0	5
Osage City	1944	1	1,000	0	0	0	0	1	1,000	0
	1945	0	0	0	0	0	0	0	0	0
Phillipsburg	1943	0	0	0	0	0	0	0	0	0
	1944	2	2,500	0	0	0	0	2	2,500	0
	1945	28	52,700	6	24,000	2	10,000	20	18,700	6
Pittsburg	1943	34	12,160	0	0	5	2,700	29	9,460	0
	1944	40	77,270	0	0	4	54,000	36	23,270	0
	1945	57	84,845	0	0	7	8,000	50	76,845	0
Pratt	1943	181	372,929	144	323,855	4	965	33	48,109	144
	1944	77	160,636	26	65,000	5	55,821	46	39,815	26
	1945	236	574,465	193	445,100	20	94,300	23	35,065	180
Rossville	1943	0	0	0	0	0	0	0	0	0
	1944	3	25,000	0	0	3	25,000	0	0	0
	1945	2	22,000	1	2,000	1	20,000	0	0	1
St. Francis	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	[1]1945	0	0	0	0	0	0	0	0	0
Salina	1943	332	938,561	209	828,995	61	48,926	62	60,640	288
	1944	120	147,120	12	9,375	52	95,260	56	42,485	12
	[2]1945	175	256,296	32	68,700	69	128,768	74	58,828	32
Sterling	1943	10	1,060	0	0	9	1,010	1	50	0
	1944	5	1,100	0	0	0	0	5	1,100	0
	1945	14	12,850	2	3,000	8	5,700	4	4,150	2
*Topeka	1943	250	59,022	3	875	95	10,020	152	48,127	3
	1944	408	892,076	55	203,000	125	121,596	228	567,480	55
	1945	704	1,189,658	202	805,800	182	134,228	320	249,630	212
Wakeeney	1943	29	5,110	2	375	25	4,485	2	250	2
	1944	19	9,665	6	5,755	10	2,185	3	1,725	6
	1945	42	67,005	20	40,400	19	22,905	3	3,700	20
Wellington	1943	28	7,667	0	0	7	1,490	21	6,177	0
	1944	29	12,982	0	0	9	9,865	20	3,117	0
	1945	57	40,210	9	14,400	33	21,770	15	4,040	9
*Wichita	1943	3,409	4,686,520	777	3,019,585	384	789,634	2,248	877,301	1,484
	1944	4,814	2,250,549	38	56,450	305	606,650	4,471	1,587,449	38
	1945	3,642	3,029,080	151	339,977	514	1,031,266	2,977	1,657,837	165
Minnesota:										
Ada	1943	10	17,775	0	0	3	15,225	7	2,550	0
	1944	11	97,550	1	300	3	78,050	7	19,200	1
	1945	17	12,525	7	5,925	9	6,400	1	200	4
Albertlen	1943	99	55,091	1	500	35	29,678	63	24,913	1
	1944	107	149,760	1	2,000	26	125,275	80	22,485	1
	1945	172	412,456	45	167,906	36	168,590	91	75,960	50
Alexandria	1943	49	14,525	0	0	13	7,550	36	6,975	0
	1944	81	17,760	0	0	34	8,000	47	9,760	0
	1945	85	167,160	27	88,800	33	65,110	25	13,250	27

* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

[2] 10 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

WEST NORTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Minnesota—Continued										
Annandale	1943	2	$600	0	0	0	0	2	$600	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Anoka	1943	28	17,650	10	$12,500	16	$4,750	2	400	10
	1944	28	32,400	6	16,000	18	15,500	4	900	6
	1945	45	134,100	22	114,000	17	14,300	6	5,800	22
Appleton	1943	3	245	0	0	3	245	0	0	0
	1944	23	20,706	2	5,000	14	12,771	7	2,935	2
	1945	30	45,900	4	9,400	12	26,200	14	10,300	4
Austin	1943	105	87,144	22	71.900	42	6,141	41	9,103	22
	1944	83	47,440	4	7,075	30	8,113	49	32,252	4
	1945	167	305,660	60	209,775	45	19,740	62	76,145	79
Balaton	1943	0	0	0	0	0	0	0	0	0
	1944	8	4,680	0	0	4	780	4	3,900	0
Barnesville	1943	0	0	0	0	0	0	0	0	0
	1944	10	4,400	0	0	2	1,200	8	3,200	0
	1945	26	23,900	2	3,600	3	1,800	21	18,500	2
Bayport	1943	5	800	0	0	4	650	1	150	0
	1944	2	20,000	0	0	2	20,000	0	0	0
	1945	3	10,000	2	8,500	0	0	1	1,500	2
Benson	1943	45	13,805	0	0	7	6,750	38	7,055	0
	1944	25	6,835	0	0	9	2,325	16	4,510	0
	[2]1945	35	78,555	7	14,400	10	50,580	18	13,575	7
Blackduck	1943	2	375	0	0	2	375	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	7	5,800	0	0	2	4,200	5	1,600	0
Bovey	1943	1	175	0	0	1	175	0	0	0
	1944	4	6,500	0	0	1	500	3	6,000	0
Braham	1943	3	1,150	0	0	1	500	2	650	0
	1944	2	40,000	0	0	2	40,000	0	0	0
	1945	6	53,000	1	2,500	4	48,000	1	2,500	1
Brainerd	1943	11	39,815	2	400	2	38,090	7	1,325	2
	1944	25	40,460	4	9,600	10	21,860	11	9,000	5
Brooklyn Center	1943	22	2,950	0	0	13	2,000	9	950	0
	1944	58	21,250	3	6,000	27	4,410	28	10,840	3
	1945	86	129,395	33	106,850	27	10,270	26	12,275	33
Caledonia	1943	2	700	0	0	0	0	2	700	0
	1944	9	11,200	0	0	3	10,200	6	1,000	0
	1945	11	11,500	0	0	1	5,000	10	6,500	0
Ceylon	1943	7	1,650	0	0	7	1,650	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	2	7,600	0	0	1	7,000	1	600	0
Chisholm	1943	18	3,175	1	200	13	2,375	4	600	1
	1944	30	22,655	3	4,500	2	350	25	17,805	3
	1945	20	27,705	3	7,950	1	180	16	19,575	3
Cloquet	1943	253	45,391	0	0	8	1,605	245	43,786	0
	1944	176	41,429	1	200	34	14,605	141	26,624	1
	1945	235	272,279	11	30,650	47	174,949	177	66,680	11
Cokato	1943	6	31,180	1	700	2	6,400	3	24,080	1
	1944	10	16,450	2	5,500	4	2,750	4	8,200	2
	1945	13	42,700	2	12,000	9	25,200	2	5,500	2
Columbia Heights	1943	84	17,578	0	0	38	6,365	46	11,213	0
	1944	64	32,417	6	14,000	34	9,549	24	8,868	6
	1945	129	180,595	24	108,800	43	27,620	62	44,175	24
Cottonwood	1943	2	600	0	0	2	600	0	0	0
	1944	1	800	0	0	1	800	0	0	0
	1945	10	27,400	2	2,400	7	24.200	1	800	2
Crookston	1943	12	18,795	0	0	6	16,495	6	2,300	0
	1944	14	9,420	0	0	2	1,650	12	7,770	0
	1945	32	34,350	5	7,800	4	2,350	23	24,200	4
Crystal	1943	19	3,225	0	0	10	1,525	9	1,700	0
Deephaven	1943	10	2,900	0	0	8	1,900	2	1,000	0
	1944	16	26,060	3	17,500	2	4,700	11	3,860	3
Detroit Lakes	1943	21	11.081	0	0	8	8,170	13	2,911	0
	1944	42	53,757	0	0	19	41,607	23	12,150	0
	[1]1945	86	206,210	18	63,100	30	108,560	38	34,550	17
*Duluth	1943	1,391	2,067,833	13	11,285	163	1,589,876	1,215	466,672	13
	1944	1,474	1,054,016	21	40,375	128	312,848	1,325	700,793	21
	1945	1,769	1,711,697	66	200,500	201	553,051	1,502	958,146	64

* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

[2] 10 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

WEST NORTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Minnesota—Continued										
Edina	1943	30	$10,923	0	0	13	$6,435	17	$4,488	0
	1944	60	33,635	2	$11,000	30	12,745	28	9,890	2
	1945	141	797,455	87	724,300	24	44,205	30	28,950	87
Elbow Lake	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	10	55,000	7	27,000	3	28,000	0	0	7
Elk River	1943	1	200	0	0	0	0	1	200	0
	1944	5	7,000	0	0	3	6,400	2	600	0
	1945	8	28,225	1	6,000	3	15,900	4	6,325	1
Fairmont	1943	20	36,720	0	0	15	35,170	5	1,550	0
	1944	24	18,890	1	3,600	10	10,675	13	4,615	1
	1945	78	192,375	20	69,800	33	107,360	25	15,215	20
Fairbault	1943	31	33,047	2	500	15	18,622	14	13,925	2
	1944	54	44,495	5	8,100	24	21,108	25	15,287	5
	1945	107	230,542	37	111,710	39	62,638	31	56,194	34
Fergus Falls	1943	26	21,335	0	0	13	17,565	13	3,770	0
	1944	63	90,390	5	4,650	14	72,460	44	13,280	4
	1945	150	210,715	29	60,850	38	102,150	83	47,715	29
Gilbert	1943	11	2,300	0	0	2	1,000	9	1,300	0
	1944	20	4,100	2	1,200	1	400	17	2,500	2
	1945	3	2,400	1	2,000	0	0	2	400	1
Glencoe	1943	1	500	0	0	0	0	1	500	0
	1944	11	7,050	0	0	5	2,750	6	4,300	0
	1945	26	47,550	9	29,500	12	14,600	5	3,450	9
Grand Rapids	1943	8	4,300	0	0	3	3,550	5	750	0
	1944	18	12,275	4	3,150	9	5,750	5	3,375	4
	1945	97	283,730	28	88,300	19	137,475	50	57,955	24
Hastings	1943	0	0	0	0	0	0	0	0	0
	1944	19	14,750	3	6,400	10	6,000	6	2,350	3
	1945	18	26,556	6	15,500	6	8,650	6	2,406	8
Hibbing	1943	198	55,412	0	0	47	6,822	151	48,590	0
	1944	230	147,507	0	0	25	26,868	205	120,639	0
	1945	248	330,558	32	135,900	29	72,010	187	122,648	22
Hopkins	1943	64	24,609	1	4,000	14	3,771	49	16,838	1
	1944	79	74,447	2	10,388	19	40,690	58	23,369	2
	1945	147	969,159	54	336,950	22	229,120	71	403,089	54
International Falls	1943	0	0	0	0	0	0	0	0	0
	1944	4	7,895	1	4,500	1	2,500	2	895	1
	1945	21	79,700	1	3,500	5	52,250	15	23,950	1
Kassons	1943	5	9,495	0	0	1	2,500	4	6,995	0
	1944	2	1,000	0	0	0	0	2	1,000	0
	1945	14	16,000	0	0	2	1,350	12	14,650	0
Lake Crystal	1943	0	0	0	0	0	0	0	0	0
	1944	2	1,500	0	0	2	1,500	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Le Sueur	1943	31	11,910	1	1,000	11	7,375	19	3,535	1
	1944	32	14,130	1	1,500	14	4,395	17	8,235	1
	1945	40	187,515	6	22,500	17	149,425	17	15,590	6
Litchfield	1943	17	17,100	2	2,900	7	3,600	8	10,600	2
	1944	34	76,075	6	22,700	9	37,575	19	15,800	6
	1945	72	175,530	24	98,400	27	56,000	21	21,130	24
Little Falls	1943	41	16,585	3	4,750	15	5,555	23	6,280	3
	1944	48	18,747	2	1,000	16	12,095	30	5,652	2
	1945	63	65,740	14	29,050	18	21,425	31	15,265	13
Mandelia	1943	1	500	0	0	0	0	1	500	0
	1944	4	6,400	0	0	4	6,400	0	0	0
	1945	5	9,000	1	4,000	4	5,000	0	0	1
Madison	1943	6	11,200	0	0	5	9,700	1	1,500	0
	1944	13	4,450	1	350	2	400	10	3,700	1
	1945	37	95,000	13	67,000	14	14,350	10	13,650	13
Mankato	1943	120	75,180	0	0	8	7,360	112	67,820	0
	1944	173	64,653	0	0	9	10,726	164	53,927	0
	1945	325	478,156	24	93,556	49	239,932	252	144,668	23
Marshall	1943	20	11,700	0	0	8	1,100	12	10,600	0
	1944	48	87,770	12	57,000	16	24,445	20	6,325	12
	1945	78	245,425	17	57,750	30	157,800	31	29,875	13
Melrose	1943	1	25,000	0	0	0	0	1	25,000	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Milaca	1943	9	4,750	3	2,800	4	1,200	2	750	3
	1944	10	3,150	0	0	8	1,950	2	1,200	0
*Minneapolis	1943	3,857	2,521,191	3	8,650	428	942,885	3,426	1,569,656	4
	1944	4,760	6,077,050	184	966,750	358	1,437,622	4,218	3,672,678	192
	1945	5,767	16,384,370	808	4,920,980	592	4,920,230	4,367	6,543,160	872

* In sample of 257 cities. See text and tables, pp. 12 to 16.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

WEST NORTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Minnesota—Continued										
Montevideo	1943	9	$8,252	0	0	5	$727	4	$7,525	0
	1944	18	11,340	1	$2,000	8	3,600	9	5,740	1
	[2]1945	31	90,224	5	8,325	13	55,200	13	26,699	5
Moorehead	1943	0	0	0	0	0	0	0	0	0
	1944	28	23,019	4	6,000	13	2,465	11	14,554	4
Mova	1943	9	3,775	0	0	6	1,925	3	1,850	0
	1944	16	30,450	5	9,900	8	18,350	3	2,200	5
	1945	39	111,150	13	40,000	10	60,150	16	11,000	13
New Ulm	1943	47	20,200	0	0	9	2,855	38	17,345	0
	1944	47	89,885	4	5,065	16	75,840	27	8,980	4
	1945	44	166,550	7	24,950	13	129,490	24	12,110	7
North Mankato	1943	35	5,507	0	0	14	2,592	21	2,915	0
	1944	18	5,305	0	0	9	3,210	9	2,095	0
	1945	52	72,088	6	18,500	25	46,875	21	6,713	6
North St. Paul	1943	10	4,150	0	0	5	425	5	3,725	0
	1944	11	9,625	2	5,100	5	730	4	3,795	2
	1945	34	83,505	13	53,600	10	4,405	11	25,500	13
Onamia	1943	0	0	0	0	0	0	0	0	0
	1944	2	2,500	0	0	1	2,000	1	500	0
	1945	1	400	0	0	1	400	0	0	0
Owatonna	1943	66	66,418	0	0	25	55,135	41	11,283	0
	1944	66	37,306	1	185	21	14,005	44	23,116	1
	1945	107	210,700	30	114,175	40	77,040	37	19,485	32
Pine City	1943	3	1,250	0	0	3	1,250	0	0	0
	1944	4	4,300	0	0	4	4,300	0	0	0
Pipestone	1943	18	6,740	0	0	6	2,800	12	3,940	0
	1944	28	14,250	2	5,500	12	3,480	14	5,270	2
	1945	88	118,430	5	15,400	30	74,310	53	28,720	5
Princeton	1943	4	6,300	0	0	1	500	3	5,800	0
	1944	10	2,100	0	0	8	1,650	2	450	0
	1945	19	115,400	7	18,000	9	93,400	3	4,000	7
Red Wing	1943	3	15,000	0	0	2	12,500	1	2,500	0
	1944	10	32,700	0	0	5	21,000	5	11,700	0
	1945	93	272,950	65	110,500	5	84,850	23	77,600	69
Redwood Falls	1943	22	44,365	0	0	9	41,330	13	3,035	0
	1944	25	24,725	3	7,500	12	10,175	10	7,050	3
	1945	44	121,700	10	45,100	18	51,100	16	25,500	10
Richfield	1943	61	20,660	9	7,870	33	9,075	19	3,715	9
	1944	139	299,390	51	243,400	50	36,515	38	19,475	51
Robbindale	1944	86	268,800	57	257,700	10	2,700	19	8,400	57
	1945	163	579,812	102	545,700	19	13,525	42	20,587	102
Rochester	1943	117	55,715	0	0	30	8,881	87	46,834	0
	1944	169	379,806	23	111,620	29	154,305	117	113,881	25
	1945	310	834,522	89	507,243	59	136,119	162	191,160	106
St. Cloud	1943	104	24,585	4	664	55	17,317	45	6,604	4
	1944	138	227,653	1	175	41	163,565	96	63,913	1
	1945	173	282,442	22	34,645	69	193,758	82	54,039	22
St. James	1943	13	11,915	0	0	6	1,215	7	10,700	0
	1944	38	30,530	1	1,500	10	14,130	27	14,900	1
	1945	44	125,579	7	36,000	18	58,575	19	31,004	7
St. Louis Park	1943	99	55,526	4	15,500	36	8,625	59	31,401	4
	1944	148	237,585	27	112,000	35	84,425	86	41,160	30
	1945	418	1,880,615	292	1,743,608	61	98,702	65	38,305	300
*St. Paul	1943	2,445	1,771,368	5	14,060	271	750,232	2,169	1,007,076	4
	1944	2,952	6,578,710	93	365,220	189	4,050,363	2,670	2,163,127	93
	1945	3,225	9,512,571	552	3,960,578	379	3,243,743	2,294	2,308,250	553
St. Peter	[1]1943	10	5,255	0	0	2	4,030	8	1,225	0
	1944	15	28,497	1	600	7	1,135	7	26,762	1
	1945	30	35,565	6	21,900	10	6,865	14	6,800	6
Sebeka	1943	2	6,500	0	0	1	3,500	1	3,000	0
	1944	3	7,300	2	4,800	1	2,500	0	0	2
	1945	4	25,800	0	0	3	25,350	1	450	0
Sleepy Eye	1943	4	775	0	0	1	100	3	675	0
	1944	4	700	0	0	0	0	4	700	0
	1945	6	29,250	6	29,250	0	0	0	0	6
South St. Paul	1943	2,445	1,771,368	5	14,060	271	750,232	2,169	1,007,076	4
	1944	108	246,300	51	221,050	27	14,650	30	10,600	51
	1945	149	514,065	57	223,800	53	253,640	39	36,625	57
Tracy	1943	2	400	0	0	1	200	1	200	0
	1944	11	775	0	0	0	0	11	775	0
	1945	3	750	0	0	2	700	1	50	0

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* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

[2] 10 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

WEST NORTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Minnesota—continued										
Two Harbor	1943	20	$7,825	2	$2,700	0	0	18	$5,125	2
	1944	41	12,361	1	1,300	3	$1,375	37	9,686	1
	1945	24	43,275	4	10,500	11	30,300	9	2,475	4
Warren	1943	10	12,855	0	0	3	4,335	7	8,520	0
	1944	2	3,650	0	0	1	150	1	3,500	0
	1945	6	9,125	3	6,800	1	250	2	2,075	2
Warroad	1943	2	500	1	300	0	0	1	200	1
	1944	1	200	0	0	0	0	1	200	0
	1945	3	5,800	1	4,000	1	300	1	1,500	1
West St. Paul	1943	86	21,896	2	5,985	29	4,728	55	11,183	2
	1944	88	56,613	8	33,200	23	4,210	57	19,203	8
	1945	110	220,645	32	179,800	37	21,340	41	19,505	32
Wheaton	1943	5	1,050	0	0	1	250	4	800	0
	1944	4	1,500	0	0	0	0	4	1,500	0
	1945	4	27,500	2	23,500	2	4,000	0	0	1
Wilmar	1943	44	57,701	0	0	25	53,046	19	4,655	0
	1944	38	157,992	7	14,500	2	120,000	29	23,492	7
	1945	141	274,763	18	82,000	19	76,916	104	115,847	18
Winnebago	1943	1	1,000	0	0	0	0	1	1,000	0
	1944	6	8,000	0	0	3	5,500	3	2,500	0
	1945	5	44,500	0	0	5	44,500	0	0	0
Winona	1943	280	55,742	0	0	29	10,970	251	44,772	0
	1944	196	112,530	1	300	18	60,125	177	52,105	1
	1945	234	326,333	4	15,000	43	193,110	187	118,223	4
Missouri:										
Bel-Nor	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	[1]1945	6	45,000	6	45,000	0	0	0	0	6
Bernie	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	2	2,300	2	2,300	0	0	0	0	1
Beverly Hills	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	[1]1945	2	15,000	2	15,000	0	0	0	0	2
Brentwood	1945	63	186,415	13	83,230	7	83,475	43	19,710	12
Cape Girardeau	1943	14	2,777	1	150	6	937	7	1,690	1
	1944	16	17,860	1	3,000	7	10,365	8	4,495	1
	1945	60	141,430	19	55,000	26	72,020	15	14,410	19
Charleston	1943	34	5,530	4	1,400	18	1,870	12	2,260	4
	1944	36	16,575	4	2,450	19	9,060	13	5,065	4
	[1]1945	77	160,560	35	92,800	29	63,765	13	3,995	35
Clayton	1943	0	0	0	0	0	0	0	0	0
	1944	1	2,800	0	0	1	2,800	0	0	0
Clinton	1943	4	2,500	0	0	3	700	1	1,800	0
Columbia	1943	0	0	0	0	0	0	0	0	0
	1944	26	86,050	6	7,800	15	74,350	5	3,900	6
	1945	129	255,196	27	91,300	47	109,575	55	54,321	28
Crystal City	1943	0	0	0	0	0	0	0	0	0
	1944	3	390	0	0	2	190	1	200	0
	1945	16	12,080	1	4,500	13	6,980	2	600	1
Cuba	1944	1	1,200	1	1,200	0	0	0	0	1
	1945	4	21,200	0	0	4	21,200	0	0	0
Glendale	1943	18	3,045	0	0	7	685	11	2,360	0
	1944	26	4,736	0	0	6	914	20	3,822	0
	1945	45	194,315	28	177,740	3	850	14	15,725	28
Hannibal	1945	36	55,503	2	3,700	5	13,500	29	38,303	2
Hayti	1943	7	2,653	1	200	2	1,650	4	803	1
	1944	4	3,600	3	2,400	1	1,200	0	0	2
	1945	19	19,800	15	14,800	4	5,000	0	0	14
Huntsville	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Independence	1943	30	12,275	11	4,300	12	2,525	7	5,450	11
	1944	51	162,284	22	46,900	10	108,984	19	6,400	22
	1945	117	336,405	30	63,525	41	196,700	46	76,180	30
Joplin	1943	283	98,685	10	6,200	24	11,776	249	80,709	10
	1944	247	595,671	34	27,125	42	439,039	171	129,507	34
	1945	366	818,267	104	239,400	64	265,350	198	313,517	101
•Kansas City	1943	925	4,194,350	36	114,700	236	3,153,950	653	925,700	35
	1944	1,572	6,683,939	319	1,766,990	334	1,661,934	919	3,255,015	631
	1945	1,958	9,401,452	225	1 072,300	550	5,209,942	1,183	3,119,210	228
Kirkwood	1943	51	16,018	0	0	31	10,118	20	5,900	0
	1944	59	31,520	0	0	35	17,885	24	13,635	0
	1945	149	412,387	45	235,750	43	85,085	61	91,552	45

• In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

WEST NORTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Missouri—Continued										
Liberty	1943	1	$200	0	0	1	$200	0	0	0
	1944	5	3,500	0	0	3	3,100	2	$400	0
	1945	8	48,500	2	$6,000	6	42,500	0	0	2
Maplewood	1943	47	8,945	0	0	27	3,520	20	5,425	0
	1944	34	34,850	2	7,500	14	4,325	18	23,025	2
	1945	48	117,070	0	0	25	88,420	23	28,650	0
Marceline	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
North Kansas City	1943	45	269,180	35	102,700	5	165,000	5	1,480	69
	1944	13	38,027	0	0	11	37,192	2	835	0
	1945	52	959,275	15	67,000	30	885,075	7	7,200	21
North Wood	1943	7	1,400	0	0	0	0	7	1,400	0
	1944	4	1,500	0	0	3	900	1	600	0
	1945	7	17,550	3	16,000	0	0	4	1,550	3
Owensville	[1]1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	2	2,000	2	2,000	0	0	0	0	2
Potosi	1944	2	250	0	0	2	250	0	0	0
	1945	1	3,500	1	3,500	0	0	0	0	1
Richmond Heights	1945	40	245,325	15	125,000	10	100,650	15	19,675	15
Rock Hill	1943	7	1,260	0	0	0	0	7	1,260	0
	1944	11	9,040	1	1,700	2	400	8	6,940	1
	1945	41	150,260	25	92,850	5	52,700	11	4,710	25
St. Charles	1943	34	153,410	0	0	14	64,175	20	89,235	0
	1944	11	299,617	2	350	5	296,967	4	2,300	2
	1945	45	248,029	15	41,250	20	194,600	10	12,179	13
St. Genevieve	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	5	16,725	1	2,500	3	14,200	1	25	1
*St. Joseph	1943	52	414,020	3	1,300	21	396,645	28	16,075	3
	1944	69	75,540	5	2,450	20	31,125	44	41,965	5
	1945	106	140,390	12	23,250	28	28,215	66	88,925	12
*St. Louis	1943	1,894	4,019,390	39	129,100	495	2,706,921	1,360	1,183,369	39
	1944	2,508	8,076,870	26	169,200	688	5,484,768	1,794	2,422,902	57
	1945	3,125	14,756,338	136	1,197,384	797	8,295,164	2,192	5,263,790	190
Shrewsbury	1943	1	100	0	0	1	100	0	0	0
	1944	12	90,575	0	0	10	90,250	2	325	0
	1945	16	31,175	4	13,500	9	16,475	3	1,200	4
Sikeston	1943	28	11,291	7	1,445	11	3,375	10	6,471	7
	1944	42	29,400	15	6,850	16	16,850	11	5,700	15
	1945	66	263,500	29	63,100	29	182,400	8	18,000	29
Springfield	1943	1,730	506,720	8	4,008	237	90,988	1,485	411,724	8
	1944	2,161	1,033,149	73	110,900	278	296,109	1,810	626,140	74
	1945	2,494	1,889,771	247	622,315	355	520,378	1,892	747,078	238
Steel	1943	7	1,154	2	600	5	554	0	0	2
	1944	10	5,235	4	1,475	5	3,700	1	60	4
	1945	14	29,750	10	11,500	4	18,250	0	0	10
Tipton	1943	4	3,800	0	0	1	2,000	3	1,800	0
	1944	11	17,730	0	0	10	17,630	1	100	0
	1945	11	27,100	2	8,500	4	16,250	5	2,350	2
Troy	1943	0	0	0	0	0	0	0	0	0
	1944	1	4,000	0	0	1	4,000	0	0	0
	1945	2	4,000	2	4,000	0	0	0	0	2
University City	1943	40	36,895	2	8,000	8	1,195	30	27,700	2
	1944	53	50,590	0	0	14	10,225	39	40,365	0
	1945	123	487,990	50	260,150	25	164,850	48	62,990	56
Warrensburg	1943	0	0	0	0	0	0	0	0	0
	1944	2	38,925	0	0	2	38,925	0	0	0
	1945	6	16,100	0	0	6	16,100	0	0	0
Warsaw	1943	0	0	0	0	0	0	0	0	0
	1944	1	250	0	0	0	0	1	250	0
	1945	3	15,500	0	0	3	15,500	0	0	0
Washington	1943	34	9,650	0	0	29	7,825	5	1,825	0
	1944	23	20,805	0	0	15	16,475	8	4,330	0
	1945	38	584,655	3	81,900	27	490,905	8	11,850	5
Webster Groves	1943	59	13,963	0	0	32	8,147	27	5,816	0
	1944	66	42,103	0	0	27	23,149	39	18,954	0
	1945	128	269,095	33	174,100	40	55,085	55	39,910	33
West Plains	1943	1	500	0	0	0	0	1	500	0
	1944	15	31,900	9	10,000	5	20,900	1	1,000	9
	1945	53	118,250	43	93,150	7	22,600	3	2,500	43

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APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

WEST NORTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Nebraska:										
Ainsworth	1943	5	$8,000	0	0	0	0	5	$8,000	0
	1944	2	5,000	0	0	0	0	2	5,000	0
	1945	21	106,000	8	$34,500	4	$62,000	9	9,500	8
Albion	1944	0	0	0	0	0	0	0	0	0
Alliance	1943	162	458,405	121	422,205	22	11,000	19	25,200	126
	1944	57	39,424	10	27,800	24	4,226	23	7,398	10
	1945	61	81,205	6	9,800	28	58,950	27	12,455	6
Arapahoe	1943	1	150	0	0	0	0	1	150	0
	1944	0	0	0	0	0	0	0	0	0
Aurora	1943	1	500	0	0	0	0	1	500	0
	1944	3	11,000	0	0	0	0	3	11,000	0
Beatrice	1943	16	8,027	0	0	9	4,918	7	3,109	0
	1944	40	50,170	2	2,750	20	36,740	18	10,680	2
	1945	59	161,565	5	18,500	24	109,665	30	33,400	5
Bridgeport	1943	0	0	0	0	0	0	0	0	0
	1944	1	200	0	0	0	0	1	200	0
	[1]1945	56	67,350	4	7,700	7	38,250	45	21,400	4
Broken Bow	1943	1	2,500	0	0	0	0	1	2,500	0
	1944	1	2,500	0	0	0	0	1	2,500	0
	1945	0	0	0	0	0	0	0	0	0
Chadron	1943	1	200	0	0	0	0	1	200	0
	1944	11	14,625	1	800	4	12,075	6	1,750	1
	1945	15	48,450	0	0	7	45,150	8	3,300	0
Chappell	1943	1	1,500	0	0	1	1,500	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	[1]1945	2	17,500	0	0	2	17,500	0	0	0
Columbus	1943	30	7,745	0	0	20	4,555	10	3,190	0
	1944	47	67,190	18	51,640	19	10,875	10	4,675	18
Crawford	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
Creighton	1943	1	150	0	0	0	0	1	150	0
Falls City	1943	6	2,750	0	0	6	2,750	0	0	0
	1944	3	2,400	0	0	1	2,000	2	400	0
Fairbury	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	5	99,500	0	0	3	98,500	2	1,000	0
Fremont	1943	293	104,842	4	11,000	34	10,054	255	83,788	4
	1944	421	179,281	2	3,855	39	71,050	380	104,376	2
	1945	454	421,416	3	19,500	42	136,055	409	265,861	3
Grand Island	1943	194	525,688	122	390,400	9	3,848	63	131,440	152
	1944	78	100,245	12	18,800	27	25,485	39	55,960	12
	1945	164	274,749	31	45,250	39	111,875	94	117,624	31
Hastings	1943	1,263	3,084,604	1,230	2,977,550	13	66,482	20	40,572	1,244
	1944	22	591,221	1	6,500	3	548,236	18	36,485	1
	1945	133	6,629,845	21	88,400	55	6,414,856	57	126,589	21
Hebron	1945	8	22,025	3	9,000	2	10,250	3	2,775	3
Hemingford	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	26	30,000	2	10,000	0	0	24	20,000	2
Kearney	1943	46	154,000	27	122,800	2	600	17	30,600	39
	1944	35	47,823	10	6,300	6	8,850	19	32,673	9
	1945	141	137,250	11	20,300	48	61,275	82	55,675	6
*Lincoln	1943	1,150	742,446	70	264,525	242	231,283	838	246,638	70
	1944	1,426	1,438,706	127	616,850	172	280,755	1,127	541,101	127
	1945	1,616	2,113,048	159	823,992	314	673,625	1,143	615,431	159
Loup City	1944	9	10,100	9	10,100	0	0	0	0	9
	1945	10	32,150	1	650	7	26,000	2	5,500	1
Minden	1943	3	475	2	400	0	0	1	75	2
	1944	10	12,460	4	4,900	2	5,600	4	1,960	4
	1945	21	23,495	8	21,000	13	2,495	0	0	8
Mitchel	1943	45	12,880	0	0	44	12,680	1	200	0
	1944	18	8,095	2	950	6	4,400	10	2,745	2
	1945	22	23,945	4	7,000	14	15,075	4	1,870	4
Nebraska City	1943	53	6,469	0	0	44	5,119	9	1,350	0
	1944	36	15,648	1	4,000	24	9,181	11	2,467	1
	1945	71	58,153	7	8,400	34	43,160	30	6,593	6
Neligh	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	3	20,000	1	6,000	2	14,000	0	0	1
North Platte	1943	27	5,605	0	0	6	625	21	4,980	0
	1944	72	127,870	20	105,500	6	4,100	46	18,270	20
	1945	92	217,100	10	33,100	21	97,375	61	86,625	10

* In sample of 257 cities. See text and tables, pp. 12 to 16.

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APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

WEST NORTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Nebraska—Continued										
Ogallala	1943	3	$4,300	0	0	0	0	3	$4,300	0
	1944	6	8,125	0	0	0	0	6	8,125	0
*Omaha	1943	2,148	5,263,276	118	$542,800	368	$3,867,379	1,662	853,097	159
	1944	2,601	5,476,112	394	2,028,042	407	2,232,568	1,800	1,215,502	490
	1945	2,742	4,773,040	293	1,628,825	587	1,885,952	1,862	1,258,263	322
Oxford	1943	1	800	0	0	0	0	1	800	0
	1944	1	3,500	0	0	1	3,500	0	0	0
Scottsbluff	1943	88	15,835	1	1,000	64	10,864	23	3,971	1
	1944	41	19,003	0	0	25	14,228	16	4,775	0
Sidney	1944	0	0	0	0	0	0	0	0	0
	1945	76	113,600	22	48,400	37	57,600	17	7,600	6
Stromsburg	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Tekamah	1943	1	4,500	0	0	1	4,500	0	0	0
	1944	1	5,000	1	5,000	0	0	0	0	1
Tilden	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	2	1,700	0	0	2	1,700	0	0	0
Wahoo	1943	84	19,158	0	0	1	150	83	19,008	0
	1944	51	28,128	0	0	5	16,990	46	11,138	0
	1945	100	102,454	2	10,500	16	68,795	82	23,159	2
Wakefield	1943	1	1,000	0	0	0	0	1	1,000	0
	1944	0	0	0	0	0	0	0	0	0
Wayne	[1]1943	12	6,925	0	0	2	2,200	10	4,725	0
	1944	18	10,400	0	0	3	6,200	15	4,200	0
	1945	33	25,450	2	5,700	6	10,400	25	9,350	1
Wilber	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	1	150	0	0	1	150	0	0	0
Winnebago	1943	1	1,500	0	0	1	1,500	0	0	0
	1944	1	1,000	0	0	0	0	1	1,000	0
	1945	3	800	0	0	0	0	3	800	0
North Dakota:										
Beach	1943	5	1,000	0	0	4	750	1	250	0
	1944	4	11,500	0	0	1	7,000	3	4,500	0
	1945	18	55,200	9	12,000	9	43,200	0	0	9
Bismarck	1943	19	5,009	0	0	7	1,748	12	3,261	0
	1944	36	21,408	1	2,500	14	5,631	21	13,277	1
	1945	214	631,288	40	177,000	63	202,493	111	251,795	34
Bowbells	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Casselton	1943	9	9,400	0	0	2	1,100	7	8,300	0
	1944	5	14,500	1	2,000	1	1,000	3	11,500	0
	1945	7	37,300	0	0	3	32,300	4	5,000	0
Cooperstown	1943	2	1,100	0	0	1	500	1	600	0
	1944	3	1,071	0	0	1	171	2	900	0
	1945	3	4,500	0	0	3	4,500	0	0	0
Crosby	1943	3	3,500	0	0	1	2,000	2	1,500	0
	1944	3	2,000	1	1,000	2	1,000	0	0	1
	1945	6	86,200	3	10,800	3	75,400	0	0	3
Devils Lake	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	11	17,500	0	0	5	13,500	6	4,000	0
Dickerson	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	40	97,800	28	50,600	6	31,200	6	16,000	25
Enderlin	1943	0	0	0	0	0	0	0	0	0
	1945	2	25,000	1	5,000	1	20,000	0	0	1
Fargo	1943	53	66,294	0	0	14	26,126	39	40,168	0
	1944	62	113,229	7	29,800	15	30,235	40	53,194	7
	1945	184	580,229	57	291,065	35	131,134	92	158,030	57
Grand Forks	1943	148	55,774	0	0	46	19,640	102	36,134	0
	1944	196	417,024	6	214,500	21	128,421	169	74,103	5
	1945	398	531,445	39	146,450	48	140,525	311	244,470	59
Hankinson	1943	1	800	0	0	1	800	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	5	12,750	1	250	4	12,500	0	0	1
Hillsboro	1943	4	24,500	0	0	3	23,500	1	1,000	0
	1944	4	17,000	0	0	2	15,000	2	2,000	0
	1945	4	49,500	0	0	4	49,500	0	0	0

* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

WEST NORTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
North Dakota—Continued										
Jamestown	1943	17	$16,240	0	0	17	$16,240	0	0	0
	1944	15	11,075	0	0	9	8,280	6	$2,795	0
	1945	68	210,978	12	$37,450	27	131,090	29	42,438	10
Kenmore	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Linton	1943	0	0	0	0	0	0	0	0	0
	1944	1	1,000	0	0	0	0	1	1,000	0
	1945	7	60,000	0	0	2	50,000	5	10,000	0
Lisbon	1943	9	5,405	1	1,000	6	3,855	2	550	1
	1944	9	3,800	0	0	4	1,200	5	2,600	0
	1945	14	30,425	1	2,500	6	20,525	7	7,400	1
Minot	1943	36	180,211	0	0	15	163,711	21	16,500	0
	1944	60	222,124	12	22,200	10	162,274	38	37,650	12
	1945	152	462,375	79	297,200	39	135,575	34	29,600	110
Minto	1943	10	13,950	0	0	5	12,700	5	1,250	0
	1944	1	250	0	0	0	0	1	250	0
Valley City	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	21	294,500	5	23,500	9	262,000	7	9,000	5
Watford City	1943	1	200	0	0	1	200	0	0	0
	1944	5	8,550	1	3,000	1	5,000	3	550	1
	1945	1	1,000	0	0	0	0	1	1,000	0
South Dakota:										
Aberdeen	1943	173	34,206	0	0	44	4,497	129	29,709	0
	1944	168	218,510	0	0	41	164,565	127	53,945	0
	1945	165	183,859	22	92,250	41	37,965	102	53,644	14
Beresford	1943	0	0	0	0	0	0	0	0	0
	1944	2	11,000	1	3,000	1	8,000	0	0	1
Bowdle	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	[1]1945	0	0	0	0	0	0	0	0	0
Brookings	1943	19	11,123	0	0	5	5,530	14	5,593	0
	1944	29	48,725	1	1,150	9	40,760	19	6,815	1
	1945	75	122,899	7	31,625	30	71,450	38	19,824	8
Burk	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Clark	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Deadwood	1943	0	0	0	0	0	0	0	0	0
	1944	3	9,250	0	0	0	0	3	9,250	0
Dell Rapids	1943	1	200	0	0	1	200	0	0	0
	1944	3	2,680	0	0	2	2,580	1	100	0
	1945	7	7,980	0	0	6	7,780	1	200	0
Eureka	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Flandreau	1943	0	0	0	0	0	0	0	0	0
	1944	3	675	0	0	3	675	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Groton	1943	3	2,500	0	0	2	1,500	1	1,000	0
	1944	8	5,000	0	0	0	0	8	5,000	0
	1945	1	1,000	0	0	0	0	1	1,000	0
Hot Spring	1943	17	6,780	2	3,500	7	1,170	8	2,110	2
	1944	17	9,250	4	5,900	7	1,500	6	1,850	4
	[1]1945	58	32,992	3	14,000	7	1,125	48	17,867	3
Huron	1944	219	1,086,654	12	310,500	28	689,385	179	86,769	11
McLaughlin	1943	3	1,100	0	0	0	0	3	1,100	0
	1944	9	3,550	0	0	0	0	9	3,550	0
	1945	7	6,900	0	0	3	4,750	4	2,150	0
Madison	1943	12	3,325	0	0	6	1,075	6	2,250	0
	1944	20	14,445	0	0	9	10,145	11	4,300	0
	1945	34	43,070	4	15,700	7	11,125	23	16,245	3
Mitchell	1943	3	1,100	0	0	2	350	1	750	0
	1944	18	70,800	2	26,000	4	26,400	12	18,400	1
	1945	13	9,049	1	2,000	4	1,450	8	5,599	1
Phillip	1943	7	2,665	0	0	4	1,300	3	1,365	0
	1944	3	3,900	0	0	1	750	2	3,150	0
	1945	50	118,200	9	31,100	20	51,450	21	35,650	15
Pierre	1943	13	5,880	0	0	5	725	8	5,155	0
	1944	17	12,570	0	0	1	1,800	16	10,770	0
	1945	27	30,665	2	6,500	4	4,700	21	19,465	2

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APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

WEST NORTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
South Dakota—Continued										
Rapid City	1943	255	$104,144	24	$61,700	81	$16,158	150	$26,286	36
	1944	310	237,745	24	25,745	48	101,863	238	110,137	33
	1945	480	518,151	71	130,924	76	173,768	333	213,459	72
*Sioux Falls	1943	900	1,201,204	139	612,195	125	183,447	636	405,562	182
	1944	1,043	588,932	11	10,375	107	313,262	925	265,295	11
	1945	1,241	1,510,845	135	535,125	149	570,770	957	404,950	136
Tyndall	1943	2	150	0	0	0	0	2	150	0
	1944	2	265	0	0	0	0	2	265	0
	1945	3	900	0	0	1	250	2	650	0
Vermillion	1943	0	0	0	0	0	0	0	0	0
	1944	2	3,000	0	0	0	0	2	3,000	0
	1945	5	13,000	1	4,000	0	0	4	9,000	1
Watertown	1943	90	25,159	0	0	11	1,723	79	23,436	0
	1944	260	193,255	1	1,400	30	106,892	229	84,963	1
	1945	217	160,197	34	47,160	48	56,978	135	56,059	25
Wessington Springs	1943	0	0	0	0	0	0	0	0	0
	1944	1	1,000	0	0	1	1,000	0	0	0
	1945	5	18,500	0	0	5	18,500	0	0	0
Yankton	1943	5	9,700	0	0	2	6,200	3	3,500	0
	1944	13	52,746	1	6,000	3	32,350	9	14,396	1
	1945	62	184,130	14	53,300	15	57,030	33	73,800	14
SOUTH ATLANTIC STATES										
Delaware:										
Bellefonte	1943	11	$1,899	0	0	0	0	11	$1,899	0
	1944	8	6,800	1	$5,500	2	$425	5	875	2
	1945	17	25,715	3	10,800	1	8,000	13	6,915	3
Delmar	1944	1	243	0	0	0	0	1	243	0
	1945	11	154,500	0	0	7	107,000	4	47,500	0
Dover	1943	9	4,596	0	0	9	4,596	0	0	0
	1944	18	105,780	0	0	12	98,310	6	7,470	0
	[1]1945	22	151,462	3	15,000	12	89,073	7	47,389	3
Elsmere	1943	252	843,432	236	829,000	8	5,337	8	9,095	235
	1944	11	5,900	0	0	1	3,000	10	2,900	0
	1945	14	2,245	0	0	10	1,295	4	950	0
Greenwood	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	2	4,050	2	4,050	0	0	0	0	2
Harrington	1943	0	0	0	0	0	0	0	0	0
	1944	4	109,000	1	2,500	2	106,000	1	500	1
Laurel	1943	7	6,915	1	500	6	6,415	0	0	1
	1944	1	6,000	0	0	1	6,000	0	0	0
	1945	8	38,300	5	16,900	3	21,400	0	0	6
Middletown	1943	4	900	0	0	1	100	3	800	0
	1944	3	6,600	1	6,000	0	0	2	600	1
	[1]1945	7	25,400	1	10,000	2	3,400	4	12,000	1
Milford	1944	0	0	0	0	0	0	0	0	0
	1945	17	113,000	7	23,000	9	88,000	1	2,000	7
Newark	1943	35	79,875	20	75,000	12	4,125	3	750	20
	1944	5	4,200	0	0	2	3,200	3	1,000	0
	1945	42	254,056	15	108,000	19	129,500	8	16,556	19
Newcastle	1944	4	306,945	0	0	3	305,895	1	1,050	0
	1945	7	10,300	1	4,000	3	5,300	3	1,000	1
Newport	1943	1	75	0	0	0	0	1	75	0
	1944	2	1,000	0	0	2	1,000	0	0	0
	1945	7	41,350	0	0	3	39,300	4	2,050	0
Rehoboth	1943	32	19,887	1	600	2	425	29	18,862	1
	1944	162	83,556	3	8,500	1	1,500	158	73,556	3
	1945	196	322,804	18	263,796	3	2,400	175	56,608	77
Seaford	1943	6	4,480	0	0	3	3,150	3	1,330	0
	1944	3	2,350	0	0	1	200	2	2,150	0
	1945	21	45,000	3	8,300	6	22,000	12	14,700	3
*Wilmington	1943	1,238	3,706,016	682	2,662,900	21	272,775	535	770,341	796
	1944	729	1,144,121	30	180,000	31	244,226	668	719,895	60
	1945	853	4,254,053	46	316,000	64	2,785,852	743	1,152,201	48
District of Columbia:										
*Washington	1943	4,557	24,314,546	1,226	14,974,045	222	6,702,857	3,109	2,637,644	5,234
	1944	5,292	20,622,766	1,397	7,421,271	233	9,910,623	3,662	3,290,872	2,598
	1945	6,081	27,212,120	1,719	11,788,608	328	11,764,416	4,034	3,659,096	3,352
Florida:										
Alachua	1943	4	2,750	0	0	0	0	4	2,750	0
	1944	5	6,100	2	700	1	2,000	2	3,400	2
	[1]1945	17	30,100	11	9,600	3	14,000	3	6,500	11

* In sample of 257 cities. See text and tables, pp. 12 to 16.

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APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

SOUTH ATLANTIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Florida—Continued										
Apalachicola	1943	56	$8,409	12	$2,775	4	$625	40	$5,009	12
	1944	56	84,582	20	4,765	3	69,077	33	10,740	16
	1945	83	50,725	39	26,100	11	13,825	33	10,800	24
Apopka	1943	5	5,050	2	750	1	4,000	2	300	2
	1944	15	8,550	3	2,250	6	4,350	6	1,950	3
	1945	34	31,225	15	8,575	12	17,100	7	5,550	15
Avon Park	1944	159	274,859	146	262,334	13	12,525	0	0	145
	1945	16	10,730	14	9,700	1	1,000	1	30	14
Barton	1943	100	183,991	60	156,400	9	18,671	31	8,920	60
	1944	85	134,820	51	104,750	14	25,300	20	4,770	51
	1945	143	320,408	65	131,250	27	114,125	51	75,033	65
Belleglade	1943	80	16,000	80	16,000	0	0	0	0	80
Biscayne Park	1943	2	200	0	0	0	0	2	200	0
	1944	0	0	0	0	0	0	0	0	0
	1945	79	600,000	79	600,000	0	0	0	0	79
Boca Raton	1943	51	136,991	41	111,325	4	7,325	6	18,341	41
	1944	5	2,850	0	0	2	650	3	2,200	0
	1945	26	100,350	17	78,700	5	16,800	4	4,850	17
Boynton Beach	1943	2	400	1	200	1	200	0	0	1
Bradenton	1943	95	43,613	0	0	9	27,516	86	16,097	0
	1944	154	63,633	8	15,000	9	7,835	137	40,798	8
	1945	433	505,061	90	276,942	78	109,990	265	118,129	95
Chipley	1943	2	3,000	2	3,000	0	0	0	0	2
	1944	4	8,700	3	7,700	1	1,000	0	0	3
	1945	0	0	0	0	0	0	0	0	0
Clearwater	1943	167	39,441	17	7,525	18	4,841	132	27,075	17
	1944	326	153,224	27	37,240	19	9,310	280	106,674	26
	1945	391	590,280	81	292,300	67	141,330	243	156,650	88
Clermont	1943	47	14,647	11	4,190	9	3,847	27	6,610	11
	1944	63	15,585	11	7,390	5	770	47	7,425	11
	1945	121	69,182	11	37,700	5	2,000	105	29,482	11
Coral Gables	1943	258	115,619	1	1,500	4	2,675	253	111,444	1
	1944	480	1,555,505	155	1,202,200	2	217,670	323	135,635	259
	1945	655	2,299,133	156	1,361,100	171	698,801	328	239,232	234
Crystal River	1943	2	1,000	1	500	0	0	1	500	1
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Daytona Beach	1943	346	485,308	14	4,709	70	395,123	262	85,476	14
	1944	537	441,741	34	7,832	61	250,665	442	183,244	34
	1945	825	1,042,220	130	528,416	65	114,105	630	399,699	145
Deland	1943	48	17,005	7	2,500	3	1,015	38	13,490	7
	1944	68	289,141	14	5,300	8	241,873	46	41,968	14
Delray Beach	1945	69	60,000	69	60,000	0	0	0	0	74
Dunedin	1943	21	64,460	2	1,450	6	60,830	13	2,180	2
	1944	40	6,891	6	1,200	4	790	30	4,901	6
	1945	55	74,385	27	62,500	5	3,935	23	7,950	27
Everglades	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Fernandina	1943	55	11,638	0	0	1	100	54	11,538	0
	1944	75	69,980	19	50,000	0	0	56	19,980	19
	1945	52	100,550	16	34,700	6	39,600	30	26,250	16
Fort Lauderdale	1943	262	82,850	3	3,850	46	29,757	213	49,243	3
	1944	727	560,652	123	209,100	70	151,197	534	200,355	135
	[1]1945	960	2,460,652	300	1,631,118	157	564,650	503	264,884	387
Fort Meade	1943	2	1,200	2	1,200	0	0	0	0	2
	1944	7	4,000	4	3,600	1	250	2	150	4
	1945	25	28,205	16	22,550	3	3,100	6	2,555	16
Fort Myers	1943	310	286,023	70	193,340	16	9,160	224	83,523	82
	1944	357	189,360	55	36,660	58	79,335	244	73,365	58
	1945	425	388,785	71	144,900	68	83,865	286	160,020	77
Fort Pierce	1943	170	86,049	73	13,750	19	50,986	78	21,313	73
	1944	279	172,995	110	21,950	28	108,500	141	42,545	113
	1945	402	541,350	172	215,230	81	258,975	149	67,145	175
Gainesville	1943	150	51,610	10	2,794	18	9,860	122	38,956	10
	1944	191	153,638	26	5,474	26	99,564	139	48,600	26
	1945	439	700,643	189	434,140	60	161,272	190	105,231	193
Gulfport	1943	43	8,885	1	200	5	3,300	37	5,385	1
	1944	95	20,296	2	550	22	6,820	71	12,926	2
	1945	189	219,807	46	179,865	5	2,075	138	37,867	46
Haines City	1943	44	12,120	40	11,295	0	0	4	825	36
	1944	50	37,350	50	37,350	0	0	0	0	47
	[1]1945	39	58,975	39	58,975	0	0	0	0	35
Hallendale	1943	42	8,668	8	2,695	12	3,304	22	2,669	8
	1944	106	122,680	54	113,730	11	2,545	41	6,405	54

[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

SOUTH ATLANTIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Florida—Continued										
Hialeah	1943	221	$31,658	1	$557	5	$1,524	215	$29,577	1
	1944	261	84,969	18	32,655	8	9,900	235	42,414	18
	1945	642	1,442,198	381	1,118,905	45	239,778	216	83,515	385
Holly Hill	1943	35	7,235	2	2,900	5	620	28	3,715	2
	1944	55	11,493	0	0	13	1,385	42	10,108	0
	1945	131	117,284	46	75,700	20	20,203	65	21,381	47
Hollywood	1943	213	61,035	0	0	28	27,376	185	33,659	0
	1944	6	11,924	6	11,924	0	0	0	0	6
	1945	409	1,092,163	163	765,049	35	204,889	211	122,225	250
*Jacksonville	1943	3,929	6,755,844	1,457	4,752,234	201	421,887	2,271	1,581,723	1,775
	1944	3,899	5,151,720	495	1,224,768	321	2,154,181	3,083	1,772,771	509
	1945	4,691	7,878,548	549	1,819,560	541	2,702,501	3,601	3,356,487	585
Kissimmee	1943	49	10,425	4	675	6	1,847	39	7,903	4
	1944	61	29,445	10	4,380	9	4,275	42	20,790	10
	1945	138	117,527	30	38,500	18	16,150	90	62,877	30
Lake City	1943	94	74,738	35	67,659	9	1,305	50	5,774	35
	1944	153	48,928	53	13,385	18	15,898	82	19,645	53
	1945	246	296,566	101	108,950	50	119,405	95	68,211	101
Lakeland	1943	666	166,731	19	12,750	13	32,455	634	121,526	19
	1944	724	351,082	70	125,200	19	49,756	635	176,126	70
	1945	993	1,401,766	185	699,090	70	376,327	738	326,349	186
Lake Wales	1943	65	77,332	11	9,100	4	46,000	50	22,232	16
	1944	86	62,760	21	35,250	0	0	65	27,510	21
	1945	37	125,425	13	30,400	4	30,500	20	64,525	13
Lake Worth	1943	112	22,495	1	200	22	3,615	89	18,680	1
	1944	197	52,700	4	1,500	21	4,650	172	46,550	4
	1945	410	687,828	111	473,033	38	57,650	261	157,145	100
Leesburg	1943	53	26,936	8	1,350	2	6,454	43	19,132	8
	1944	73	73,559	28	51,878	8	3,825	37	17,856	28
Lynn Haven	1943	28	5,273	20	4,200	3	450	5	623	20
	1944	70	46,725	50	43,000	8	1,325	12	2,400	50
Madison	1943	0	0	0	0	0	0	0	0	0
	1944	2	5,000	0	0	2	5,000	0	0	0
Marianna	1943	166	404,525	134	383,180	6	6,200	26	15,145	134
	1944	86	118,685	31	22,750	17	79,100	38	16,835	31
	1945	97	154,775	39	44,975	21	87,600	37	22,200	39
Melbourne	1943	20	162,877	11	5,950	5	12,547	4	144,380	11
	1944	41	82,495	31	72,650	0	0	10	9,845	31
	1945	61	83,380	40	66,550	3	2,650	18	14,180	30
Miami	1943	4,845	6,196,410	0	0	519	4,940,454	4,326	1,255,956	0
	1944	6,394	5,237,380	415	1,753,468	550	1,785,484	5,429	1,698,428	459
	1945	8,879	14,564,393	1,113	6,807,912	1,128	4,028,055	6,638	3,728,426	1,438
Miami Beach	1943	833	829,479	0	0	12	112,703	821	716,776	0
	1944	1,609	1,149,554	9	149,750	2	13,000	1,598	986,804	34
	1945	2,142	6,005,869	139	2,592,149	51	1,251,420	1,952	2,162,300	395
Miami Shores	1943	46	8,770	0	0	0	0	46	8,770	0
	1944	128	372,720	61	338,000	2	22,500	65	12,220	64
	1945	136	1,777,261	98	1,242,761	7	493,000	31	41,500	98
Miami Springs	1943	163	356,834	108	343,700	5	4,475	50	8,659	108
	1944	348	1,038,075	301	1,025,800	1	2,500	46	9,775	301
	1945	108	339,492	57	284,800	13	41,940	38	12,752	56
Mount Dora	1943	16	4,850	4	2,000	3	900	9	1,950	4
	1944	17	16,460	10	7,100	4	8,900	3	460	10
	1945	58	108,050	32	88,225	12	8,475	14	11,350	33
Neptune Beach	1943	23	39,590	5	36,000	1	125	17	3,465	10
	1944	24	18,322	2	6,500	0	0	22	11,822	2
	1945	164	91,830	14	50,750	5	1,500	145	39,580	15
New Port Richey	1943	12	1,850	0	0	9	1,425	3	425	0
	1944	23	7,610	5	3,230	9	2,260	9	2,120	5
	1945	60	88,750	33	80,850	14	4,475	13	3,425	33
New Smyrna Beach	1943	209	32,994	5	2,900	8	645	196	29,449	5
	1944	186	34,711	0	0	8	2,786	178	31,925	0
	[1]1945	67	55,521	15	27,480	5	550	47	27,491	15
Ocala	1943	72	17,566	13	2,380	12	1,734	47	13,452	13
	1944	101	29,738	37	8,750	18	12,069	46	8,919	37
	1945	221	378,122	94	107,375	54	226,624	73	44,123	95
Orlando	1943	596	180,607	5	1,000	40	44,075	551	135,532	6
	1944	993	908,709	205	603,800	56	43,798	732	261,111	73
	1945	1,258	2,590,220	231	1,193,655	151	860,210	876	536,355	261
Ormond	1943	4	725	0	0	2	400	2	325	0
	1944	0	0	0	0	0	0	0	0	0

* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

SOUTH ATLANTIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Florida—Continued										
Oviedo	1943	15	$2,325	5	$925	1	$200	9	$1,200	5
	1944	33	15,775	22	8,050	5	6,825	6	900	22
	1945	30	38,925	10	9,825	11	25,650	9	3,450	10
Palatka	[1]1943	26	14,265	9	4,550	9	8,100	8	1,615	9
	1944	27	17,590	7	4,150	7	6,350	13	7,090	7
	1945	83	182,450	40	76,375	19	95,250	24	10,825	39
Palm Beach	1943	102	214,219	0	0	3	560	99	213,659	0
	1944	150	464,273	0	0	1	49,670	149	414,603	0
	1945	200	647,648	8	128,500	1	12,000	191	507,148	10
Panama City	1944	707	667,177	336	292,625	91	243,357	280	131,195	336
	1945	623	1,188,605	236	334,345	154	657,638	233	196,622	236
Pensacola	1943	1,023	1,178,968	480	958,687	59	11,421	484	208,860	499
	1944	908	1,666,350	251	433,173	89	654,873	568	578,304	251
	1945	1,022	1,751,114	174	312,739	185	811,207	663	627,168	174
Plant City	1944	44	45,955	21	7,950	4	35,200	19	2,805	21
	1945	130	147,900	63	43,850	26	79,500	41	24,550	64
Pompano	1943	55	9,855	42	8,300	2	200	11	1,355	42
	1944	19	4,500	7	1,400	3	1,250	9	1,850	7
Port Orange	1943	2	400	0	0	0	0	2	400	0
	1944	1	1,500	0	0	0	0	1	1,500	0
Port Tampa	1943	23	11,500	1	1,400	0	0	22	10,100	1
	1944	22	13,400	5	5,000	1	1,000	16	7,400	5
	1945	30	34,050	6	13,600	2	2,800	22	17,650	6
Quincy	1943	29	12,268	1	199	6	7,725	22	4,344	1
	1944	36	37,332	7	1,625	5	27,350	24	8,357	7
	1945	124	321,525	60	96,735	24	197,900	40	26,890	62
River Junction	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	2	11,000	2	11,000	0	0	0	0	2
Rockledge	1943	10	22,485	3	7,000	0	0	7	15,485	3
	1944	12	10,400	4	6,000	2	1,300	6	3,100	4
	1945	20	26,800	4	8,500	4	5,250	12	13,050	4
St. Augustine	1943	240	47,501	2	350	33	10,590	205	36,561	2
	[1]1945	261	194,138	27	40,700	56	77,740	178	75,698	19
St. Petersburg	1943	1,005	611,589	4	3,400	69	370,685	932	237,504	1
	1944	1,966	828,702	44	45,180	151	210,360	1,771	573,162	46
	1945	3,106	4,613,760	549	2,894,562	252	601,195	2,305	1,118,003	565
Sarasota	1943	324	76,426	6	2,000	18	4,946	300	69,480	6
	1944	392	99,861	12	7,237	25	16,710	355	75,914	11
	1945	527	1,180,107	109	329,848	55	615,663	363	234,596	110
Sebring	1943	94	159,328	53	114,800	11	34,958	30	9,570	52
	1944	156	250,019	101	196,341	25	45,333	30	8,345	101
Stuart	1943	24	6,630	3	600	7	3,790	14	2,240	3
	1944	18	3,484	3	510	3	1,150	12	1,824	2
	1945	29	12,915	4	6,550	11	2,890	14	3,475	4
Tallahassee	1943	97	131,735	8	1,825	11	104,195	78	25,715	8
	1944	162	337,206	43	157,423	19	136,717	100	43,066	49
	1945	235	977,341	55	218,425	41	578,555	139	180,361	89
Tampa	1943	2,636	1,764,588	300	762,600	369	436,119	1,967	565,869	299
	1944	4,769	3,325,055	703	2,044,510	639	342,078	3,427	938,467	703
	1945	6,026	4,746,398	388	869,640	539	1,914,034	5,099	1,962,724	402
Tappon Springs	1943	59	10,510	0	0	0	0	59	10,510	0
	1944	83	22,021	0	0	0	0	83	22,021	0
	[1]1945	113	132,760	20	33,850	14	67,050	79	31,860	20
Vero Beach	1943	0	0	0	0	0	0	0	0	0
	1944	6	35,600	0	0	0	0	6	35,600	0
Wauchula	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
West Palm Beach	1943	270	494,733	3	561	46	326,321	221	167,851	3
	1944	412	225,065	5	2,575	40	27,427	367	195,063	5
	1945	751	1,928,527	173	915,750	119	537,342	459	475,435	196
Winter Garden	1943	14	5,712	4	1,112	1	1,200	9	3,400	4
	1944	19	17,125	2	1,800	7	1,225	10	14,100	2
	1945	48	68,280	26	55,370	11	6,995	11	5,915	26
Winter Haven	1943	83	146,645	27	121,267	7	9,408	49	15,970	48
	1944	106	74,135	20	20,335	15	12,235	71	41,565	28
	1945	216	408,880	76	189,810	51	128,750	89	90,320	86
Winter Park	1943	76	17,321	17	3,335	9	1,580	50	12,406	17
	1944	150	78,211	44	45,400	14	2,475	92	30,336	44
	1945	234	434,341	110	325,550	29	51,925	95	56,866	90
Georgia:										
Alma	1943	1	500	1	500	0	0	0	0	1
	1944	6	12,500	5	7,500	1	5,000	0	0	5
	1945	34	36,800	33	34,800	1	2,000	0	0	16

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[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

SOUTH ATLANTIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Georgia—Continued										
Americus	1943	456	$44,365	9	$2,645	3	$850	444	$40,870	9
Athens	1943	94	74,655	6	2,555	0	0	88	72,100	9
	1944	143	71,542	6	9,288	0	0	137	62,254	6
	1945	195	439,728	64	308,432	0	0	131	131,296	64
*Atlanta	1943	1,098	1,993,137	166	674,068	100	102,779	832	1,216,290	289
	1944	2,327	4,069,762	515	1,651,211	155	292,848	1,657	2,125,703	604
	1945	2,303	8,665,129	516	2,475,518	295	3,691,755	1,492	2,497,856	534
*Augusta	1943	483	646,271	1	200	17	478,019	465	168,052	1
	1944	390	368,780	14	9,850	45	229,688	331	129,242	14
	1945	400	554,081	52	86,475	80	279,690	268	187,916	51
Bainbridge	1943	70	87,475	49	82,575	1	150	20	4,750	49
	1944	48	77,884	19	22,500	5	30,792	24	24,592	19
	1945	63	111,650	32	53,200	11	51,000	20	7,450	32
Blackshear	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Cairo	1944	2	700	1	500	0	0	1	200	1
	1945	94	159,660	52	87,885	12	55,475	30	16,300	52
Calhoun	1943	32	15,110	0	0	1	1,200	31	13,910	0
	1944	22	8,700	2	4,500	3	335	17	3,865	2
	1945	43	102,185	20	50,050	11	45,450	12	6,685	21
Canton	1943	41	5,011	0	0	15	2,375	26	2,636	0
	1944	33	45,506	1	1,500	7	8,716	25	35,290	1
	1945	27	30,630	1	740	7	26,875	19	3,015	1
Center Hill	1943	45	18,410	23	9,660	4	5,000	18	3,750	23
	1944	209	363,924	152	342,699	10	3,650	47	17,575	153
	1945	285	432,525	198	372,025	32	31,975	55	28,525	199
Claxton	1943	13	13,200	6	10,000	1	500	6	2,700	6
	1944	17	44,200	9	29,700	4	9,500	4	5,000	9
	1945	45	159,200	16	57,300	22	68,000	7	33,900	18
College Park	1943	48	225,000	48	225,000	0	0	0	0	75
	1944	118	444,438	92	349,978	1	45,000	25	49,460	92
	[2] 1945	152	339,475	76	238,075	23	60,230	53	41,170	84
*Columbus	1943	428	279,348	3	4,250	45	159,562	380	115,536	3
	1944	649	794,234	177	610,410	58	55,358	414	128,466	182
	1945	649	1,841,634	119	587,795	125	910,710	405	343,129	145
Cordele	1943	24	5,498	3	588	0	0	21	4,910	3
	1944	30	71,356	5	1,499	8	60,099	17	9,758	5
	1945	103	200,576	50	96,974	23	82,850	30	20,752	50
Covington	1943	4	2,800	1	1,000	2	1,050	1	750	1
	1944	9	15,350	7	8,350	1	3,000	1	4,000	8
	1945	25	47,050	16	25,550	9	21,500	0	0	24
Cuthbert	1943	3	3,000	2	2,000	1	1,000	0	0	2
	1944	2	54,000	0	0	2	54,000	0	0	0
Douglasville	1943	2	350	0	0	1	100	1	250	0
	1944	8	16,200	5	4,000	2	2,200	1	10,000	5
	[2] 1945	6	11,200	4	7,000	1	4,000	1	200	4
Dublin	1944	85	269,100	58	69,850	9	177,095	18	22,155	58
	1945	139	2,316,817	94	194,000	23	2,053,429	22	69,388	94
East Point	1943	86	158,302	41	140,500	3	3,200	42	14,602	41
	1944	106	144,127	37	113,350	10	11,500	59	19,277	38
	1945	244	1,042,112	109	473,839	45	519,095	90	49,178	110
East Thomaston	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Elberton	1944	7	2,300	0	0	4	1,700	3	600	0
	1945	29	68,670	20	42,070	6	22,500	3	4,100	20
Fairburn	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	8	16,900	4	7,900	4	9,000	0	0	6
Forsyth	1943	2	700	0	0	1	350	1	350	0
	1944	0	0	0	0	0	0	0	0	0
	1945	6	15,000	6	15,000	0	0	0	0	6
Gainesville	1943	8	37,928	3	5,800	2	1,000	3	31,128	4
	1944	3	61,615	2	4,000	1	57,615	0	0	2
	1945	40	518,956	22	94,900	17	419,361	1	4,695	25
Grantville	1943	1	40	0	0	1	40	0	0	0
	1944	5	2,500	1	1,500	0	0	4	1,000	1
	1945	0	0	0	0	0	0	0	0	0
Griffin	1943	6	11,490	0	0	3	2,715	3	8,775	0
	1944	14	52,950	1	200	4	38,000	9	14,750	1
	1945	41	192,400	19	69,600	18	113,000	4	9,800	19

* In sample of 257 cities. See text and tables, pp. 12 to 16.

[2] 10 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

SOUTH ATLANTIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Georgia—Continued										
Hapeville	1943	65	$301,700	48	$293,700	6	$3,850	11	$4,150	48
	1944	194	148,650	149	132,750	9	6,100	36	9,800	148
	1945	103	247,245	53	200,750	13	22,675	37	23,820	52
Hartwell	1943	0	0	0	0	0	0	0	0	0
	1944	8	9,200	6	7,700	2	1,500	0	0	6
	1945	13	26,200	10	15,700	3	10,500	0	0	10
Hawkinsville	1943	4	11,500	4	11,500	0	0	0	0	4
	1944	0	0	0	0	0	0	0	0	0
Jefferson	1944	1	15,000	0	0	1	15,000	0	0	0
	1945	7	16,500	6	12,000	1	4,500	0	0	3
Jonesboro	1943	20	5,875	1	2,000	8	900	11	2,975	1
	1944	19	18,255	8	7,350	4	8,025	7	2,880	8
	[1]1945	18	38,015	11	16,450	3	20,400	4	1,165	11
Kingsland	1944	1	75	1	75	0	0	0	0	1
	[1]1945	0	0	0	0	0	0	0	0	0
Lafayette	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Lagrange	1943	39	47,743	9	2,200	9	41,343	21	4,200	9
	1944	55	53,964	17	5,236	11	43,153	27	5,575	17
	1945	277	210,809	88	143,252	42	52,839	147	14,718	139
Louisville	1943	9	7,550	5	2,200	2	5,000	2	350	5
	1944	14	15,000	10	12,600	1	200	3	2,200	10
	1945	27	50,650	21	31,650	5	18,000	1	1,000	23
*Macon	1943	745	758,708	141	209,160	36	180,574	568	368,974	153
	1944	775	892,323	14	13,650	72	251,571	689	627,102	23
	1945	811	1,150,349	20	84,250	163	439,494	628	626,605	27
Mariette	1943	1,263	4,429,084	871	4,164,072	29	128,796	363	136,216	1,404
	1944	822	1,483,342	504	1,010,148	28	403,021	290	70,173	504
	1945	359	311,899	22	76,550	45	116,977	292	118,372	22
Monticello	1945	0	0	0	0	0	0	0	0	0
Newman	1943	109	10,437	2	400	5	455	102	9,582	2
	1944	105	127,460	8	2,500	8	111,880	89	13,080	8
	1945	187	238,811	22	24,200	17	148,500	148	66,111	22
Rockmart	1943	1	75	0	0	1	75	0	0	0
	1944	6	39,944	0	0	6	39,944	0	0	0
	1945	49	64,000	16	33,800	25	24,825	8	5,375	18
Rome	1944	6	50,494	0	0	2	46,104	4	4,390	0
*Savannah	1943	1,507	2,897,875	540	1,909,054	42	49,618	925	939,203	808
	1944	1,196	1,106,960	183	236,700	61	365,374	952	504,886	210
	1945	1,417	2,155,701	212	364,200	139	1,148,016	1,066	643,485	214
Savannah Beach	1943	1	10,000	0	0	0	0	1	10,000	0
	1944	147	49,866	0	0	0	0	147	49,866	0
	1945	109	62,362	11	28,000	7	9,700	91	24,662	13
Silvertown	1944	0	0	0	0	0	0	0	0	0
	[2]1945	0	0	0	0	0	0	0	0	0
Smyrna	1943	9	20,100	2	2,400	6	10,200	1	7,500	2
	1944	17	11,585	5	6,250	6	4,250	6	1,085	5
	[1]1945	35	60,950	16	41,275	16	16,325	3	3,350	16
Sylvania	1943	0	0	0	0	0	0	0	0	0
	1944	2	2,000	2	2,000	0	0	0	0	2
	1945	28	108,900	16	43,500	8	59,400	4	6,000	16
Thomson	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	[1]1945	5	10,650	4	8,200	0	0	1	2,450	10
Tifton	1943	5	6,000	4	4,000	1	2,000	0	0	4
	1944	9	7,400	2	400	2	1,200	5	5,800	2
	1945	88	356,750	58	158,050	22	180,400	8	18,300	58
Valdosta	1943	35	24,040	14	3,100	8	8,300	13	12,640	14
	1944	50	50,060	30	12,490	2	20,500	18	17,070	30
	1945	86	179,150	43	75,300	24	92,315	19	11,535	43
Villa Rica	1943	0	0	0	0	0	0	0	0	0
	1944	1	800	1	800	0	0	0	0	1
	1945	7	90,000	7	90,000	0	0	0	0	5
Waynesboro	[1]1943	0	0	0	0	0	0	0	0	0
	[1]1945	2	25,500	0	0	2	25,500	0	0	0
Wrens	1944	4	1,100	0	0	3	600	1	500	0
	1945	13	2,388	4	200	2	628	7	1,560	4
Maryland:										
Aberdeen	1943	3	2,200	1	1,000	2	1,200	0	0	1
	1944	0	0	0	0	0	0	0	0	0
	1945	5	31,000	3	16,500	2	14,500	0	0	3

* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

[2] 10 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

SOUTH ATLANTIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Maryland—Continued										
Annapolis	1943	63	$48,515	0	0	11	$26,430	52	$22,085	0
	1944	133	763,077	36	$63,100	35	631,445	62	68,532	36
	1945	55	532,809	2	13,500	2	305,316	51	213,993	2
*Baltimore	1943	9,616	11,932,444	1,563	6,365,890	630	2,646,419	7,423	2,920,135	2,629
	1944	7,904	11,209,910	774	3,982,639	456	4,359,984	6,674	2,867,287	944
	1945	8,235	12,360,975	634	3,290,950	674	4,425,478	6,927	4,644,547	665
Baltimore County, Dist. 12	1943	401	2,797,747	326	2,724,100	39	59,610	36	14,037	950
	1944	566	1,361,535	441	1,243,450	48	95,710	77	22,375	459
	1945	360	1,309,670	118	383,580	91	856,657	151	69,433	119
Baltimore County, Dist. 13	1943	56	93,790	16	39,100	17	27,562	23	27,128	16
	1944	89	654,709	6	9,690	44	628,910	39	16,109	6
	1945	173	661,628	55	240,900	64	389,380	54	31,348	56
Barton	1943	2	3,250	0	0	1	3,000	1	250	0
	1944	2	1,275	0	0	1	75	1	1,200	0
	1945	5	2,468	1	1,000	2	150	2	1,318	1
Brentwood	1943	25	250,650	19	250,000	1	125	5	525	104
	1944	7	2,950	0	0	1	300	6	2,650	0
	1945	21	60,590	0	0	3	45,600	18	14,990	0
Brunswick	1943	0	0	0	0	0	0	0	0	0
	1944	5	1,325	0	0	0	0	5	1,325	0
	1945	3	5,600	2	5,500	1	100	0	0	2
Cambridge	1943	31	10,290	0	0	17	4,375	14	5,915	0
Capitol Heights	1943	68	16,787	0	0	19	2,922	49	13,865	0
	1944	42	9,070	0	0	5	1,120	37	7,950	0
	1945	51	21,267	1	3,000	6	7,050	44	11,217	1
Chesapeake City	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
Chestertown	1943	15	6,808	0	0	3	4,478	12	2,330	0
	1944	25	7,015	0	0	1	450	24	6,565	0
	1945	19	12,880	0	0	1	6,000	18	6,880	0
Cheverly	1943	3	13,650	3	13,650	0	0	0	0	3
	1944	1	37,000	0	0	1	37,000	0	0	0
	1945	47	241,100	45	238,100	0	0	2	3,000	45
Crisfield	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	5	14,550	1	2,750	4	11,800	0	0	1
*Cumberland	1943	95	304,773	7	7,530	19	271,971	69	25,272	7
	1944	115	95,158	1	200	27	37,076	87	57,882	1
	1945	122	213,840	12	43,250	27	58,020	83	112,570	14
Denton	1943	12	1,575	0	0	1	200	11	1,375	0
	1944	14	1,227	0	0	0	0	14	1,227	0
	1945	19	9,625	1	500	4	4,000	14	5,125	1
Easton	1943	34	12,734	2	560	5	4,721	27	7,453	2
	1944	50	27,725	1	2,000	7	3,600	42	22,125	0
	1945	116	49,910	2	4,000	1	1,000	113	44,910	2
Federalsburg	1944	3	25,500	0	0	2	24,500	1	1,000	0
	1945	5	66,000	0	0	5	66,000	0	0	0
Frederick	1943	57	36,157	0	0	16	4,235	41	31,922	0
	1944	55	55,596	0	0	18	13,875	37	41,721	0
	1945	124	240,035	22	44,000	40	118,900	62	77,135	7
Gaithersburg	1943	7	2,950	0	0	4	2,250	3	700	0
	1944	5	30,525	0	0	5	30,525	0	0	0
	1945	17	43,510	4	29,000	8	11,510	5	3,000	4
Hagerstown	1943	238	445,448	72	326,775	80	32,813	86	85,860	92
	1944	115	310,525	20	112,300	39	106,940	56	91,285	30
	1945	230	381,689	43	200,307	90	81,516	97	99,866	45
Kensington	1943	2	2,300	0	0	0	0	2	2,300	0
	1944	4	4,475	0	0	1	4,000	3	475	0
	1945	19	103,800	18	102,800	0	0	1	1,000	18
Kitzmillersville	1943	3	3,488	0	0	1	1,688	2	1,800	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Lonaconing	1943	0	0	0	0	0	0	0	0	0
	1944	1	500	0	0	0	0	1	500	0
	1945	2	2,075	1	2,000	0	0	1	75	1
Midland	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
North East	1943	0	0	0	0	0	0	0	0	0
	1944	2	675	0	0	2	675	0	0	0
	1945	2	2,650	0	0	2	2,650	0	0	0
Oxford	1943	2	2,700	0	0	2	2,700	0	0	0
	1944	3	900	0	0	0	0	3	900	0

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APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

SOUTH ATLANTIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Maryland—Continued										
Princess Anne	1943	0	0	0	0	0	0	0	0	0
Rockville	1943	30	$88,150	26	$65,000	4	$23,150	0	0	26
	1944	16	24,850	2	3,400	8	13,000	6	$8,450	2
	1945	24	93,900	10	80,300	8	10,400	6	3,200	13
St. Michaels	1943	4	1,800	0	0	4	1,800	0	0	0
	1944	9	2,900	1	1,800	8	1,100	0	0	1
	1945	3	1,700	1	1,000	1	500	1	200	0
Salisbury	1943	228	93,279	0	0	81	51,346	147	41,933	0
	1944	281	282,901	6	2,090	55	166,050	220	114,761	5
	1945	375	603,293	15	59,300	65	374,173	295	169,820	21
Snow Hill	1943	2	4,500	0	0	2	4,500	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	11	208,000	7	8,000	4	200,000	0	0	7
Takoma Park	1943	54	334,120	5	312,900	5	2,450	44	18,770	105
	1944	78	76,438	12	41,200	10	6,698	56	28,540	13
	1945	98	247,177	42	223,300	9	2,175	47	21,702	42
Westminster	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	21	75,350	2	6,200	12	60,350	7	8,800	2
North Carolina:										
Aberdeen	1943	39	67,730	20	60,000	0	0	19	7,730	20
	1944	11	3,080	0	0	0	0	11	3,080	0
	1945	5	3,900	0	0	1	2,000	4	1,900	0
Asheboro	1943	85	24,503	6	2,310	12	4,110	67	18,083	6
	1944	98	88,469	8	3,100	18	45,180	72	40,189	8
	1945	140	532,939	20	50,400	41	360,290	79	122,249	19
*Asheville	1943	305	216,967	4	9,280	26	84,597	275	123,090	4
	1944	296	260,933	14	4,000	30	92,605	252	164,328	14
	1945	384	1,318,192	55	183,530	52	808,755	277	325,907	55
Belmont	1943	3	3,400	1	3,000	2	400	0	0	1
	1944	1	150	0	0	0	0	1	150	0
Benson	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	2	5,000	0	0	2	5,000	0	0	0
Bessemer City	1943	5	8,120	3	4,250	0	0	2	3,870	3
	1944	17	16,620	9	14,350	2	600	6	1,670	12
Brevard	[1]1945	96	182,890	38	93,650	12	48,750	46	40,490	38
Burgaw	1943	0	0	0	0	0	0	0	0	0
	1944	11	17,800	10	16,800	1	1,000	0	0	11
Burlington	1943	11	126,575	7	120,300	3	5,575	1	700	49
	1944	7	3,175	0	0	5	2,725	2	450	0
	1945	65	906,735	24	122,953	37	781,005	4	2,777	27
Canton	1943	60	11,299	1	2,000	13	902	46	8,397	1
	1944	78	33,923	4	3,000	11	15,410	63	15,513	4
	1945	108	156,697	22	68,310	25	62,150	61	26,237	22
Carolina Beach	1943	39	32,875	10	17,750	7	11,650	22	3,475	11
	1944	57	94,610	16	42,750	8	36,310	33	15,550	40
Chadbourne	1945	28	28,330	15	15,300	7	11,650	6	1,380	15
Chapel Hill	1943	7	11,050	5	6,250	2	4,800	0	0	5
	1944	0	0	0	0	0	0	0	0	0
	[2]1945	25	143,600	6	39,000	5	74,450	14	30,150	6
*Charlotte	1943	425	274,911	2	1,275	57	118,212	366	155,424	2
	1944	428	803,118	2	7,000	63	406,568	363	389,550	2
	1945	787	4,216,537	184	827,160	178	2,348,247	425	1,041,130	208
Cherryville	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
Clinton	[1]1945	25	170,600	12	95,600	12	72,000	1	3,000	15
Concord	1943	32	23,756	1	500	3	4,050	28	19,206	2
	1944	48	47,085	8	2,725	9	17,380	31	26,980	8
	1945	73	199,537	21	52,350	16	88,075	36	59,112	21
Durham	1943	190	496,628	70	331,740	8	58,355	112	106,533	65
	1944	170	481,597	2	6,600	26	346,397	142	128,600	2
	1945	266	2,064,873	104	564,960	42	1,203,659	120	296,254	107
Edenton	[1]1943	52	24,455	3	4,500	3	5,600	46	14,355	3
	1944	77	85,200	13	39,100	11	11,850	53	34,250	13
	1945	73	113,150	10	27,200	3	23,700	60	62,250	10
Elizabeth City	1943	42	86,015	21	68,865	10	8,875	11	8,275	21
	1944	65	443,818	13	15,200	23	394,698	29	33,920	13
	1945	72	225,161	21	43,475	37	118,115	14	63,571	21
Farmville	1943	2	1,500	0	0	2	1,500	0	0	0
	1944	4	6,700	1	4,000	3	2,700	0	0	1
	1945	9	32,000	6	19,500	3	12,500	0	0	6

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SOUTH ATLANTIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
North Carolina—Continued										
Fayetteville	1943	324	$148,494	62	$13,079	24	$41,451	238	$93,964	62
	1944	320	201,831	78	38,375	49	101,155	193	62,301	78
	1945	393	1,105,831	138	269,942	78	749,945	177	85,944	138
Forest City	1943	13	2,840	1	175	2	350	10	2,315	1
	1944	10	6,350	5	5,400	3	550	2	400	5
	1945	48	124,725	31	54,500	13	64,775	4	5,450	31
Franklin	1944	0	0	0	0	0	0	0	0	0
Franklinton	1943	0	0	0	0	0	0	0	0	0
	1944	3	3,500	0	0	0	0	3	3,500	0
	1945	2	8,000	0	0	2	8,000	0	0	0
Gastonia	1943	107	166,527	61	143,327	4	800	42	22,400	61
	1944	81	102,750	19	33,800	18	28,825	44	40,125	19
	1945	119	333,954	37	116,250	60	190,875	22	26,829	43
Gibsonville	1943	16	3,343	0	0	9	735	7	2,608	0
	1944	21	6,000	2	3,000	4	115	15	2,885	2
Goldsboro	1943	183	551,861	62	442,345	42	29,967	79	79,549	105
	1944	154	194,554	16	20,850	76	138,379	62	35,325	16
	1945	196	440,585	32	86,350	90	250,760	74	103,475	32
Greensboro	1943	268	125,839	2	1,500	39	8,518	227	115,821	2
	1944	263	311,561	19	15,250	47	94,964	197	201,347	19
	1945	496	3,591,002	139	561,150	95	2,547,582	262	482,270	147
Greenville	1943	20	8,000	2	3,250	5	2,825	13	1,925	4
	1944	36	22,130	0	0	12	17,625	24	4,505	0
	1945	61	137,010	20	88,200	21	44,100	20	4,710	20
Hamlet	1943	16	106,950	11	89,000	0	0	5	17,950	53
	1944	12	38,850	10	37,150	1	1,500	1	200	10
	1945	18	42,100	5	15,300	9	24,300	4	2,500	4
Hendersonville	1943	21	7,575	0	0	2	350	19	7,225	0
	1944	74	59,847	5	3,500	8	5,015	61	51,332	5
	[2] 1945	116	183,179	14	35,000	20	72,350	82	75,829	17
Hickory	1943	34	20,285	0	0	10	3,725	24	16,560	0
	1944	44	30,125	0	0	9	11,400	35	18,725	0
	1945	65	285,665	14	53,800	28	143,890	23	87,975	14
High Point	1943	826	284,631	3	550	86	42,785	737	241,296	3
	1944	985	323,025	3	1,575	73	57,883	909	263,567	3
	1945	958	825,341	44	126,800	110	388,217	804	310,324	55
Hillsboro	1943	0	0	0	0	0	0	0	0	0
	1944	1	5,000	1	5,000	0	0	0	0	1
	1945	0	0	0	0	0	0	0	0	0
Kings Mountain	1943	5	4,900	1	1,000	1	200	3	3,700	1
	1944	9	3,350	1	300	3	1,700	5	1,350	1
	1945	48	116,865	20	43,660	14	41,920	14	31,285	24
Kinston	1943	57	43,920	3	1,300	23	20,305	31	22,315	3
	1944	60	137,235	25	27,600	17	88,510	18	21,125	29
	[2] 1945	64	346,200	32	89,000	29	250,700	3	6,500	44
Lenoir	[1] 1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	18	82,650	7	17,400	8	53,250	3	12,000	7
Lexington	1943	86	30,369	1	3,000	14	2,460	71	24,909	1
	1944	71	52,792	1	925	20	24,895	50	26,972	1
	1945	114	642,630	30	73,750	21	365,700	63	203,180	30
Lincolnton	1943	36	44,951	5	890	2	1,500	29	42,561	5
	1944	34	22,021	8	5,700	5	1,725	21	14,596	8
	[1] 1945	42	86,714	18	43,085	7	29,189	17	14,440	18
Littleton	1943	4	2,250	0	0	2	1,350	2	900	0
	1944	8	4,150	0	0	3	1,650	5	2,500	0
	1945	1	1,200	1	1,200	0	0	0	0	1
Longview	1943	2	4,600	1	100	1	4,500	0	0	1
	1944	17	11,255	12	6,390	4	4,765	1	100	12
	1945	23	42,400	11	16,400	11	25,800	1	200	11
Louisburg	1943	4	7,600	0	0	1	750	3	6,850	0
	1944	2	4,800	0	0	0	0	2	4,800	0
Lumberton	1943	14	9,650	3	4,200	6	4,300	5	1,150	2
	1944	19	72,800	7	7,400	4	52,150	8	13,250	7
	1945	68	429,210	36	148,800	22	223,860	10	56,550	37
Madison	1943	2	2,900	0	0	2	2,900	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Marion	1944	5	10,700	5	7,200	1	3,500	0	0	5
	1945	13	40,100	7	18,100	6	22,000	0	0	7
Marshall	1943	1	500	0	0	0	0	1	500	0
	1944	1	1,800	0	0	0	0	1	1,800	0
Mocksville	1943	2	1,600	0	0	2	1,600	0	0	0
	1944	3	6,700	0	0	2	6,200	1	500	0
	1945	17	47,700	9	27,000	8	20,700	0	0	9

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[1] 11 months only.

[2] 10 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

SOUTH ATLANTIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
North Carolina—Continued										
Monroe	1943	74	$30,758	6	$4,400	4	$12,500	64	$13,858	5
	1944	94	51,018	9	3,080	2	26,627	83	21,311	9
	[1]1945	88	132,101	28	57,725	18	63,910	42	10,466	28
Mooresville	1943	67	21,129	1	200	14	2,530	52	18,399	1
	1944	78	29,848	4	6,579	9	4,789	65	18,480	4
	1945	57	46,205	13	21,900	11	11,190	33	13,115	13
Morehead City	1943	104	455,400	103	451,900	0	0	1	3,500	103
	1944	20	24,585	7	14,335	6	6,000	7	4,250	7
	1945	183	720,875	145	650,450	25	61,725	13	8,700	144
Morgantown	1943	12	4,300	2	400	2	1,700	8	2,200	2
	1944	4	26,612	2	700	1	22,972	1	2,940	2
Mount Airy	1943	24	9,626	2	400	2	400	20	8,826	2
	1944	56	33,315	4	1,000	14	15,555	38	16,760	3
	1945	96	108,117	9	23,900	19	48,945	68	35,272	9
New Bern	1943	44	169,682	6	9,400	4	54,600	34	105,682	6
	1944	225	171,660	4	6,500	35	88,255	186	76,905	4
	1945	218	220,459	24	52,875	14	42,100	180	125,484	24
North Wilkesboro	1943	8	5,150	0	0	3	2,250	5	2,900	0
	1944	8	33,750	2	700	5	33,000	1	50	2
	1945	18	53,650	6	23,800	10	25,550	2	4,300	7
Oxford	1943	1	2,500	0	0	0	0	1	2,500	0
	1944	0	0	0	0	0	0	0	0	0
Raleigh	1943	123	252,754	15	3,125	42	150,577	66	99,052	15
	1944	124	487,639	2	2,000	60	449,389	62	36,250	9
	1945	372	2,505,267	142	707,100	97	1,100,818	133	697,349	148
Reidsville	1943	8	2,350	0	0	1	500	7	1,850	0
	1944	21	24,065	0	0	7	13,830	14	10,235	0
	1945	52	165,130	20	46,950	13	88,975	19	29,205	20
Roanoke Rapids	1943	34	19,735	1	500	10	5,935	23	13,300	1
	1944	45	88,203	3	5,250	15	51,050	27	31,903	3
	1945	62	250,535	18	82,300	21	106,975	23	61,260	18
Rockingham	1943	13	106,500	12	100,000	0	0	1	6,500	40
	1944	7	61,000	1	1,500	3	52,500	3	7,000	1
	[1]1945	35	141,150	7	23,100	8	38,900	20	79,150	9
Rocky Mount	1943	53	13,565	1	600	24	4,535	28	8,430	1
	1944	47	115,927	3	2,750	18	98,627	26	14,550	3
	1945	104	323,775	29	80,150	33	197,275	42	46,350	32
Roxboro	1944	0	0	0	0	0	0	0	0	0
	1945	2	8,000	0	0	2	8,000	0	0	0
Salisbury	1943	154	54,692	0	0	32	6,475	122	48,217	0
	1944	69	82,987	2	2,300	9	27,990	58	52,697	2
	1945	108	330,885	31	108,473	21	124,125	56	98,287	31
Sanford	1943	16	72,000	16	72,000	0	0	0	0	16
	1944	44	132,700	38	103,300	4	24,400	2	5,000	38
Shelby	1943	73	18,369	0	0	7	6,158	66	12,211	0
	1944	16	20,753	2	1,900	4	3,600	10	15,253	2
	1945	83	300,800	27	90,000	24	176,450	32	34,350	30
Siler City	1943	1	5,000	0	0	1	5,000	0	0	0
	1944	1	12,000	0	0	1	12,000	0	0	0
	1945	22	69,000	19	51,500	3	17,500	0	0	19
Southern Pines	1943	38	18,850	10	3,500	1	300	27	15,050	10
	1944	34	22,950	29	12,900	2	2,000	3	8,050	31
	1945	28	26,100	21	14,800	3	8,100	4	3,200	21
South Port	1943	2	1,100	1	800	0	0	1	300	1
	1944	4	2,400	4	2,400	0	0	0	0	4
	1945	7	12,300	1	8,000	4	3,900	2	400	1
Spencer	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
Spindale	1943	8	1,790	1	350	5	540	2	900	1
	1944	8	5,425	1	400	2	3,200	5	1,825	1
	1945	21	48,250	11	16,800	9	30,450	1	1,000	11
Statesville	1943	0	0	0	0	0	0	0	0	0
	1944	16	34,667	2	1,800	12	31,067	2	1,800	2
	1945	78	473,393	38	153,680	39	309,713	1	10,000	38
Taylorsville	1943	1	250	0	0	1	250	0	0	0
	1944	1	200	1	200	0	0	0	0	1
	[1]1945	2	4,500	2	4,500	0	0	0	0	2
Thomasville	1943	18	5,745	0	0	6	835	12	4,910	0
	1944	16	14,600	3	6,350	1	125	12	8,125	3
	1945	38	102,705	9	15,850	19	78,530	10	8,325	9
Valdese	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	5	40,500	1	4,000	3	32,500	1	4.000	1

[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

SOUTH ATLANTIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
North Carolina—Continued										
Washington	1943	7	$2,625	2	$1,600	4	$525	1	$500	2
	1944	13	32,550	5	4,200	8	28,350	0	0	5
Williamston	1945	58	131,720	18	28,375	13	75,795	27	27,550	18
*Wilmington	1943	711	1,021,822	28	49,900	39	637,990	644	333,932	28
	1944	814	396,288	10	17,900	22	119,967	782	258,421	10
	1945	798	964,383	8	24,100	50	562,122	740	378,161	7
Wilson	1943	29	24,783	1	200	12	6,915	16	17,668	1
	1944	48	76,830	15	18,200	12	37,505	21	21,125	15
	1945	92	262,693	33	81,700	22	46,400	37	134,593	33
Windsor	1943	6	2,600	0	0	2	450	4	2,150	0
	1944	5	13,400	1	3,200	3	4,200	1	6,000	2
	1945	10	30,800	2	6,000	4	22,500	4	2,300	2
*Winston-Salem	1943	509	379,579	2	4,000	36	75,325	471	300,254	2
	1944	537	1,085,983	4	14,800	40	519,718	493	551,465	4
	1945	639	1,492,300	98	440,888	62	461,840	479	589,572	119
South Carolina:										
Aiken	1943	7	2,200	6	2,000	0	0	1	200	6
	1944	13	68,500	6	7,700	3	57,800	4	3,000	6
	1945	16	34,244	4	3,200	9	24,800	3	6,244	4
Bamberg	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	1	45,000	0	0	1	45,000	0	0	0
Batesburg	1943	7	2,795	0	0	0	0	7	2,795	0
	1944	12	12,025	4	7,500	2	3,000	6	1,525	4
	1945	29	28,055	19	20,315	7	5,875	3	1,865	19
Beaufort	1943	162	314,871	111	303,700	8	1,220	43	9,951	111
	1944	53	182,491	2	1,000	13	153,772	38	27,719	2
	1945	108	172,200	41	126,850	25	34,075	42	11,275	41
Belton	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	11	13,050	8	10,850	3	2,200	0	0	8
Calhoun Falls	1943	21	30,975	8	13,000	6	14,675	7	3,300	8
	1944	33	51,850	14	23,700	7	16,300	12	11,850	14
*Charleston	1943	534	1,647,998	26	21,700	54	668,764	454	957,534	26
	1944	658	1,189,754	11	15,600	74	807,563	573	366,591	11
	1945	1,078	2,841,978	35	61,225	144	2,100,395	899	680,358	35
Chester	1943	9	13,145	1	755	3	11,250	5	1,140	2
	1944	13	25,665	9	4,390	3	21,100	1	175	9
	1945	33	66,875	16	17,675	11	45,050	6	4,150	16
*Columbia	1943	266	243,476	11	134,400	34	38,973	221	70,103	59
	1944	231	166,309	7	5,175	30	65,944	194	95,190	7
	1945	379	1,243,070	99	331,705	96	634,020	184	277,345	137
Conway	1943	8	2,175	0	0	2	450	6	1,725	0
	1944	5	1,700	2	800	3	900	0	0	2
	1945	22	40,200	12	8,300	8	31,150	2	750	12
Darlington	1943	87	43,495	0	0	1	3,800	86	39,695	0
	1944	125	63,467	0	0	4	4,025	121	59,442	0
	1945	197	79,754	0	0	11	33,975	186	45,779	0
Dillon	1943	54	176,823	23	9,342	8	158,585	23	8,896	24
	1944	39	15,303	8	3,240	5	850	26	11,213	8
	1945	33	56,555	12	22,600	10	29,415	11	4,540	12
Easley	[1]1943	52	18,541	8	2,440	5	1,397	39	14,704	8
	1944	15	7,285	7	3,100	3	1,335	5	2,850	7
	1945	75	213,548	32	46,465	15	159,619	28	7,464	36
Eau Claire	1943	1	1,000	1	1,000	0	0	0	0	1
	1944	4	20,000	4	20,000	0	0	0	0	4
	1945	4	20,000	4	20,000	0	0	0	0	4
Florence	1943	32	100,240	30	99,990	0	0	2	250	30
	1944	46	114,160	30	99,990	1	13,920	15	250	30
	1945	11	34,700	8	8,200	1	25,000	2	1,500	9
Gaffney	1943	48	11,195	6	2,200	5	740	37	8,255	6
	1944	48	53,291	4	575	6	13,628	38	39,088	4
Greenville	1943	108	172,445	2	2,300	20	106,886	86	63,259	2
	1944	83	125,876	4	4,300	17	15,800	62	105,776	7
	1945	282	493,302	25	66,600	56	254,415	201	172,287	35
Greenwood	1943	65	25,447	0	0	7	692	58	24,755	0
	1944	57	48,556	0	0	4	6,200	53	42,356	0
	[1]1945	18	52,846	11	28,700	5	22,500	2	1,646	11
Hartsville	1944	0	0	0	0	0	0	0	0	0
	1945	56	31,253	4	11,650	1	10,610	51	8,993	4
Honea Path	1943	1	500	1	500	0	0	0	0	1
	1944	4	3,900	3	3,200	1	700	0	0	3
	[1]1945	9	8,150	6	7,100	3	1,050	0	0	6

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* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

SOUTH ATLANTIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
South Carolina—Continued										
Lake City	1943	4	$4,435	0	0	1	$4,000	3	$435	0
	1944	4	16,000	1	$1,000	3	15,000	0	0	1
	1945	30	102,750	16	37,200	12	63,200	2	2,350	16
Lancaster	1945	27	102,655	13	63,000	7	28,800	7	10,855	16
McCormick	1945	24	22,000	3	4,200	4	8,500	17	9,300	3
Mount Pleasant	1943	34	41,305	4	2,500	2	400	28	38,405	4
	1944	25	16,900	12	14,600	3	600	10	1,700	12
	1945	43	37,500	10	19,550	9	10,550	24	7,400	10
Mullins	[1] 1943	7	2,100	4	1,300	1	200	2	600	4
	1944	11	7,025	7	1,525	2	900	2	4,600	6
	1945	35	12,300	21	7,500	6	3,000	8	1,800	21
Newberry	1943	115	30,913	1	500	37	3,887	77	26,526	1
North Augusta	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	3	12,500	2	7,500	1	5,000	0	0	2
Pendleton	1943	0	0	0	0	0	0	0	0	0
	1944	1	7,000	0	0	1	7,000	0	0	0
	[2] 1945	0	0	0	0	0	0	0	0	0
Rock Hill	1945	78	318,040	26	60,550	26	230,225	26	27,265	26
Spartanburg	1943	325	269,436	36	55,795	11	45,485	278	168,156	38
	1944	315	406,085	93	262,658	14	46,700	208	96,727	96
	1945	280	507,147	92	196,950	52	162,147	136	148,050	96
Sumter	1943	41	162,298	9	3,450	12	146,048	20	12,800	11
	1944	61	159,542	10	5,750	19	145,457	32	8,335	10
	1945	96	272,060	24	107,060	36	119,640	36	45,360	24
Union	1943	0	0	0	0	0	0	0	0	0
	1944	27	11,040	4	3,100	8	6,190	15	1,750	2
	1945	79	116,890	12	26,180	12	62,322	55	28,388	12
West Columbia	1943	5	2,500	0	0	0	0	5	2,500	0
	1944	6	15,300	0	0	0	0	6	15,300	0
	1945	11	18,560	0	0	4	11,400	7	7,160	0
West Greenville	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	8	10,000	8	10,000	0	0	0	0	8
Virginia:										
Alexandria	1943	964	3,867,862	241	2,422,522	33	1,080,707	690	364,633	775
	1944	830	2,763,394	227	1,779,500	31	640,051	572	343,843	505
	1945	904	1,643,730	40	248,200	70	905,974	794	489,556	40
Altavista	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	10	133,350	5	8,300	4	124,750	1	300	5
Amherst	1943	3	1,650	1	1,000	2	650	0	0	1
	1944	2	6,000	2	6,000	0	0	0	0	2
	1945	3	10,000	2	6,000	0	0	1	4,000	2
Appalachia	1943	0	0	0	0	0	0	0	0	0
	1944	7	22,000	1	2,000	2	5,000	4	15,000	1
	1945	20	52,800	3	5,500	6	30,300	11	17,000	3
Arlington	1943	2,122	16,142,774	1,477	11,274,658	84	3,723,338	561	1,144,778	3,640
	1944	1,069	7,006,694	292	2,953,650	95	3,631,502	682	421,542	557
	1945	1,377	6,873,891	457	3,491,610	122	2,504,976	798	877,305	523
Ashland	1943	3	5,250	1	2,500	1	250	1	2,500	2
	1944	3	1,600	1	1,000	2	600	0	0	1
	1945	10	44,600	4	28,000	5	14,600	1	2,000	4
Bedford	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
Blacksburg	1943	27	20,210	8	5,550	12	11,210	7	3,450	8
	1944	10	5,850	3	3,600	4	1,550	3	700	4
	1945	10	25,550	0	0	7	21,050	3	4,500	0
Blackstone	1943	173	199,625	123	144,523	33	36,494	17	18,608	133
	1944	59	36,029	27	14,394	19	9,400	13	12,235	27
	1945	39	42,070	18	11,630	14	23,785	7	6,655	18
Bristol	1943	176	246,094	63	80,626	46	140,411	67	25,057	63
	1944	212	65,218	22	24,135	77	10,300	113	30,783	22
	1945	260	414,145	48	104,390	86	238,653	126	71,102	48
Broadway	1943	2	4,400	0	0	2	4,400	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	7	15,550	2	5,300	5	10,250	0	0	2
Buchanan	1943	8	2,400	0	0	5	1,500	3	900	0
Charlottesville	1943	121	101,347	1	200	29	4,975	91	96,172	1
	1944	115	313,453	9	1,700	15	219,876	91	91,877	9
	1945	188	513,775	67	227,405	43	188,071	78	98,299	70
Chase City	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0

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[2] 10 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

SOUTH ATLANTIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Virginia—Continued										
Chatham	1943	4	$5,750	1	$5,000	3	$750	0	0	1
	1944	1	400	0	0	0	0	1	$400	0
	1945	4	10,000	2	2,000	1	5,000	1	3,000	2
Christiansburg	1943	6	1,850	3	1,500	3	350	0	0	3
	1944	9	10,150	3	2,900	3	6,450	3	800	3
Clifton Forge	1943	8	1,700	0	0	1	350	7	1,350	0
	1944	2	330	0	0	0	0	2	330	0
	1945	38	34,156	10	5,810	1	200	27	28,146	10
Colonial Beach	1943	68	9,290	4	1,900	2	145	62	7,245	4
	1944	75	15,088	2	1,800	3	800	70	12,488	2
	1945	157	92,435	14	23,800	11	35,950	132	32,685	14
Colonial Heights	1943	165	261,280	83	249,000	12	1,300	70	10,980	83
	1944	29	40,550	12	36,000	1	50	16	4,500	12
	1945	30	39,935	7	33,400	6	1,435	17	5,100	7
Covington	1943	16	1,325	0	0	7	490	9	835	0
	1944	9	2,895	0	0	6	1,075	3	1,820	0
Crewe	1943	0	0	0	0	0	0	0	0	0
	1944	1	17,200	0	0	1	17,200	0	0	0
	1945	2	4,600	1	4,000	1	600	0	0	1
Culpeper	1943	19	10,170	0	0	3	210	16	9,960	0
	1944	29	21,000	1	250	4	5,050	24	15,700	1
	1945	27	38,980	3	13,475	5	15,495	19	10,010	3
Damascus	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
Danville	1943	386	105,301	7	2,250	102	22,507	277	80,544	7
	1944	345	153,952	7	6,000	65	43,842	273	104,110	7
	1945	341	788,186	50	202,460	75	320,869	216	264,857	52
Emporia	1943	29	23,915	0	0	12	1,685	17	22,230	0
	1944	24	14,205	2	400	8	4,850	14	8,955	2
	1945	38	89,095	7	18,800	20	63,235	11	7,060	17
Falls Church	1943	98	198,738	42	169,500	16	9,022	40	20,216	42
	1944	68	59,361	2	7,500	13	20,685	53	31,176	2
	1945	99	383,053	23	179,000	18	135,215	58	68,838	23
Farmville	1943	0	0	0	0	0	0	0	0	0
Franklin	1943	19	4,965	1	650	3	465	15	3,850	1
	1944	16	180,175	2	400	4	171,900	10	7,875	3
	1945	20	88,370	9	34,300	5	50,150	6	3,920	10
Galax	1943	12	4,925	0	0	6	2,450	6	2,475	0
	1944	19	12,950	6	3,700	4	5,800	9	3,450	6
	1945	44	109,125	12	18,200	19	82,510	13	8,415	12
Hampton	[1]1943	104	154,424	1	750	15	103,674	88	50,000	1
	1944	74	375,968	1	2,000	7	335,320	66	38,648	1
Harrisonburg	1943	103	24,740	1	200	21	5,525	81	19,015	1
	1944	71	38,325	3	600	23	20,510	45	17,215	3
	1945	107	213,544	16	82,900	31	68,590	60	62,054	19
Hillsville	1943	4	1,070	1	200	3	870	0	0	1
	1944	0	0	0	0	0	0	0	0	0
	1945	11	90,500	3	29,000	8	61,500	0	0	9
Hopewell	1943	90	18,062	0	0	15	4,050	75	14,012	0
	1944	69	20,127	1	1,400	8	615	60	18,112	1
	1945	115	184,334	29	134,500	9	14,665	77	35,169	29
Leesburg	1943	0	0	0	0	0	0	0	0	0
	1944	5	14,700	2	7,200	2	6,500	1	1,000	2
Lexington	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
Luray	1943	9	1,280	0	0	6	1,000	3	280	0
	1944	11	6,580	2	2,500	5	3,275	4	805	2
	1945	13	26,125	5	12,300	4	13,150	4	675	6
*Lynchburg	1943	280	70,682	0	0	58	10,681	222	60,001	0
	1944	294	113,426	5	3,645	34	11,997	255	97,784	5
	1945	528	736,306	50	225,435	59	201,753	419	309,118	50
Manassas	1943	15	2,365	1	200	7	865	7	1,300	1
	1944	9	12,125	3	11,000	5	925	1	200	3
	1945	17	57,250	5	33,000	6	22,100	6	2,150	6
Martinsville	1943	68	29,180	0	0	10	7,350	58	21,830	0
	1944	59	555,324	2	1,000	11	530,273	46	24,051	2
	1945	149	620,285	75	297,750	34	286,520	40	36,015	86
Narrows	1943	0	0	0	0	0	0	0	0	0
	1944	9	6,905	3	4,500	5	1,405	1	1,000	3
	1945	9	24,700	4	15,500	4	4,200	1	5,000	4
*Newport News	1943	1,567	1,874,932	171	889,807	167	510,795	1,229	474,330	360
	1944	1,303	1,485,082	9	30,300	208	1,086,718	1,086	368,064	12
	1945	1,531	1,420,634	34	85,156	242	852,945	1,255	482,533	34

* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

SOUTH ATLANTIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Virginia—Continued										
*Norfolk	1943	1,128	$7,396,573	427	$2,579,258	216	$3,277,727	485	$1,539,588	943
	1944	860	9,659,036	13	45,300	281	8,685,483	566	928,253	13
	1945	1,146	5,653,611	81	267,850	397	3,801,411	668	1,584,350	84
Norton	1944	12	72,200	8	7,200	4	65,000	0	0	8
Orange	1943	3	900	0	0	0	0	3	900	0
	1944	2	1,150	1	1,000	0	0	1	150	1
	[1]1945	10	40,165	1	5,200	5	24,965	4	10,000	1
Pennington Gap	1943	4	800	0	0	0	0	4	800	0
	1944	8	2,000	0	0	0	0	8	2,000	0
	1945	7	14,050	1	2,000	4	9,900	2	2,150	1
*Petersburg	1943	35	108,910	0	0	12	80,676	23	28,234	0
	1944	49	42,520	4	3,925	19	20,640	26	17,955	4
	1945	55	158,048	8	31,880	20	100,655	27	25,513	8
Phoebus	1943	50	11,288	4	2,500	1	200	45	8,588	4
	1944	61	32,675	2	1,400	1	700	58	30,575	2
	1945	47	27,489	4	8,300	11	10,800	32	8,389	4
*Portsmouth	1943	595	5,645,287	346	2,956,750	98	2,306,741	151	381,796	1,401
	1944	316	883,256	16	14,325	114	413,837	186	455,094	16
	1945	399	1,219,767	52	473,150	149	370,140	198	376,477	51
Pulaski	1943	13	9,706	5	3,646	4	2,610	4	3,450	5
	1944	27	60,250	7	5,500	7	50,735	13	4,015	7
	1945	78	357,405	25	51,700	33	287,740	20	17,965	25
Quantico	1943	4	8,100	2	5,500	1	800	1	1,800	1
	1944	5	14,000	1	6,000	1	3,000	3	5,000	2
	1945	10	26,300	1	1,600	2	5,700	7	19,000	2
Radford	1943	48	20,791	4	725	20	11,641	24	8,425	4
Richlands	1943	2	700	2	700	0	0	0	0	2
	1944	11	2,950	4	2,300	7	650	0	0	4
	1945	20	66,775	8	11,600	11	54,675	1	500	7
*Richmond	1943	1,232	1,408,731	40	127,400	84	604,885	1,108	676,446	40
	1944	2,311	2,558,488	210	864,900	188	491,700	1,913	1,201,888	209
	1945	3,131	7,769,811	793	4,499,998	294	1,596,730	2,044	1,673,083	1,066
*Roanoke	1943	490	153,066	0	0	82	38,410	408	114,656	0
	1944	564	321,321	6	12,700	63	84,496	495	224,125	6
	1945	747	1,240,900	95	497,237	93	438,691	559	304,972	103
Salem	1943	34	11,366	0	0	8	1,026	26	10,340	0
	1944	23	53,750	1	200	10	22,450	12	31,100	1
	1945	39	108,484	8	26,700	10	34,350	21	47,434	8
South Boston	1943	0	0	0	0	0	0	0	0	0
	1944	1	250	0	0	0	0	1	250	0
	1945	5	46,650	3	6,190	2	40,460	0	0	3
South Hill	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	8	72,500	4	12,000	3	60,000	1	500	4
South Norfolk	1943	1	2,500	0	0	1	2,500	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	15	44,250	13	38,250	2	6,000	0	0	13
Staunton	1943	76	18,163	0	0	6	1,675	70	16,488	0
	1944	16	75,185	0	0	15	38,485	1	36,700	0
Strasburg	1943	1	75	0	0	1	75	0	0	0
	1944	10	25,325	6	24,000	1	175	3	1,150	6
Suffolk	1943	70	25,685	0	0	36	12,670	34	13,015	0
	1944	81	91,220	7	9,350	47	72,070	27	9,800	7
	1945	120	167,385	29	86,250	60	49,635	31	31,500	29
Tappahannock	1943	2	665	1	615	1	50	0	0	1
Vinton	1943	28	6,618	1	200	15	5,045	12	1,373	1
	1944	26	6,340	2	400	1	3,200	23	2,740	2
	1945	21	27,592	2	23,897	7	955	12	2,740	1
Warrenton	1943	4	9,000	2	5,000	0	0	2	4,000	2
	1944	2	26,000	0	0	2	26,000	0	0	0
	1945	4	19,600	0	0	4	19,600	0	0	0
Waverly	1943	6	1,982	0	0	1	32	5	1,950	0
	1944	10	11,635	3	900	5	10,135	2	600	3
	1945	10	18,195	4	6,720	1	10,000	5	1,475	4
Waynesboro	1943	36	29,040	9	2,350	11	24,300	16	2,390	9
	1944	17	4,340	1	200	4	500	12	3,640	1
	1945	67	166,170	24	80,800	10	54,750	33	30,620	28
West Point	1943	59	6,660	2	400	10	1,585	47	4,675	2
	1944	41	17,940	0	0	6	7,025	35	10,915	0
Williamsburg	1943	22	52,172	3	28,700	12	20,707	7	2,765	3
	1944	16	4,503	1	1,000	5	1,325	10	2,178	1

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APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

SOUTH ATLANTIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Virginia—Continued										
Winchester	1943	16	$4,871	1	$200	14	$4,590	1	$81	1
	1944	16	11,573	2	5,200	9	2,450	5	3,923	2
	1945	63	343,550	18	79,000	29	231,350	16	33,200	25
Woodstock	1943	2	6,000	1	1,000	1	5,000	0	0	1
	1944	2	4,600	0	0	1	4,500	1	100	0
	1945	2	3,500	0	0	2	3,500	0	0	0
Wytheville	1943	3	2,800	3	2,800	0	0	0	0	3
	1944	11	19,300	9	14,900	1	3,500	1	900	9
West Virginia:										
Alderson	1943	0	0	0	0	0	0	0	0	0
	1944	2	4,000	2	4,000	0	0	0	0	2
	1945	2	12,500	0	0	2	12,500	0	0	0
Beckley	1943	46	7,423	23	3,650	19	2,498	4	1,275	23
	1944	46	43,470	39	35,230	6	8,040	1	200	41
	[1]1945	102	285,186	80	223,804	22	61,382	0	0	80
Belington	1943	18	3,275	4	975	14	2,300	0	0	4
	1944	10	2,130	2	750	7	1,320	1	60	2
	1945	14	3,725	3	1,400	11	2,325	0	0	3
Berkeley Springs	1943	3	600	0	0	1	200	2	400	0
	1944	1	100	0	0	0	0	1	100	0
	1945	3	4,000	1	3,500	0	0	2	500	1
Bluefield	1943	387	76,002	2	1,600	87	9,201	298	65,201	2
	1944	433	110,180	12	10,820	89	30,816	332	68,544	12
	1945	561	607,119	31	140,500	99	254,700	431	211,919	31
Bridgeport	1943	8	1,420	0	0	7	990	1	430	0
	1944	8	2,960	2	1,000	3	660	3	1,300	2
	1945	17	19,350	1	1,400	10	4,300	6	13,650	1
Buckhannon	1943	32	4,220	3	600	15	1,675	14	1,945	3
	1944	43	5,737	3	750	15	1,885	25	3,102	3
	1945	74	48,460	19	19,450	18	22,000	37	7,010	13
Cameron	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
*Charleston	1943	905	1,425,734	24	19,453	105	1,195,754	776	210,527	25
	1944	1,110	401,051	5	5,350	56	35,018	1,049	360,683	5
	1945	1,555	2,653,818	66	382,000	125	1,545,303	1,364	726,515	67
*Clarksburg	1943	150	24,227	0	0	23	1,379	127	22,848	0
	1944	151	67,667	1	200	14	24,360	136	43,107	1
	1945	194	165,210	14	36,400	32	70,965	148	57,845	19
Dunbar	1943	21	30,410	9	27,000	3	550	9	2,860	9
	1944	20	15,331	4	8,200	1	200	15	6,931	7
	1945	97	263,641	64	193,815	5	59,100	28	10,726	64
East Rainelle	1943	4	850	3	600	1	250	0	0	3
	1944	1	2,000	0	0	1	2,000	0	0	0
	1945	22	115,000	9	21,100	11	77,900	2	16,000	10
Elizabeth	1943	15	7,600	0	0	12	5,900	3	1,700	0
	1944	11	8,000	2	900	3	2,500	6	4,600	2
Fairmont	1943	62	15,427	7	1,545	25	4,728	30	9,154	7
	1944	93	184,825	41	131,510	25	48,502	27	4,813	41
	1945	132	299,837	27	43,350	60	183,415	45	73,072	27
Follansbee	1944	1	150	0	0	0	0	1	150	0
	1945	12	124,450	1	6,000	4	113,800	7	4,650	2
Gassaway	1943	0	0	0	0	0	0	0	0	0
Grantsville	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
Hinton	1943	2	850	1	500	1	350	0	0	1
	1944	0	0	0	0	0	0	0	0	0
Hollidays Cove	1943	4	738	0	0	1	200	3	538	0
	1944	4	5,100	0	0	0	0	4	5,100	0
	1945	4	27,500	0	0	1	20,000	3	7,500	0
*Huntington	1943	181	202,129	8	6,095	75	109,559	98	86,475	6
	1944	271	1,024,258	38	100,090	56	788,160	177	136,008	40
	1945	704	2,099,859	159	419,600	143	1,036,113	402	644,146	160
Iaeger	1943	4	1,950	1	200	1	1,200	2	550	1
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Kenova	1943	12	20,800	0	0	7	19,750	5	1,050	0
	1944	77	59,900	1	2,000	31	37,750	45	20,150	1
	[1]1945	53	49,400	11	30,000	16	8,500	26	10,900	11
Keyser	1943	7	920	0	0	6	670	1	250	0
	1944	23	11,825	1	1,500	13	6,625	9	3,700	1
	1945	9	8,450	3	6,200	5	1,450	1	800	3
Kimball	1943	0	0	0	0	0	0	0	0	0
	1944	4	5,000	4	5,000	0	0	0	0	4

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APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

SOUTH ATLANTIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
West Virginia—Continued										
Lewisburg	1943	2	$1,450	0	0	1	$450	1	$1,000	0
	1944	5	5,700	3	$4,200	0	0	2	1,500	3
	1945	16	43,800	8	29,500	4	9,100	4	5,200	8
Logan	[1]1943	3	750	2	550	1	200	0	0	2
	1944	7	2,800	7	2,800	0	0	0	0	7
	1945	20	74,800	12	59,200	4	4,600	4	11,000	18
McMechen	1943	2	2,900	0	0	2	2,900	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Mannington	1943	0	0	0	0	0	0	0	0	0
	1944	3	1,250	0	0	3	1,250	0	0	0
	1945	6	4,000	0	0	6	4,000	0	0	0
Marlinton	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	6	15,200	4	12,000	1	200	1	3,000	7
Martinsburg	1943	165	48,076	0	0	76	33,037	89	15,039	0
	1944	166	105,730	2	400	60	87,622	104	17,708	2
	1945	289	528,751	57	233,450	70	237,618	162	57,683	60
Milton	1943	0	0	0	0	0	0	0	0	0
	1944	1	1,000	0	0	1	1,000	0	0	0
Morgantown	1943	105	249,997	40	183,900	17	4,669	48	61,428	40
	1944	71	28,991	2	4,850	14	5,772	55	18,369	2
	1945	89	110,256	0	0	18	51,066	71	59,190	0
Moundsville	1943	114	21,252	0	0	19	3,475	95	17,777	0
	1944	111	41,160	2	1,550	11	5,375	98	34,235	2
	1945	237	195,600	22	67,050	24	57,005	191	71,545	22
Mullens	1943	6	1,100	5	1,000	1	100	0	0	5
	1944	4	10,000	3	2,500	1	7,500	0	0	3
Nutter-Fort	1943	20	2,530	0	0	10	1,085	10	1,445	0
	1944	16	2,410	0	0	1	60	15	2,350	0
	1945	29	12,792	3	4,050	3	4,285	23	4,457	3
Parkersburg	1943	169	94,851	0	0	23	36,838	146	58,013	0
	1944	263	110,374	1	1,400	29	10,835	233	98,139	1
Philippi	1943	7	2,275	0	0	4	1,815	3	460	0
	1944	13	14,780	2	6,900	7	5,600	4	2,280	2
	1945	21	23,600	4	7,500	10	4,100	7	12,000	4
Pineville	1943	3	1,300	0	0	3	1,300	0	0	0
	1944	1	50	0	0	0	0	1	50	0
	1945	7	21,000	3	9,000	4	12,000	0	0	2
Princeton	1943	20	21,150	0	0	14	20,350	6	800	0
	1944	27	24,225	5	9,200	11	11,175	11	3,850	5
	1945	60	126,488	34	100,700	9	18,375	17	7,413	40
Ranson	1943	15	5,895	0	0	12	4,545	3	1,350	0
	1944	22	67,085	4	21,300	13	9,175	5	36,610	18
	1945	23	364,655	5	7,400	16	355,755	2	1,500	5
Ravenswood	1943	5	750	0	0	4	550	1	200	0
	1944	1	200	0	0	0	0	1	200	0
	1945	0	0	0	0	0	0	0	0	0
Ridgley	1943	11	945	0	0	8	505	3	440	0
	1944	1	50	0	0	0	0	1	50	0
Romney	1943	18	2,270	0	0	6	655	12	1,615	0
	1944	10	6,005	0	0	2	4,000	8	2,005	0
Sabraton	1943	12	3,580	2	1,500	7	880	3	1,200	2
	1944	9	10,700	2	6,000	6	4,200	1	500	2
	1945	23	20,525	6	13,200	11	4,025	6	3,300	6
St. Albans	1943	49	89,300	0	0	4	76,300	45	13,000	0
	1944	53	20,200	1	4,000	0	0	52	16,200	1
St. Marys	1943	1	100	0	0	1	100	0	0	0
	1944	1	200	0	0	0	0	1	200	0
	1945	135	468,834	42	180,025	34	245,514	59	43,295	46
South Charleston	1943	31	21,395	2	1,500	2	525	27	19,370	2
	1944	45	49,200	7	16,750	8	14,600	30	17,850	6
Spencer	1944	0	0	0	0	0	0	0	0	0
	1945	8	7,590	3	2,800	4	4,290	1	500	3
Terra Alta	1943	1	800	0	0	0	0	1	800	0
	1944	2	600	0	0	2	600	0	0	0
	1945	1	3,000	1	3,000	0	0	0	0	1
Thomas	1943	1	400	0	0	0	0	1	400	0
	1944	0	0	0	0	0	0	0	0	0
	[1]1945	15	62,954	1	1,500	7	13,900	7	47,554	1
Wellsburg	1943	7	9,950	1	3,000	3	6,500	3	450	1
	1944	13	25,850	1	500	3	1,100	9	24,250	1
	1945	776	1,822,623	1	5,000	23	1,250,600	752	567,023	1

[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

SOUTH ATLANTIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
West Virginia—Continued										
•Wheeling	1943	556	$290,911	1	$3,000	23	$48,275	532	$239,636	1
	1944	484	448,870	1	1,900	9	105,000	474	341,970	1
	1945	776	1,882,623	1	5,000	23	1,250,600	752	567,023	1
Williamson	1943	1	1,000	1	1,000	0	0	0	0	1
	1944	6	4,000	5	3,400	0	0	1	600	5
EAST SOUTH CENTRAL STATES—Continued										
Alabama:										
Albertville	1943	2	2,000	2	2,000	0	0	0	0	2
	1944	18	26,500	18	26,500	0	0	0	0	18
Anniston	1943	478	1,203,813	185	479,097	11	566,275	282	158,441	212
	1944	320	397,350	57	118,200	7	131,821	256	147,329	57
	1945	791	1,504,832	154	211,450	53	612,396	584	680,986	157
Atmore	1943	3	950	0	0	0	0	3	950	0
	1944	0	0	0	0	0	0	0	0	0
	1945	12	7,301	1	1,000	1	4,000	10	2,301	1
Auburn	1943	0	0	0	0	0	0	0	0	0
	1944	1	800	1	800	0	0	0	0	1
	[1]1945	22	94,100	16	65,300	3	22,000	3	6,800	27
Bessemer	1943	114	72,619	35	6,875	8	43,105	71	22,639	35
	1944	125	222,382	64	191,500	3	2,700	58	28,182	64
	[1]1945	164	79,570	100	45,075	8	12,000	56	22,495	111
•Birmingham	1943	5,996	3,773,485	58	33,651	378	2,035,676	5,560	1,704,158	60
	1944	6,725	3,207,420	128	92,682	389	923,801	6,208	2,190,937	129
	1945	7,025	5,636,289	352	821,014	516	1,885,627	6,157	2,929,648	354
Brewton	1943	17	6,100	11	4,900	1	150	5	1,050	11
	1944	46	36,222	8	3,700	2	25,500	36	7,022	8
Brighton	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Clanton	1943	7	7,500	4	4,500	0	0	3	3,000	4
	1944	17	34,500	12	20,000	4	12,000	1	2,500	12
Cullman	1943	12	36,560	0	0	4	35,475	8	1,085	0
	1944	27	38,120	3	3,300	4	26,075	20	8,745	3
	1945	41	149,650	25	96,850	9	50,300	7	2,500	24
Decatur	1943	213	819,054	190	506,351	10	297,350	13	15,353	190
	1944	67	61,960	29	6,455	21	52,100	17	3,405	29
	1945	113	274,043	54	74,728	39	193,265	20	6,050	59
Dora	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
Eufaula	1943	86	19,394	4	1,200	2	4,200	80	13,994	4
	1944	82	42,207	5	2,490	2	2,600	75	37,117	5
	1945	52	28,294	5	3,450	5	4,000	42	20,844	5
Eutaw	1943	4	965	0	0	1	500	3	465	0
	1944	6	11,500	0	0	0	0	6	11,500	0
	1945	10	16,350	1	1,000	1	4,000	8	11,350	0
Fairhope	1943	106	62,234	48	47,500	20	5,750	38	8,984	54
	1944	86	42,308	25	24,625	31	9,148	30	8,535	25
Flomaton	1943	11	52,650	0	0	2	50,500	9	2,150	0
	1945	2	5,000	2	5,000	0	0	0	0	2
Gadsden	1943	312	574,515	243	450,882	9	108,148	60	15,485	236
	1944	302	1,922,601	251	429,475	30	1,478,047	21	15,079	251
	1945	439	1,850,663	307	626,120	83	1,122,805	49	101,738	307
Greenville	1943	41	7,534	0	0	0	0	41	7,534	0
	1944	49	20,875	2	4,000	2	4,400	45	12,475	2
Homewood	1943	53	13,945	1	500	1	200	51	13,245	1
	1944	73	19,990	2	2,500	0	0	71	17,490	2
Huntsville	1944	343	530,130	86	23,340	17	27,817	240	478,973	86
	1945	433	639,618	149	112,600	63	126,845	221	400,173	152
Irondale	1943	16	1,383	0	0	0	0	16	1,383	0
	1944	33	11,602	12	5,765	2	200	19	5,637	12
	1945	29	25,200	22	21,550	4	1,750	3	1,900	22
Leeds	1943	2	3,000	2	3,000	0	0	0	0	2
	1944	4	5,400	2	4,500	0	0	2	900	2
	1945	10	7,520	5	2,950	3	3,870	2	700	4
•Mobile	1943	1,192	2,961,406	468	1,185,502	44	1,184,654	680	591,250	621
	1944	1,021	1,296,591	308	237,449	58	645,954	655	413,188	310
	1945	1,237	3,736,053	250	357,898	188	1,964,870	799	1,413,285	270
•Montgomery	1943	1,138	284,097	79	26,075	6	80,893	1,053	177,129	79
	1944	1,427	1,822,150	383	1,483,361	8	80,305	1,036	258,484	431
	1945	1,658	3,616,055	376	1,042,490	105	1,952,328	1,177	621,237	356
Oneonta	1943	1	2,000	0	0	1	2,000	0	0	0
	1944	9	58,750	4	5,500	4	52,500	1	750	4
	1945	31	98,500	29	88,500	2	10,000	0	0	29

* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

EAST SOUTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Alabama—Continued										
Piedmont	1943	4	$1,235	1	$475	2	$360	1	$400	1
	1944	18	3,550	15	3,000	1	175	2	375	15
	1945	28	17,200	21	13,800	4	2,800	3	600	21
Selma	1943	149	37,924	12	2,300	6	869	131	34,755	12
	1944	151	80,725	17	4,475	9	41,651	125	34,599	17
	1945	214	201,541	77	93,798	15	45,294	122	62,449	77
Sheffield	1943	38	7,075	26	5,200	0	0	12	1,875	26
	1944	50	53,283	27	46,229	7	5,736	16	1,318	27
	1945	67	210,050	32	33,030	24	174,482	11	2,538	32
Tarrant City	1943	142	28,300	0	0	0	0	142	28,300	0
	1944	122	32,750	2	1,050	1	1,500	119	30,200	2
	1945	192	82,800	22	29,000	5	14,300	165	39,500	22
Thomasville	1943	0	0	0	0	0	0	0	0	0
	1944	2	8,500	0	0	1	7,500	1	1,000	0
	1945	17	23,500	15	19,650	2	3,850	0	0	15
Troy	1943	99	202,183	10	4,775	9	3,436	80	193,972	10
	1944	77	47,763	3	3,050	9	19,200	65	25,513	3
	1945	42	232,099	3	8,800	25	214,965	14	8,334	4
Tuscaloosa	1943	50	130,743	15	27,345	11	86,668	24	16,730	15
	1944	37	464,061	9	3,165	16	434,179	12	26,717	9
	1945	387	1,930,691	319	587,725	31	1,259,746	37	83,220	321
Tuscumbia	1943	100	238,361	100	238,361	0	0	0	0	100
	1944	4	24,971	2	3,000	2	21,971	0	0	2
Union Springs	1943	2	3,250	0	0	1	1,500	1	1,750	0
	1944	3	8,500	2	7,000	0	0	1	1,500	2
	1945	12	26,300	4	5,800	5	18,000	3	2,500	4
Kentucky:										
Anchorage	1943	0	0	0	0	0	0	0	0	0
Bardstown	1943	11	15,990	4	4,300	0	0	7	11,690	3
	1944	18	70,775	5	11,275	11	58,550	2	950	5
	1945	18	194,410	4	10,400	7	170,500	7	13,510	4
Bellevue	1944	40	27,658	0	0	2	525	38	27,133	0
	1945	62	48,899	0	0	2	5,500	60	43,399	0
Bowling Green	1943	1	250,660	0	0	1	250,660	0	0	0
	1944	0	0	0	0	0	0	0	0	0
Brodhead	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Bromley	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	3	7,500	1	6,500	1	500	1	500	1
Carlisle	1943	4	1,825	0	0	3	1,425	1	400	0
	1944	1	1,500	0	0	0	0	1	1,500	0
	1945	2	500	0	0	1	200	1	300	0
Carrollton	1943	0	0	0	0	0	0	0	0	0
	1944	499	2,220,000	499	2,220,000	0	0	0	0	487
Cloverport	1943	1	500	1	500	0	0	0	0	1
	1944	1	100	0	0	1	100	0	0	0
	[1]1945	5	6,400	0	0	2	500	3	5,900	0
Corbin	1943	14	6,380	1	800	9	4,280	4	1,300	1
	1944	25	17,400	2	4,400	12	2,050	11	10,950	1
	1945	64	81,545	14	22,100	23	36,100	27	23,345	14
*Covington	1943	49	47,836	0	0	5	700	44	47,136	0
	1944	75	73,863	0	0	9	1,895	66	71,968	0
Dayton	1943	1	6,500	1	6,500	0	0	0	0	1
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Eminence	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	3	8,500	3	8,500	0	0	0	0	3
Falmouth	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
Fort Thomas	1943	6	5,215	0	0	1	400	5	4,815	0
	1944	28	11,045	0	0	2	1,050	26	9,995	0
	1945	17	7,615	0	0	3	2,035	14	5,580	[illegible]
Frankfort	1943	7	3,325	0	0	3	1,550	4	1,775	[illegible]
	1944	20	29,290	0	0	8	23,350	12	5,940	[illegible]
	1945	36	164,210	4	18,300	12	18,255	20	127,655	[illegible]
Georgetown	1943	1	2,000	0	0	0	0	1	2,000	[illegible]
	1944	3	500	0	0	3	500	0	0	[illegible]
	[1]1945	2	8,500	1	5,000	1	3,500	0	0	[illegible]
Glasgow	1943	4	5,300	4	5,300	0	0	0	0	[illegible]
	1944	5	85,000	0	0	5	85,000	0	0	[illegible]
	1945	23	142,305	8	26,000	10	86,050	5	30,255	[illegible]

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* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

EAST SOUTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Kentucky—Continued										
Harrodsburg	1943	25	$2,350	0	0	14	$1,180	11	$1,170	0
	1944	9	8,210	0	0	5	6,625	4	1,585	0
	[1]1945	25	23,175	10	$21,100	10	1,450	5	625	10
Hazard	1943	12	17,200	7	15,000	2	1,200	3	1,000	7
	1944	11	17,200	6	15,100	1	1,500	4	600	6
	1945	12	79,800	2	4,300	8	73,000	2	2,500	2
Hodgenville	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	[1]1945	2	7,500	2	7,500	0	0	0	0	2
Hopkinsville	1943	61	115,551	12	8,100	15	58,258	34	49,193	12
Horse Cave	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Irvine	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Junction City	1943	2	250	0	0	2	250	0	0	0
	1944	2	3,500	1	500	1	3,000	0	0	1
Lakeside	1943	0	0	0	0	0	0	0	0	0
Lawrenceburg	1943	0	0	0	0	0	0	0	0	0
	1944	4	3,200	1	2,000	3	1,200	0	0	1
	[2]1945	7	56,300	5	12,300	2	44,000	0	0	5
[*]Lexington	1943	939	214,498	1	200	72	22,951	866	191,347	1
	1944	825	308,692	0	0	62	12,254	763	296,438	0
	1945	869	2,873,323	20	87,970	93	2,248,493	756	536,860	21
London	1943	0	0	0	0	0	0	0	0	0
	1944	1	4,000	1	4,000	0	0	0	0	1
[*]Louisville	1943	1,173	4,470,716	495	1,287,461	284	2,645,229	394	538,026	613
	1944	1,007	4,612,548	228	609,925	349	3,369,336	430	633,287	259
	1945	1,207	7,993,720	251	984,250	493	6,705,325	463	304,145	302
Loyal	1943	11	2,000	0	0	0	0	11	2,000	0
	1944	9	39,850	1	2,500	4	33,650	4	3,700	1
	1945	20	38,000	0	0	2	17,000	18	21,000	0
Ludlow	1943	5	1,125	0	0	3	525	2	600	0
	1944	3	1,200	0	0	2	600	1	600	0
	1945	10	12,650	2	9,800	4	1,050	4	1,800	2
Marion	[1]1945	11	24,000	8	8,000	3	16,000	0	0	8
Maysville	1943	11	4,080	0	0	5	850	6	3,230	0
	1944	12	2,275	1	200	5	1,000	6	1,075	1
	1945	4	5,500	0	0	1	2,500	3	3,000	0
Munfordville	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	4	28,000	4	28,000	0	0	0	0	8
[*]Newport	1943	15	63,590	0	0	3	58,287	12	5,303	0
	1944	43	270,365	0	0	8	255,780	35	14,585	0
	[2]1945	43	96,125	0	0	8	68,200	35	27,925	0
Paducah	1943	71	24,965	14	9,500	17	5,898	40	9,567	13
	1944	99	68,410	30	19,975	31	17,240	38	31,195	30
	1945	173	364,258	70	134,830	61	199,118	42	30,310	75
Paintsville	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	19	85,900	3	10,300	11	71,300	5	4,300	3
Paris	1943	7	1,730	0	0	5	630	2	1,100	0
	1944	0	0	0	0	0	0	0	0	0
	1945	2	9,500	2	9,500	0	0	0	0	2
Park Hills	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	11	93,750	8	91,000	1	150	2	2,600	15
Raceland	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	5	2,000	0	0	0	0	5	2,000	0
Richmond	1943	2	600	0	0	0	0	2	600	0
	1944	8	119,328	3	2,900	4	114,429	1	1,999	3
	1945	20	306,509	6	12,875	11	94,434	3	199,200	6
Russell	1943	10	3,065	0	0	0	0	10	3,065	0
	1944	23	12,250	0	0	2	250	21	12,000	0
	1945	25	8,201	0	0	0	0	25	8,201	0
Scottsville	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
South Fort Mitchell	1944	1	900	0	0	0	0	1	900	0
	1945	2	32,000	2	32,000	0	0	0	0	8

[*] In sample of 257 cities. See text and tables, pp. 12 to 18.

[1] 11 months only.

[2] 10 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

EAST SOUTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Kentucky—Continued										
Southgate	1943	1	$1,500	0	0	0	0	1	$1,500	0
	1944	4	4,300	1	$2,600	1	$200	2	1,500	1
	1945	2	1,600	0	0	2	1,600	0	0	0
Stanford	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	2	7,000	1	2,000	1	5,000	0	0	1
Trenton	1943	8	2,225	0	0	0	0	8	2,225	0
	1944	8	17,500	0	0	3	9,000	5	8,500	0
Vanceburg	1943	7	18,800	1	1,600	2	14,000	4	3,200	2
	1944	0	0	0	0	0	0	0	0	0
Versailles	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Mississippi:										
Biloxi	1943	579	600,611	328	374,032	54	120,215	197	106,364	328
	1944	359	59,548	76	14,920	73	13,562	210	31,066	78
	1945	355	398,395	116	92,172	93	266,065	146	40,158	119
Canton	1943	103	13,696	15	4,585	13	1,029	75	8,082	15
	1944	117	26,326	11	5,175	10	6,205	96	14,946	11
	1945	126	134,852	55	91,340	14	28,908	57	14,604	57
Clarksdale	1943	27	23,674	2	395	6	4,025	19	19,254	2
	1944	54	18,795	20	11,100	4	375	30	7,320	20
	1945	128	348,441	58	102,015	29	192,736	41	53,690	62
Corinth	1943	13	4,705	1	125	0	0	12	4,580	1
	1944	21	3,715	2	400	4	390	15	2,925	2
	1945	37	59,325	24	43,500	7	12,950	6	2,875	24
Friars Point	1943	8	1,925	1	200	0	0	7	1,725	1
	1944	4	1,250	1	300	0	0	3	950	1
	[1]1945	10	5,825	5	4,625	2	450	3	750	5
Greenville	1943	267	94,133	11	2,350	16	40,344	240	51,439	11
	1944	196	101,389	14	3,125	11	22,140	171	76,124	14
Greenwood	1943	118	198,205	56	157,000	5	820	57	40,385	56
	1944	81	54,285	15	8,425	19	9,780	47	36,080	16
	1945	152	222,515	30	41,400	37	106,610	85	74,505	31
Gulfport	1943	902	1,092,070	739	1,000,110	61	67,663	102	24,297	808
	1944	330	299,020	178	68,630	38	194,685	114	35,705	181
	1945	418	1,130,007	220	111,575	71	984,587	127	33,845	226
Hattiesburg	1943	218	93,900	82	37,274	13	7,900	123	48,726	89
	1944	194	140,036	97	102,470	27	13,675	70	23,891	101
	[1]1945	274	355,219	159	213,610	45	109,365	70	32,244	162
Indianola	1943	48	8,870	9	1,758	4	715	35	6,397	9
	1944	47	42,500	15	4,750	8	20,515	24	17,235	15
	1945	75	86,519	18	42,775	13	13,785	44	29,959	18
Jackson	1943	1,298	530,876	93	146,375	13	170,582	1,192	213,919	100
	1944	1,427	895,276	192	241,870	27	283,593	1,208	369,813	199
	1945	1,650	3,662,200	351	935,645	90	1,455,188	1,209	1,271,367	382
Leland	1943	58	11,334	10	1,900	8	3,024	40	6,410	10
	1944	63	12,354	6	1,200	7	1,240	50	9,914	6
	1945	85	58,095	36	32,565	8	7,330	41	18,200	40
Long Beach	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	16	7,000	16	7,000	0	0	0	0	1
Louisville	1943	3	5,500	1	3,000	1	2,000	1	500	1
	1944	4	4,300	2	3,500	0	0	2	800	2
	1945	7	43,025	3	5,600	2	7,000	2	30,425	3
Moss Point	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
Meridian	1943	162	63,491	37	8,050	10	5,475	115	49,966	37
	1944	239	299,363	85	175,625	20	43,294	134	80,444	81
	1945	0	0	0	0	0	0	0	0	0
Oxford	1943	17	6,957	0	0	5	1,620	12	5,337	0
	1944	21	6,370	6	3,150	2	350	13	2,870	6
	1945	45	113,137	11	17,800	19	83,175	15	12,162	11
Pascagoula	1943	327	779,568	292	371,290	20	209,629	15	198,649	292
	1944	271	606,512	217	432,150	43	148,067	11	26,295	217
	1945	200	351,889	69	63,085	79	239,360	52	49,444	68
Shaw	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	[1]1945	4	4,000	4	4,000	0	0	0	0	4
Tupelo	1943	0	0	0	0	0	0	0	0	0
	1944	1	1,000	0	0	0	0	1	1,000	0
	1945	63	151,275	39	66,850	21	77,800	3	6,625	39

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[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

EAST SOUTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Mississippi—Continued										
Vicksburg	1943	33	$43,183	4	$775	2	$240	27	$42,168	4
	1944	27	42,378	1	90	4	38,052	22	4,236	1
	1945	38	59,037	13	5,115	2	35,000	23	18,922	13
Yazoo City	1943	32	44,764	9	1,878	2	1,065	21	41,821	10
Tennessee:										
Athens	1943	107	17,640	12	4,640	11	1,740	84	11,260	12
	1944	124	72,667	13	8,030	6	47,100	105	17,537	13
	[1]1945	161	148,732	51	64,075	33	58,310	77	26,347	60
Belle Meade	1943	3	1,840	0	0	1	90	2	1,750	0
	1944	2	4,800	0	0	1	300	1	4,500	0
	1945	13	124,000	10	118,500	1	1,000	2	4,500	9
Bristol	1943	166	302,082	128	280,772	17	5,210	21	16,100	140
	1944	79	87,935	26	11,925	18	39,825	35	36,185	26
	1945	101	261,780	52	77,650	27	119,260	22	64,870	52
Brownsville	1943	8	13,248	2	400	3	548	3	12,300	2
	1944	9	1,800	5	1,000	4	800	0	0	5
	1945	19	40,050	11	16,700	8	23,350	0	0	7
Carthage	1943	0	0	0	0	0	0	0	0	0
	1944	8	41,100	4	4,800	2	34,500	2	1,800	4
	[1]1945	8	38,400	4	4,900	4	33,500	0	0	4
*Chattanooga	1943	2,036	569,366	14	37,300	6	83,800	2,016	448,266	14
	1944	2,064	710,298	10	7,100	10	31,350	2,044	671,848	10
	1945	2,419	2,128,346	150	345,469	73	713,008	2,196	1,069,869	150
Clarksville	1943	25	128,776	8	1,600	5	118,351	12	8,825	8
	1944	51	49,130	31	19,200	10	19,850	10	10,080	31
Clinton	1943	28	4,530	11	2,200	6	775	11	1,555	11
	1944	93	369,102	83	213,275	5	122,852	5	32,975	83
Collierville	1943	12	12,775	3	600	1	7,500	8	4,675	3
	1944	8	14,250	2	5,500	1	4,000	5	4,750	2
	1945	10	32,400	3	2,500	6	28,200	1	1,700	3
Columbia	1943	2	400	1	200	1	200	0	0	1
	1944	0	0	0	0	0	0	0	0	0
Cookeville	1943	15	2,747	2	600	6	812	7	1,335	2
	1944	25	11,685	5	4,350	9	4,300	11	3,035	5
	1945	52	127,430	23	52,400	22	70,780	7	4,250	23
Covington	1944	10	16,300	10	16,300	0	0	0	0	4
	1945	14	34,511	7	13,712	6	18,200	1	2,599	7
Cowan	1943	13	5,700	2	400	4	3,000	7	2,300	2
	1944	7	1,900	3	600	0	0	4	1,300	3
	1945	24	70,800	18	63,100	2	6,000	4	1,700	21
Dyer	1944	15	17,040	7	11,000	3	4,790	5	1,250	7
	1945	19	26,650	10	19,000	4	5,700	5	1,950	10
Dyersburg	1943	17	4,935	15	3,185	2	1,750	0	0	15
	1944	34	20,100	28	12,400	4	7,400	2	300	27
	[1]1945	63	111,295	48	44,350	11	62,500	4	4,445	48
Elizabethton	1943	20	9,240	2	690	8	6,325	10	2,225	2
	1945	81	264,000	71	140,000	4	24,000	6	100,000	70
Erwin	1943	48	18,473	0	0	4	730	44	17,743	0
	1944	14	44,191	0	0	9	40,566	5	3,625	0
	1945	22	48,650	9	20,600	4	14,650	9	13,400	9
Etowah	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
Franklin	[1]1943	2	1,179	0	0	0	0	2	1,179	0
	1944	0	0	0	0	0	0	0	0	0
Gallatin	1943	44	9,760	0	0	5	1,510	39	8,250	0
	1944	53	113,453	2	400	11	105,485	40	7,568	2
	1945	70	125,622	10	31,425	12	77,100	48	17,097	10
Harriman	1944	89	36,250	20	11,900	35	15,450	34	8,900	20
Hartsville	1943	1	360	0	0	1	360	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	2	1,500	0	0	0	0	2	1,500	0
Humboldt	1944	0	0	0	0	0	0	0	0	0
Jackson	1943	608	151,225	12	2,748	119	72,405	477	76,072	12
	1944	909	166,534	52	30,611	132	21,067	725	114,856	52
	1945	933	808,142	101	309,632	217	244,644	615	253,866	105
Jellico	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Johnson City	1943	212	61,062	33	6,475	33	3,237	146	51,350	33
	1944	309	191,025	39	22,000	37	30,860	233	138,165	37
	1945	439	701,793	64	121,500	98	229,435	277	350,858	64

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* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

EAST SOUTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Tennessee—Continued										
Kingsport	1943	243	$782,740	127	$664,100	38	$64,700	78	$53,940	233
	1944	207	655,275	50	173,300	95	454,275	62	27,700	80
*Knoxville	1943	705	818,367	83	242,495	82	285,284	540	290,588	83
	1944	1,478	4,317,392	765	2,905,680	128	297,305	585	1,114,407	765
	1945	1,130	4,426,258	285	810,690	228	2,468,038	617	1,147,530	287
Lebanon	1943	11	17,251	5	8,075	4	8,826	2	350	3
	1944	0	0	0	0	0	0	0	0	0
Livingston	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	[2] 1945	12	69,000	7	36,000	5	33,000	0	0	7
Maryville	1943	3	3,400	0	0	1	1,000	2	2,400	0
	1944	1	9,000	0	0	1	9,000	0	0	0
	1945	36	151,400	20	68,700	15	74,700	1	8,000	20
*Memphis	1943	4,756	4,225,094	576	1,753,250	731	1,006,543	3,449	1,465,301	686
	1944	4,928	7,927,338	705	2,250,665	1,089	3,163,712	3,134	2,512,961	740
	1945	5,515	15,304,821	1,114	4,731,480	1,007	7,112,910	3,394	3,460,431	1,253
Milan	[1] 1945	26	331,203	14	11,425	10	318,878	2	900	14
Mount Pleasant	1943	32	9,410	9	2,200	1	2,000	22	5,210	9
	1944	35	13,001	7	2,475	5	2,571	23	7,955	7
	1945	38	50,975	17	17,150	8	11,450	13	22,375	17
*Nashville	1943	606	3,157,088	17	12,150	93	2,568,248	496	576,690	18
	1944	774	1,536,430	49	40,575	128	983,592	597	512,263	53
	1945	1,233	4,160,128	212	610,050	203	2,132,395	818	1,417,683	238
Newbern	1943	1	2,000	0	0	0	0	1	2,000	0
	1944	28	112,350	9	15,100	6	87,000	13	10,250	12
	1945	33	52,650	14	23,450	7	11,200	12	18,000	15
Ripley	1943	22	36,250	17	24,560	3	9,100	2	2,590	17
	1944	23	14,570	10	5,850	8	7,475	5	1,245	10
	1945	38	64,541	13	7,400	19	53,606	6	3,535	13
Signal Mountain	1943	3	3,200	0	0	0	0	3	3,200	0
	1944	2	5,200	0	0	1	5,000	1	200	0
	1945	11	37,675	4	33,300	2	2,200	5	2,175	4
Somerville	1944	11	3,550	8	2,300	2	1,000	1	250	8
	1945	23	63,350	15	36,350	8	27,000	0	0	15
Springfield	1943	6	13,150	0	0	3	12,200	3	950	0
	1944	20	24,850	7	4,350	3	16,250	10	4,250	7
	1945	43	76,810	24	30,060	7	38,550	12	8,200	24
Union City	1943	35	46,112	18	36,000	2	550	15	9,562	18
	1944	35	17,925	14	5,675	3	6,975	18	5,275	14
	1945	80	169,680	21	34,825	22	98,535	37	36,320	21
Winchester	1944	0	0	0	0	0	0	0	0	0
	1945	22	63,959	15	21,000	6	40,800	1	2,159	21
WEST SOUTH CENTRAL STATES										
Arkansas:										
Batesville	1943	0	0	0	0	0	0	0	0	0
	1944	5	$40,000	0	0	5	$40,000	0	0	0
	1945	2	6,500	0	0	2	6,500	0	0	0
Brinkley	1943	0	0	0	0	0	0	0	0	0
Camden	1943	55	68,900	53	$67,900	0	0	2	$1,000	56
	1944	65	53,700	43	30,450	17	19,250	5	4,000	42
	1945	305	651,330	238	525,250	46	86,480	21	39,600	252
Clarksville	1944	6	20,250	0	0	6	20,250	0	0	0
	1945	43	129,250	27	43,500	15	70,750	1	15,000	7
El Dorado	1943	98	130,006	22	15,145	14	99,900	62	14,961	23
	1944	78	55,620	17	20,175	15	16,250	46	19,195	17
	1945	167	231,040	62	92,650	19	57,200	86	81,190	62
Fayetteville	1943	66	16,377	0	0	8	1,605	58	14,772	0
	1944	53	21,805	1	1,800	13	10,775	39	9,230	1
	1945	73	117,746	13	38,900	21	47,365	39	31,481	13
Fort Smith	1943	897	207,482	1	300	2	32,786	894	174,396	1
	1944	835	310,119	20	16,410	9	62,800	806	230,909	20
	1945	1,112	747,165	82	95,440	68	428,609	962	223,116	78
Helena	1944	0	0	0	0	0	0	0	0	0
	1945	3	1,300	0	0	0	0	3	1,300	0
Hot Springs	1943	48	154,201	6	1,335	7	133,676	35	19,190	6
	1944	49	200,785	1	1,635	10	150,102	38	49,048	1
Jonesboro	1943	68	31,059	12	3,050	11	1,955	45	26,054	12
	1944	107	77,045	19	12,015	17	7,165	71	57,865	19
	1945	187	450,114	38	102,085	32	257,870	117	90,159	38

* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

[2] 10 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

WEST SOUTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Arkansas—Continued										
Lepanto	1944	20	$31,250	13	$14,500	5	$15,750	2	$1,000	13
*Little Rock	1943	1,393	380,509	42	11,800	152	120,607	1,199	248,102	43
	1944	2,504	1,155,708	85	28,456	210	492,072	2,209	635,180	85
	1945	2,550	2,889,821	287	1,031,732	261	948,011	2,002	910,078	343
Marianna	1943	23	10,375	1	200	1	400	21	9,775	1
	1944	6	5,900	1	400	1	1,000	4	4,500	1
	1945	29	67,490	3	6,500	5	42,000	21	18,990	3
Newport	1943	0	0	0	0	0	0	0	0	0
	1944	29	46,050	16	24,550	12	19,500	1	2,000	16
	1945	56	306,000	28	113,000	18	185,000	10	8,000	28
North Little Rock	1943	470	151,822	57	12,125	55	75,320	358	64,377	58
	1944	564	1,901,101	89	19,075	63	1,791,062	412	90,964	89
Paris	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	[1] 1945	1	300	0	0	1	300	0	0	0
Pine Bluff	1943	209	325,783	38	68,875	8	44,912	163	211,996	47
	1944	349	606,661	136	333,210	23	109,760	190	163,691	136
	1945	311	1,759,514	120	172,139	49	1,417,080	142	170,295	120
West Memphis	1943	133	70,255	116	31,815	7	36,425	10	2,015	116
	1944	171	144,450	132	26,400	13	110,400	26	7,650	132
	[1] 1945	320	511,950	202	266,400	37	175,950	81	69,600	219
Wynne	1943	136	31,575	0	0	0	0	136	31,575	0
	1944	156	52,800	0	0	0	0	156	52,800	0
	1945	140	185,000	6	28,000	11	60,500	123	96,500	6
Louisiana:										
Alexandria	1943	681	351,539	78	26,432	62	143,099	541	182,008	78
	1944	605	525,518	49	24,910	64	307,014	492	193,594	49
	1945	678	615,315	80	130,266	86	288,783	512	196,266	80
Coushatta	1943	2	1,200	1	800	1	400	0	0	1
	1944	0	0	0	0	0	0	0	0	0
De Quincy	1943	13	4,160	11	3,600	2	560	0	0	11
	1944	4	1,010	4	1,010	0	0	0	0	4
Eunice	1943	22	7,170	20	6,150	1	1,000	1	20	20
	1944	44	25,250	40	22,950	4	2,300	0	0	40
	1945	97	189,762	68	63,012	25	123,650	4	3,100	68
Hammond	1943	6	2,300	3	1,200	0	0	3	1,100	3
Homer	1943	2	9,125	1	9,000	1	125	0	0	4
	1944	6	24,900	0	0	2	10,400	4	14,500	0
	1945	35	111,356	20	50,000	9	52,015	6	9,341	20
Lafayette	1943	33	53,072	0	0	0	0	33	53,072	0
Lake Charles	1943	537	194,099	113	41,718	84	32,332	340	120,049	113
	1944	575	313,959	78	76,548	69	58,241	428	179,170	78
	1945	500	2,012,029	98	154,893	89	1,724,645	313	132,491	85
Lake Providence	1943	3	1,932	3	1,932	0	0	0	0	3
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Lecompte	1943	2	3,500	0	0	2	3,500	0	0	0
	1944	0	0	0	0	0	0	0	0	0
Madisonville	1943	5	2,300	5	2,300	0	0	0	0	5
	1944	2	1,100	1	500	1	600	0	0	1
	[1] 1945	2	7,000	0	0	2	7,000	0	0	0
Mansfield	1943	15	5,635	15	5,635	0	0	0	0	15
	1944	14	8,915	14	8,915	0	0	0	0	14
	1945	24	44,275	15	17,975	7	23,050	2	3,250	15
Monroe	1943	357	522,850	175	410,457	39	15,972	143	96,421	193
	1944	280	476,134	34	9,500	58	198,072	188	268,562	34
	1945	470	522,431	147	170,662	84	210,777	239	140,992	130
Natchitoches	1943	37	64,495	4	1,560	2	56,000	31	6,935	4
	1944	46	13,045	19	6,910	2	1,200	25	4,935	19
*New Orleans	1943	1,068	27,663,522	797	2,087,975	60	24,422,092	211	1,153,455	982
	1944	3,417	20,237,290	3,147	11,719,870	67	7,547,403	203	970,017	4,563
	1945	1,495	7,362,212	971	3,666,943	135	1,571,300	389	2,123,969	1,731
Oakdale	1943	15	34,000	15	34,000	0	0	0	0	16
	1944	0	0	0	0	0	0	0	0	0
Opelousas	1943	52	46,072	13	2,520	13	37,940	26	5,612	13
	1944	121	95,749	45	12,833	20	66,555	56	16,361	45
	1945	210	302,123	97	145,735	46	86,745	67	69,643	97
Plaquemine	1943	119	14,457	3	585	5	5,207	111	8,665	3
	1944	137	9,831	0	0	1	190	136	9,641	0
	1945	111	22,321	0	0	0	0	111	22,321	0
Ponchatoula	1943	0	0	0	0	0	0	0	0	0
	1944	11	8,875	7	3,500	2	5,200	2	175	7
	[2] 1945	16	25,050	11	13,850	5	11,200	0	0	11

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* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

[2] 10 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

WEST SOUTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Louisiana—Continued										
*Shreveport	1943	1,102	$408,647	23	$6,545	37	$26,455	1,042	$375,647	24
	1944	1,902	1,607,532	78	184,960	41	703,025	1,783	719,547	78
	1945	2,386	2,636,328	418	1,056,406	131	468,307	1,837	1,111,615	418
Sunset	1943	1	500	1	500	0	0	0	0	1
	1944	0	0	0	0	0	0	0	0	0
Thibodaux	1943	28	5,710	1	300	2	1,060	25	4,350	2
	1944	52	12,677	3	1,700	3	400	46	10,577	3
	1945	67	73,275	27	49,550	9	8,850	31	14,875	23
Vivian	1943	2	380	0	0	1	80	1	300	0
	1944	5	1,800	0	0	2	300	3	1,500	0
	1945	12	30,850	2	1,500	6	23,500	4	5,850	2
Welsh	1943	12	3,370	2	650	0	0	10	2,720	2
	1944	22	4,960	7	2,175	3	400	12	2,385	7
	1945	28	55,838	12	13,011	9	37,152	7	5,675	12
White Castle	1943	0	0	0	0	0	0	0	0	0
	1944	1	500	1	500	0	0	0	0	1
	[2]1945	0	0	0	0	0	0	0	0	0
Oklahoma:										
Ada	1943	9	4,950	4	2,700	1	200	4	2,050	4
	1944	7	11,600	1	500	1	2,000	5	9,100	1
	1945	41	97,698	19	38,095	6	24,000	16	35,603	19
Ardmore	1943	33	6,600	16	4,700	11	1,320	6	580	16
	1944	41	20,518	29	15,603	7	4,490	5	425	29
	[1]1945	63	59,198	33	23,900	18	31,040	12	4,258	33
Bartlesville	1943	11	2,220	0	0	4	550	7	1,670	0
	1944	33	76,025	17	68,000	4	1,950	12	6,075	17
	1945	69	277,787	42	160,750	13	107,837	14	9,200	42
Blackwell	1943	6	7,020	0	0	2	260	4	6,760	0
	1944	19	9,475	0	0	3	1,200	16	8,275	0
	1945	40	47,851	1	1,000	22	36,890	17	9,961	2
Chickasha	1943	131	204,237	40	49,825	11	98,572	80	55,840	38
	1944	100	183,065	55	46,665	20	107,241	25	29,159	61
	[1]1945	132	346,065	73	123,750	26	187,095	33	35,220	77
Cleveland	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	2	8,000	0	0	2	8,000	0	0	0
Clinton	1943	0	0	0	0	0	0	0	0	0
	1944	2	186,239	0	0	2	186,239	0	0	0
	1945	1	25,000	0	0	1	25,000	0	0	0
Drumright	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
Elk City	1943	12	6,500	0	0	2	3,000	10	3,500	0
	1944	0	0	0	0	0	0	0	0	0
	1945	3	116,000	0	0	3	116,000	0	0	0
El Reno	1943	76	109,193	19	79,500	15	2,280	42	27,413	36
	1944	85	129,030	3	2,000	25	93,115	57	33,915	3
	1945	167	192,397	27	70,250	53	40,895	87	81,252	34
Enid	1943	227	110,530	3	3,000	40	42,901	184	64,629	3
	1944	347	189,926	14	16,150	110	51,978	223	121,798	14
	1945	822	825,983	118	281,134	201	199,060	503	345,789	117
Eufaula	1943	0	0	0	0	0	0	0	0	0
	1944	6	12,825	1	250	4	12,400	1	175	1
	1945	17	35,600	7	8,800	7	21,150	3	5,650	7
Grove	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
Guthrie	1943	86	16,131	0	0	22	3,777	64	12,354	0
	1944	116	28,677	2	2,700	25	4,550	89	21,427	2
	1945	171	82,030	2	1,350	68	43,045	101	37,635	3
Guymon	1943	24	10,410	1	3,000	14	5,285	9	2,125	1
	1944	64	154,315	44	128,200	10	12,425	10	13,690	44
	[1]1945	107	262,600	91	238,400	2	16,000	14	8,200	90
Henryetta	1943	3	9,495	0	0	0	0	3	9,495	0
	1944	3	8,000	0	0	0	0	3	8,000	0
	1945	17	100,150	2	5,850	7	75,150	8	19,150	1
Hobart	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
Hooker	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	7	17,500	2	3,500	5	14,000	0	0	2
Lawton	1943	233	132,854	36	30,960	13	33,925	184	67,969	36
	1944	187	134,049	15	14,790	21	57,890	151	61,369	15
	1945	240	369,433	45	78,890	59	198,810	136	91,733	47
McAlester	1943	219	493,714	48	11,306	11	1,650	160	480,758	48
	1944	59	277,799	25	7,100	5	23,175	29	247,524	25
	1945	117	7,868,922	51	66,564	24	7,749,705	42	52,653	53

* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

[2] 10 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

WEST SOUTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Oklahoma—Continued										
Mangum	1943	4	$31,300	1	$20,000	2	$1,300	1	$10,000	14
	1944	6	4,500	6	4,500	0	0	0	0	6
	1945	15	22,000	15	22,000	0	0	0	0	15
Marlow	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
*Muskogee	1943	324	321,939	31	31,335	8	202,941	285	87,663	31
	1944	216	83,480	45	23,230	7	9,340	164	50,910	45
	1945	473	509,264	123	248,584	22	80,125	328	180,555	123
Nichols Hills	1943	1	100	0	0	0	0	1	100	0
	1944	0	0	0	0	0	0	0	0	0
	1945	37	283,167	36	281,667	0	0	1	1,500	36
*Oklahoma City	1943	1,761	5,408,065	864	4,104,605	104	40,000	793	1,263,460	949
	1944	1,140	2,442,865	395	1,276,386	144	563,718	601	602,761	473
	1945	1,836	6,122,850	595	2,270,450	450	2,712,440	791	1,139,960	612
Okmulgee	1943	6	3,400	1	800	3	1,900	2	700	1
	1944	8	82,493	0	0	4	77,160	4	5,333	0
	1945	8	14,550	0	0	4	6,050	4	8,500	0
Pauls Valley	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
Pawhuska	1943	1	250	0	0	1	250	0	0	0
	1944	2	9,100	0	0	0	0	2	9,100	0
	1945	5	8,300	0	0	4	8,000	1	300	0
Ponca City	1943	236	53,386	23	7,030	20	2,865	193	43,491	23
	1944	304	142,101	20	45,800	29	29,360	255	66,941	20
	1945	464	646,354	103	353,449	60	179,471	301	113,434	107
Sapulpa	1943	21	16,000	1	1,500	0	0	20	14,500	1
	1944	26	24,100	6	2,900	4	900	16	20,300	6
	1945	40	39,300	16	12,400	8	4,400	16	22,500	16
Sayre	1943	0	0	0	0	0	0	0	0	0
Shawnee	1943	60	15,399	2	350	0	980	49	14,069	2
	1944	68	62,256	15	35,858	13	6,662	40	19,736	15
	1945	83	174,881	14	16,349	29	24,305	40	134,227	14
Tahlequah	1943	43	5,500	7	1,350	16	1,830	20	2,320	7
	1944	51	9,713	7	1,400	18	4,818	26	3,495	7
	1945	81	134,670	25	21,250	18	95,400	38	18,020	24
Tonkawa	1944	0	0	0	0	0	0	0	0	0
*Tulsa	1943	1,167	1,370,557	201	345,405	150	202,706	816	822,446	209
	1944	1,299	1,157,922	246	175,120	329	552,390	724	430,412	275
	1945	2,119	4,228,010	515	1,926,186	423	1,296,638	1,181	1,005,186	525
Watonga	1943	1	275	0	0	1	275	0	0	0
	1944	12	4,875	2	400	7	3,925	3	550	2
	1945	24	258,800	4	15,000	11	217,450	9	26,350	5
Woodward	1943	75	28,809	9	2,935	12	4,220	54	21,654	12
	1944	72	40,116	2	4,250	11	7,765	59	28,101	2
	1945	97	192,427	18	39,200	34	128,067	45	25,160	19
Yale	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Texas:										
Abilene	1943	267	243,819	85	80,656	5	5,382	177	157,781	85
	1944	230	402,863	149	237,910	14	133,413	67	31,540	149
	1945	261	969,883	102	225,346	74	655,577	85	88,960	102
Alamo	1943	62	17,870	0	0	2	925	60	16,945	0
	1944	56	18,190	0	0	0	0	56	18,190	0
	1945	49	41,215	8	23,400	4	5,000	37	12,815	10
Alamo Heights	1943	66	49,016	7	27,000	0	0	59	22,016	8
	1944	269	115,048	6	29,500	2	12,647	261	72,901	13
	[2]1945	94	336,435	31	209,200	5	96,900	58	30,335	37
Alice	1943	37	7,900	2	1,100	1	3,000	34	3,800	2
	1944	31	29,850	5	19,200	0	0	26	10,650	5
	1945	57	322,555	23	177,580	15	118,700	19	26,275	23
Amarillo	1943	538	640,733	150	328,388	31	38,270	357	274,075	150
	1944	842	1,264,453	326	833,250	46	146,283	470	284,920	346
	1945	1,396	3,832,679	565	1,740,718	183	1,403,967	648	687,994	545
Arlington	1943	18	10,790	16	6,790	2	4,000	0	0	16
	1944	28	33,250	27	28,350	1	4,900	0	0	27
	1945	52	353,609	43	112,975	9	240,634	0	0	40
Arp	1943	0	0	0	0	0	0	0	0	0
Asherton	1943	1	150	0	0	0	0	1	150	0
	1944	1	200	1	200	0	0	0	0	1
	1945	4	1,875	4	1,875	0	0	0	0	4
Austin	1943	1,132	438,388	120	77,954	165	98,868	847	261,566	120
	1944	1,236	660,933	175	199,972	129	102,530	932	358,431	179
	1945	2,325	5,229,321	850	3,096,300	472	1,457,680	1,003	675,341	744

* In sample of 257 cities. See text and tables, pp. 12 to 16.

[2] 10 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

WEST SOUTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Texas—Continued										
Ballinger	1944	15	$30,300	12	$18,500	3	$11,800	0	0	12
	1945	107	107,235	16	30,100	11	37,550	80	$39,585	17
Beaumont	1943	1,182	351,838	71	20,768	41	31,615	1,070	299,455	75
	1944	1,455	805,138	234	291,874	88	142,055	1,133	371,209	239
	1945	1,785	1,728,756	173	316,705	245	690,619	1,367	721,432	190
Bellaire	1943	13	2,599	0	0	5	204	8	2,395	0
	1944	24	19,719	0	0	15	4,024	9	15,695	0
	1945	47	206,650	27	188,400	0	0	20	18,250	27
Bellville	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Belton	1943	10	8,200	4	4,200	0	0	6	4,000	4
	1944	34	80,900	26	67,500	4	9,800	4	3,600	29
	1945	28	138,350	20	40,100	8	98,250	0	0	20
Big Spring	1943	268	96,380	23	6,899	34	4,740	211	84,741	23
	1944	491	325,845	59	32,145	79	182,760	353	110,940	61
	1945	656	720,530	224	347,540	90	163,095	342	209,895	220
Brady	1943	44	51,408	33	46,218	2	985	9	4,205	39
	1944	66	69,065	47	44,492	6	20,728	13	3,845	47
	1945	73	110,746	40	42,151	23	65,530	10	3,065	40
Brenham	1943	9	2,861	1	210	2	225	6	2,426	1
	1944	16	6,465	0	0	3	1,370	13	5,095	0
	1945	34	33,888	2	7,000	2	3,500	30	23,388	1
Brownsville	1943	351	551,746	142	222,875	6	276,536	203	52,335	142
	1944	489	396,800	193	324,991	34	25,390	262	46,419	193
	1945	817	421,905	104	64,817	78	206,583	635	150,505	99
Brownwood	1943	58	28,785	24	6,000	5	8,804	29	13,981	24
	1944	101	187,561	55	115,600	18	39,570	28	32,391	54
	1945	91	442,961	18	218,650	33	183,550	40	40,761	37
Bryan	1943	292	156,554	72	37,495	17	28,475	203	90,584	73
	1944	299	107,740	114	51,365	16	10,055	169	46,320	114
	1945	426	651,425	233	373,310	52	223,365	141	54,750	221
Burnet	1943	1	2,000	1	2,000	0	0	0	0	1
	1944	6	5,500	0	0	5	2,000	1	3,500	0
	1945	19	168,220	4	6,100	8	151,020	7	11,100	4
Canyon	1943	5	2,929	0	0	3	2,400	2	529	0
	1944	2	1,200	1	1,000	0	0	1	200	1
Carrizo Springs	1943	53	14,800	45	9,100	3	4,500	5	1,200	45
	1944	55	20,400	54	19,800	1	600	0	0	54
	1945	50	41,250	40	25,250	10	16,000	0	0	40
Cleburne	1943	40	16,510	5	4,750	3	2,300	32	9,460	5
	1944	70	35,222	13	10,300	6	4,950	51	19,972	13
	[2]1945	137	160,383	78	66,441	22	81,750	37	12,192	59
Cleveland	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
College Station	1943	14	22,510	0	0	4	9,800	10	12,710	0
	1944	22	42,450	8	20,500	3	10,500	11	11,450	8
	1945	39	66,591	20	49,050	3	1,061	16	16,480	8
Corpus Christi	1943	1,080	1,802,063	339	989,315	34	505,239	707	307,509	338
	1944	1,284	2,854,710	334	903,960	124	1,463,771	826	486,979	356
	1945	1,716	3,775,426	553	1,541,465	299	1,115,149	864	1,118,812	641
Corsicana	1943	63	33,435	3	835	1	4,700	59	27,900	3
	1944	44	27,892	3	1,201	3	8,970	38	17,721	1
	1945	82	202,010	24	38,800	9	112,500	49	50,710	24
Cotulla	1943	24	13,085	4	1,573	3	7,257	17	4,255	8
	1944	20	10,975	0	0	2	6,900	18	4,075	0
	1945	11	5,350	1	225	3	2,550	7	2,575	1
Crockett	1943	8	4,340	2	400	4	3,290	2	650	2
	1944	11	24,280	1	900	5	20,480	5	2,900	1
	1945	61	112,605	36	76,900	17	25,400	8	10,305	36
Crosbyton	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
Dalhart	1943	70	36,715	2	4,000	11	13,375	57	19,340	2
	1944	67	63,925	22	25,575	1	200	44	38,150	27
	1945	58	78,335	15	43,400	5	8,600	38	26,335	15
*Dallas	1943	5,772	5,879,354	1,019	2,621,741	450	1,013,988	4,303	2,243,625	1,430
	1944	6,450	7,104,693	1,277	3,665,902	687	1,210,809	4,486	2,227,982	1,620
	1945	8,726	17,477,142	1,421	5,333,378	1,536	7,297,605	5,769	4,846,159	1,459
Dayton	1944	0	0	0	0	0	0	0	0	0
	[1]1945	9	23,850	2	8,500	5	15,100	2	250	2

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APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

WEST SOUTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Texas—Continued										
Del Rio	1943	330	$167,213	81	$41,285	8	$11,003	241	$114,925	81
	1944	268	75,771	33	8,930	3	23,300	232	43,541	33
Denton	1943	55	26,185	20	6,155	11	7,655	24	12,375	20
	1944	66	26,585	31	18,400	15	3,470	20	4,715	31
	1945	292	923,312	193	287,870	48	577,205	51	58,237	192
Dublin	1943	0	0	0	0	0	0	0	0	0
	1944	5	7,050	5	7,050	0	0	0	0	5
	1945	0	0	0	0	0	0	0	0	0
Eagle Pass	1943	144	38,811	61	17,615	8	1.400	75	19,796	60
	1944	117	42,630	52	27,385	1	30	64	15,215	52
	1945	70	30,975	37	19,110	4	5,700	29	6,165	37
Eastland	1943	9	9,700	2	2,200	0	0	7	7,500	2
	1944	252	42,500	0	0	0	0	252	42,500	0
	1945	16	50,500	0	0	1	2,000	15	48,500	0
Edinburg	1943	88	39,957	62	9,349	4	6,200	22	24,408	62
	1944	75	59,554	33	6,424	8	23,500	34	29,630	33
	[1]1945	168	308,770	64	73,565	49	200,565	55	34,640	65
El Campo	1943	41	13,528	0	0	17	4,393	24	9,135	0
	1944	36	16,440	1	1,000	8	4,090	27	11,350	1
Elgin	1944	0	0	0	0	0	0	0	0	0
	1945	44	47,300	40	40,750	4	6,550	0	0	40
*El Paso	1943	524	449,294	46	169,450	79	80,939	399	198,905	47
	1944	790	1,346,123	185	723,825	70	193,314	535	428,984	199
	1945	813	2,447,907	120	407,768	149	1,083,870	544	956,269	127
Floydada	1944	0	0	0	0	0	0	0	0	0
Fort Stockton	1943	40	82,325	16	61,050	0	0	24	21,275	29
*Fort Worth	1943	3,682	6,797,603	1,754	4,469,541	317	755,569	1,611	1,572,493	2,371
	1944	3,032	4,568,751	936	1,659,232	408	1,730,921	1,688	1,178,598	1,133
	1945	4,105	9,240,726	1,545	4,335,864	796	3,271,897	1,764	1,632,965	1,558
Freeport	1943	70	172,679	49	143,900	7	24,553	14	4,226	49
	1944	16	70,777	1	1,000	11	66,777	4	3,000	1
	1945	29	56,687	4	5,100	14	47,981	11	3,606	4
Gainesville	1943	298	205,447	120	43,264	24	81,107	154	81,076	119
	1944	220	232,648	133	190,700	33	13,205	54	28,743	134
Galena Park	1943	341	1,202,004	340	1,195,004	1	7,000	0	0	340
	1944	84	302,170	72	266,180	7	33,950	5	2,040	72
	1945	62	227,509	11	35,250	39	181,387	12	10,872	11
*Galveston	1943	1,554	2,228,168	716	1,515,633	178	125,199	660	587,336	734
	1944	823	888,417	189	370,271	147	204,039	487	314,107	192
	1945	717	1,349,259	54	147,050	172	730,493	491	471,716	66
Garland	1943	58	15,330	2	1,300	5	4,725	51	9,305	2
	1944	49	30,900	13	16,350	3	3,225	33	11,325	12
	1945	91	165,753	20	40,600	17	100,025	54	25,128	18
Gilmer	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Gladewater	1944	0	0	0	0	0	0	0	0	0
	1945	56	71,207	6	8,350	10	43,650	40	19,207	6
Goliad	1943	12	11,150	4	4,600	1	300	7	6,250	4
	1944	6	11,000	3	2,000	2	8,400	1	600	3
	1945	11	29,800	7	20,000	3	8,800	1	1,000	7
Goose Creek	1943	285	476,253	161	307,220	10	1,226	114	167,807	161
	1944	299	425,730	191	402,350	22	4,135	86	19,245	191
	1945	186	257,912	31	93,550	53	120,057	102	44,305	31
Graham	1943	21	13,362	6	6,897	5	3,440	10	3,025	6
	1944	20	41,018	10	16,532	7	18,406	3	6,080	10
	1945	45	110,770	29	43,858	12	65,062	4	1,850	29
Greenville	1943	102	51,451	10	6,410	11	2,675	81	42,366	10
Hale Center	1943	7	4,400	0	0	2	1,250	5	3,150	0
	1944	9	9,650	3	4,300	1	700	5	4,650	3
	1945	11	14,600	6	9,500	3	4,500	2	600	6
Hamlin	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	[1]1945	235	507,209	90	110,980	95	360,510	50	35,719	99
Harlingen	1943	38	119,020	26	4,463	5	113,642	7	915	26
	1944	274	598,940	210	418,355	44	167,360	20	13,225	210
Haskell	1943	0	0	0	0	0	0	0	0	0
	1944	5	3,650	3	2,150	1	1,000	1	500	3
	1945	90	89,159	69	54,341	4	23,850	17	10,968	70
Hearne	1943	65	21,434	58	18,826	0	0	7	2,608	57
	1944	74	38,800	47	21,225	1	3,000	26	14,575	47
	1945	110	161,718	9	22,150	20	65,290	81	74,278	9

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* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

WEST SOUTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Texas—Continued										
Henderson	1943	25	$20,935	1	$200	3	$12,750	21	$7,985	1
	1944	62	37,485	0	0	8	9,700	54	27,785	0
	1945	55	258,770	27	80,820	17	166,900	11	11,050	27
Hereford	1943	0	0	0	0	0	0	0	0	0
	1944	13	20,150	9	12,700	2	7,000	2	450	9
	1945	156	454,843	33	360,250	1	3,000	122	91,593	30
Highland Park	1943	170	272,938	4	212,000	0	0	166	60.938	72
	1944	147	410,030	5	332,000	1	15,000	141	63,030	112
	1945	4,750	45,335,871	1,722	7,081,903	1,442	35,409,727	1,586	2,844,241	1,980
*Houston	1943	2,733	6,273,011	1,473	3,628,127	110	1,333,725	1,150	1,311,159	1,563
	1944	2,886	10,314,269	1,327	4,057,050	523	5,370,469	1,036	886,750	1,517
	1945	4,750	45,335,871	1,722	7,081,903	1,442	35,409,727	1,586	2,844,241	1,980
Huntsville	1943	10	27,105	7	4,250	2	19,855	1	3,000	7
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Iowa Park	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	[1]1945	17	35,500	13	26,000	4	9,500	0	0	13
Irving	1943	3	2,850	1	1,000	2	1,850	0	0	1
	1944	6	8,200	5	4,200	1	4,000	0	0	5
Jacksonville	1943	22	9,425	7	3,550	8	4.075	7	1,800	7
	1944	42	49,612	25	32,612	4	5,300	13	11,700	25
	1945	27	27,010	8	9,750	2	900	17	16,360	8
Kaufman	1943	6	4.300	0	0	0	0	6	4.300	0
	1944	25	34,850	4	6,950	3	11,100	18	16,800	4
	1945	19	144,262	7	14,350	7	38,400	5	91,512	7
Kenedy	1943	14	5,215	0	0	0	0	14	5,215	0
	1944	11	13,038	0	0	1	1,000	10	12,038	0
	1945	166	344,593	73	239,244	28	37,975	65	67,374	68
Kerrville	1943	40	58,768	0	0	6	1,259	34	57,509	0
	1944	39	38,867	11	28,620	5	3,080	23	7,167	11
	[1]1945	28	76,550	17	32,100	9	43,800	2	650	18
Lamesa	1943	17	48,750	15	48,000	1	600	1	150	15
	1944	2	16,750	1	1,750	1	15,000	0	0	1
Lampasas	1943	47	11,416	20	4,023	5	865	22	6,528	20
	1944	35	10,633	13	2,488	5	5,495	17	2,650	13
	1945	31	35,085	14	12,600	6	15,250	11	7,235	14
La Porte	1943	12	112,415	6	950	4	91,115	2	20,350	6
	1944	19	10,730	8	6,975	5	785	6	2,970	8
	[1]1945	558	442,715	469	416,110	0	0	89	26,605	475
Laredo	1943	508	583,350	411	539,880	0	0	97	43,470	442
	1944	537	191,620	413	164,585	1	2,200	123	24,835	413
	[1]1945	160	268,916	82	100,046	40	151,550	38	17,320	84
Levelland	1943	57	31,872	2	1,600	17	15,335	38	14,937	2
	1944	112	236,160	70	153,825	26	79,505	16	2,830	72
	1945	28	62,580	16	31,550	7	19,730	5	11,300	16
Liberty	1943	14	9,550	3	940	7	7,150	4	1,460	3
	1944	11	5,690	6	4,340	1	350	4	1,000	6
	1945	46	84,881	20	21,935	10	52,870	16	10,076	20
Livingston	1943	8	3,800	1	1,400	2	950	5	1,450	1
	1944	12	8,249	5	5,750	4	1,874	3	625	5
	1945	1,462	3,736,327	465	1,435,564	305	1,877,020	692	423,743	462
Lubbock	1943	748	268,269	45	13,517	81	79,946	622	174,806	46
	1944	1,250	1,057,700	139	268,474	155	494,517	956	294,709	147
	1945	195	339,380	95	160,290	31	141,350	69	37,740	106
Lufkin	1943	155	76,461	22	52,770	14	10,858	119	12,833	21
	1944	391	330,036	114	191,120	23	91,855	254	47,061	114
	[1]1945	328	428,545	66	116,365	46	232,300	216	79,880	66
McAllen	1943	278	98,063	68	12,735	29	41,780	181	43,548	68
	1944	344	231,650	66	57,030	43	117,565	235	57,055	67
	1945	11	9,675	3	6,500	0	0	8	3,175	3
McCamey	1943	3	425	0	0	0	0	3	425	0
	1944	33	107,025	25	97,000	3	7,625	5	2,400	25
	1945	924	377,607	167	88,009	133	99,492	624	190,106	167
Marshall	1943	741	338,159	213	288,481	82	3,813	446	45,865	213
	1944	706	153,031	86	17,285	75	52,174	545	83,572	86
	1945	420	1,543,735	259	703,045	54	721,150	107	119,540	271
Midland	1943	85	63,145	19	12,840	6	21,700	60	28,605	19
	1944	163	472,750	111	316,500	14	101,300	38	54,950	111
Mineral Wells	1943	84	65,365	38	36,025	5	16,610	41	12,730	38
	1944	7	1,495	1	120	0	0	6	1,375	1
	1945	119	163,410	45	58,485	24	88,020	50	16,905	43

* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

WEST SOUTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Texas—Continued										
Mission	1943	101	$31,785	27	$5,430	6	$4,845	68	$21,510	27
	1944	116	188,174	45	18,880	15	116,900	56	52,394	45
	1945	98	236,060	51	90,810	17	110,300	30	34,950	52
Mount Pleasant	1943	4	2,150	1	200	1	1,250	2	700	1
	1944	19	36,435	15	20,935	2	10,500	2	5,000	15
	1945	85	153,355	37	60,800	22	63,400	26	29,155	37
Nacogdoches	1943	8	9,800	0	0	5	7,800	3	2,000	0
	1944	20	23,015	9	8,415	7	10,900	4	3,700	12
	1945	40	32,800	25	17,150	6	12,750	9	2,900	25
Navasota	1943	13	3,000	7	1,500	2	275	4	1,225	7
	1944	28	5,702	7	2,450	5	1,025	16	2,227	7
	1945	246	214,057	54	106,013	70	59,287	122	48,757	55
New Braunfels	1943	113	18,542	18	5,020	18	3,039	77	10,483	17
	1944	177	47,851	22	13,275	50	8,542	105	26,034	23
	1945	0	0	0	0	0	0	0	0	0
Newcastle	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	76	50,000	6	20,000	0	0	70	30,000	6
Olney	1944	44	28,500	5	7,500	4	6,000	35	15,000	5
	[1] 1945	615	247,861	50	27,348	145	166,985	420	53,528	53
Orange	1943	188	23,710	0	0	23	17,210	165	6,500	0
	1944	119	254,934	0	0	32	184,992	87	69,942	0
	1945	17	14,150	9	9,975	3	2,800	5	1,375	9
Paducah	1943	4	910	1	250	1	250	2	410	2
	1944	8	4,610	1	1,500	1	500	6	2,610	1
	[1] 1945	220	232,574	85	100,800	34	70,865	101	60,909	85
Palestine	1943	51	41,760	10	5,000	3	16,025	38	20,735	10
	1944	52	21,822	19	10,530	0	0	33	11,292	19
	1945	242	760,975	168	556,400	20	119,650	54	84,925	168
Pampa	1943	136	236,750	72	188,000	4	3,950	60	44,800	79
	1944	72	71,431	19	55,500	1	1,500	52	14,431	19
	[1] 1945	206	205,481	108	135,825	18	40,290	80	29,366	108
Paris	1943	290	263,304	181	212,375	6	18,299	103	32,630	181
	1944	219	190,655	111	130,425	7	8,375	101	51,855	121
Pasadena	1943	260	510,151	242	504,676	13	4,375	5	1,100	242
	1944	1,262	3,844,133	984	3,119,862	115	562,652	163	161,619	996
Pilot Point	1943	26	6,475	1	200	7	1,835	18	4,440	1
	1944	44	8,650	3	2,000	10	1,300	31	5,350	3
Plainview	1943	28	35,880	2	1,600	8	19,925	18	14,355	2
	1944	64	70,691	14	14,241	12	40,720	38	15,730	15
	1945	1,027	955,474	124	326,294	187	275,080	716	354,100	122
Port Arthur	1943	539	188,138	67	55,052	69	10,682	403	122,404	68
	1944	677	315,821	103	111,990	94	32,198	480	171,633	105
	1945	14	16,235	4	2,725	4	9,300	6	4,210	4
Quanah	1943	3	885	0	0	2	585	1	300	0
	1944	3	9,500	0	0	3	9,500	0	0	0
	1945	6	17,000	3	8,500	3	8,500	0	0	3
Ranger	1943	1	500	1	500	0	0	0	0	1
	1944	0	0	0	0	0	0	0	0	0
	1945	155	91,050	9	22,000	14	43,300	132	25,750	9
Rosebud	1943	120	18,965	1	78	1	112	118	18,775	1
	1944	123	17,850	1	200	0	0	122	17,650	1
	1945	804	1,590,647	316	727,810	171	690,879	317	171,958	317
San Angelo	1943	441	195,305	83	77,023	88	65,185	270	53,097	105
	1944	479	483,810	150	166,689	70	249,335	259	67,786	160
	1945	10,419	14,518,375	1,636	4,909,737	596	6,202,526	8,187	3,406,112	1,741
*San Antonio	1943	7,617	3,570,971	844	1,578,313	182	673,285	6,591	1,319,373	1,040
	1944	9,670	5,331,510	832	1,547,471	291	1,189,198	8,547	2,594,841	879
	1945	10,420	14,518,375	1,636	4,909,737	597	6,202,526	8,187	3,406,112	1,741
Sanger	1943	12	3,970	2	3,000	2	85	8	885	4
	1944	0	0	0	0	0	0	0	0	0
	1945	137	137,474	95	96,488	26	30,550	16	10,436	95
San Juan	1943	81	8,564	17	2,435	4	725	60	5,404	17
	1945	0	0	0	0	0	0	0	0	0
Seguin	1943	68	12,929	40	7,490	14	3,248	11	2,191	40
	1944	98	36,468	64	12,703	12	19,825	22	3,940	64
Seminole	1943	0	0	0	0	0	0	0	0	0
	1944	1	2,500	0	0	0	0	1	2,500	0
	1945	48	49,000	12	17,400	26	19,900	10	11,700	12
South Houston	1943	9	2,355	4	1,000	5	1,355	0	0	4
	1944	35	54,215	22	51,750	8	1,265	5	1,200	22
	1945	10	28,000	8	23,500	1	4,000	1	500	7
Spur	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	254	219,120	80	94,770	26	50,020	148	74,330	80

* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

WEST SOUTH CENTRAL STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Texas—Continued										
Sweetwater	1943	186	$107,005	42	$69,950	6	$1,175	138	$35,880	42
	1944	186	177,385	46	102,800	18	41,240	122	33,345	46
	1945	18	42,000	6	6,100	8	31,000	4	4,900	6
Tahoka	1943	6	46,560	0	0	2	41,000	4	5,560	0
	1944	17	53,695	2	3,000	11	44,875	4	5,820	2
	1945	177	128,991	27	30,525	18	54,965	132	43,501	27
Taylor	1943	72	20,924	6	1,550	7	1,156	59	18,218	6
	1944	136	138,753	14	6,425	23	96,423	99	35,905	16
Temple	1943	171	345,172	140	226,779	9	93,159	22	25,234	140
	1944	349	722,698	297	573,315	15	110,022	37	39,361	296
	1945	30	27,350	20	15,350	8	11,400	2	600	19
Terrell	1943	9	11,936	2	2,700	0	0	7	9,236	2
	1944	13	9,650	6	4,800	2	3,500	5	1,350	6
	1945	197	359,558	55	82,550	70	240,600	72	36,408	58
Texas City	1943	501	5,187,872	386	1,068,712	38	4,094,315	77	24,845	444
	1944	315	580,364	191	349,620	36	207,524	88	23,220	208
	1945	38	185,780	22	62,930	13	117,100	3	5,750	21
Tulia	1943	10	5,675	1	300	0	0	9	5,375	1
	1944	10	41,800	8	40,000	0	0	2	1,800	8
	1945	0	0	0	0	0	0	0	0	0
Turkey	1943	0	0	0	0	0	0	0	0	0
	1944	1	700	0	0	0	0	1	700	0
	1945	1,676	1,185,344	139	330,722	107	527,720	1,430	326,902	139
Tyler	1943	480	128,022	17	5,667	32	12,440	431	109,915	17
	1944	949	257,759	28	9,961	33	58,151	888	189,647	30
	[2]1945	281	1,074,922	131	862,347	13	137,950	137	74,625	157
University Park	1943	72	28,853	1	3,500	1	175	70	25,178	1
	1944	117	58,995	3	16,400	12	9,105	102	33,490	3
	1945	82	125,354	33	34,920	25	83,580	24	6,854	33
Uvalde	1943	35	14,935	12	6,040	2	1,550	21	7,345	12
	1944	82	71,031	52	28,020	2	22,000	28	21,011	52
	1945	58	137,550	42	91,200	10	38,950	6	7,400	42
Vernon	1943	13	8,750	2	2,000	0	0	11	6,750	2
	1944	13	30,950	2	2,900	6	24,500	5	3,550	5
	1945	905	2,167,937	416	659,920	161	1,247,074	328	260,943	416
Waco	1943	531	549,118	106	204,025	49	111,396	376	233,697	106
	1944	710	953,908	272	630,350	68	164,667	370	158,891	272
	1945	905	2,167,937	416	659,920	161	1,247,074	328	260,943	416
Waxahachie	1943	66	33,650	6	2,050	5	15,025	55	16,575	6
	1944	123	64,515	32	19,800	12	14,640	79	30,075	32
	1945	156	185,620	50	49,275	17	93,750	89	42,595	51
Weslaco	1943	61	63,925	24	2,960	5	53,460	32	7,505	24
	1944	81	148,466	39	10,595	6	131,500	36	6,371	39
	[1]1945	406	1,320,121	212	1,221,410	136	59,425	58	39,286	221
West University	1945	590	695,015	169	215,832	92	252,813	329	226,370	171
Wichita Falls	1943	333	280,799	67	56,170	36	40,203	230	184,426	67
	1944	353	277,056	57	20,281	45	76,833	251	179,942	57
	1945	102	57,840	11	16,100	4	1,850	87	39,890	11
Yoakum	1943	60	10,043	0	0	0	0	60	10,043	0
	1944	59	18,065	0	0	0	0	59	18,065	0

MOUNTAIN STATES

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Arizona:										
Casa Grande	1943	15	$8,900	7	$5,300	6	$2,100	2	$1,500	7
	1944	25	35,050	4	6,500	5	8,450	16	20,100	1
	1945	112	227,160	72	117,050	22	67,760	18	42,350	48
Chandler	1943	8	4,300	4	150	2	150	2	4,000	4
	1944	29	17,800	14	6,650	6	8,050	9	3,100	14
	1945	87	180,450	38	66,300	25	79,750	24	34,400	36
Clifton	1943	0	0	0	0	0	0	0	0	0
	1944	1	30,903	0	0	1	30,903	0	0	0
	1945	2	2,000	2	2,000	0	0	0	0	2
Douglas	1943	150	382,063	119	361,728	6	4,600	25	15,735	208
	1944	57	48,736	4	11,878	8	19,158	45	17,700	4
	1945	53	197,118	17	49,725	12	126,868	24	20,525	24
Flagstaff	1943	241	548,665	224	519,334	11	16,334	6	12,997	224
	1944	33	7,455	6	1,100	4	2,350	23	4,005	6
	1945	57	177,500	41	71,500	11	92,100	5	13,900	43
Florence	1943	32	129,700	28	128,100	0	0	4	1,600	36
	1944	12	7,150	9	2,050	3	5,100	0	0	9
	[1]1945	9	5,650	6	4,000	3	1,650	0	0	6

[1] 11 months only.

[2] 10 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

MOUNTAIN STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Arizona—Continued										
Glendale	1943	33	$10,555	17	$7,725	0	0	16	$2,830	17
	1944	73	59,681	52	45,150	4	$10,606	17	3,925	52
	1945	62	100,331	44	73,756	5	23,050	13	3,525	44
Globe	1943	140	27,074	0	0	0	0	140	27,074	0
	1944	90	14,597	0	0	0	0	90	14,597	0
	1945	75	38,676	3	6,000	0	0	72	32,676	3
Mesa	1943	96	229,272	15	32,774	15	171,467	66	25,031	29
	1944	179	190,485	48	95,648	14	61,052	117	33,785	48
Miami	1943	1	500	1	500	0	0	0	0	1
	1944	0	0	0	0	0	0	0	0	0
	1945	1	500	0	0	1	500	0	0	0
Nogales	1943	27	37,208	0	0	1	10,000	26	27,208	0
	1944	60	114,874	0	0	0	0	60	114,874	0
	1945	54	86,925	0	0	8	19,100	46	67,825	0
*Phoenix	1943	786	1,917,890	186	848,349	73	562,470	527	507,071	384
	1944	1,140	2,471,484	294	1,118,385	180	730,629	666	622,470	310
	1945	1,869	6,922,842	771	4,002,555	334	1,986,599	764	933,688	867
Prescott	1943	87	23,723	1	199	3	8,192	83	15,332	1
	1944	93	58,208	5	9,000	6	11,465	82	37,743	5
	1945	158	234,748	22	66,000	17	66,860	119	101,888	22
Safford	1943	23	6,000	1	200	6	755	16	5,045	1
	1944	30	17,825	1	200	9	4,100	20	13,525	1
	1945	72	247,785	28	112,850	29	126,100	15	8,835	26
Tucson	1943	737	962,724	137	450,400	52	78,471	548	433,853	187
	1944	931	856,133	38	136,933	66	313,829	827	405,371	48
	1945	1,208	2,927,526	233	1,148,431	128	1,110,138	847	668,957	240
Wickenburg	1943	48	21,381	4	11,650	4	575	40	9,156	5
	1944	19	17,580	3	400	6	13,900	10	3,280	3
Williams	1943	14	1,350	0	0	10	850	4	500	0
	1944	7	5,055	0	0	4	4,800	3	255	0
	1945	42	48,190	2	6,000	19	36,130	21	6,060	2
Winslow	1943	205	373,477	186	369,324	2	350	17	3,803	153
	1944	121	282,294	103	244,180	6	26,375	12	11,739	103
	1945	60	161,075	24	50,700	14	51,725	22	58,650	24
Yuma	1943	143	166,273	41	125,060	8	3,270	94	37,943	40
	1944	200	493,628	77	161,951	12	256,374	111	75,303	67
	1945	261	626,960	75	320,050	20	198,937	166	107,973	73
Colorado:										
Akron	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
Alamosa	1943	16	4,700	0	0	5	1,300	11	3,400	0
	1944	11	5,500	0	0	1	2,250	10	3,250	0
	1945	17	17,600	0	0	3	1,300	14	16,300	0
Animas City	1943	12	2,745	2	800	5	920	5	1,025	2
	1944	8	3,000	1	1,100	3	800	4	1,100	1
	[1] 1945	32	32,550	19	28,700	10	1,450	3	2,400	19
Arvada	1943	16	6,775	0	0	2	260	14	6,515	0
	1944	5	1,425	0	0	2	400	3	1,025	0
	1945	33	85,980	15	64,200	7	3,680	11	18,100	15
Boulder	1943	145	38,542	0	0	15	2,820	130	35,722	0
	1944	117	41,881	1	1,500	19	3,155	97	37,226	1
	1945	217	276,031	30	147,250	29	13,155	158	115,626	30
Brighton	1943	8	4,300	4	150	2	150	2	4,000	4
	[1] 1945	69	64,921	12	35,800	12	18,550	45	10,571	15
Canon City	1944	29	10,595	2	4,000	2	350	25	6,245	2
	1945	155	126,862	26	50,850	8	21,400	121	54,612	25
Center	1944	1	1,000	0	0	1	1,000	0	0	0
	1945	10	40,200	3	3,000	7	37,200	0	0	3
*Colorado Springs	1943	798	686,719	30	112,310	127	17,607	641	556,802	30
	1944	639	343,634	16	43,646	95	43,676	528	256,312	16
	1945	960	1,303,413	163	747,890	149	162,655	648	392,868	163
Craig	1943	35	17,552	4	5,000	1	1,500	30	11,052	4
	1944	48	56,800	22	36,790	11	8,430	15	11,580	22
	1945	63	172,355	19	72,650	19	68,160	25	31,545	20
Crested Butte	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Delta	1943	4	4,237	1	200	1	1,800	2	2,237	1
	1944	39	45,775	15	13,400	20	30,950	4	1,425	16
	1945	92	157,500	61	89,150	27	65,500	4	2,850	55
*Denver	1943	4,097	2,688,212	181	805,400	426	668,693	3,490	1,214,119	288
	1944	5,292	4,716,144	375	1,626,400	370	1,131,459	4,547	1,958,285	556
	1945	7,639	16,304,904	1,770	9,236,450	1,068	3,468,786	4,801	3,599,668	2,403
Dolores	1943	19	4,174	0	0	7	880	12	3,294	0
	1944	14	8,465	0	0	3	4,830	11	3,635	0
	1945	12	21,846	0	0	3	13,000	9	8,846	0

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* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

MOUNTAIN STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Colorado—Continued										
Durango	1943	16	$6,875	0	0	2	$3,150	14	$3,725	0
	1944	45	15,560	1	$1,500	9	2,180	35	11,880	1
	1945	63	78,620	10	17,600	10	31,950	43	29,070	6
Eaton	1943	0	0	0	0	0	0	0	0	0
	1944	3	1,150	0	0	0	0	3	1,150	0
	1945	12	7,950	0	0	3	2,500	9	5,450	0
Edgewater	1943	13	3,243	0	0	5	930	8	2,313	0
	1944	10	3,600	2	2,750	1	200	7	650	1
	1945	86	335,752	63	316,000	6	16,100	17	3,652	62
Fort Collins	1943	409	60,890	0	0	0	0	409	60,890	0
	1944	503	107,694	0	0	15	8,384	488	99,310	0
	1945	582	349,838	31	131,850	30	33,365	521	184,623	31
Fort Morgan	1943	52	10,321	0	0	14	5,211	38	5,110	0
	1944	41	31,652	0	0	6	23,150	35	8,502	0
	1945	101	71,082	5	19,700	14	27,420	82	23,962	7
Glenwood Springs	1943	3	475	0	0	2	400	1	75	0
	1944	4	2,700	1	2,000	1	200	2	500	1
	1945	12	16,740	3	8,500	6	5,040	3	3,200	3
Golden	1943	39	7,340	1	2,000	33	2,060	5	3,280	1
	1944	3	750	0	0	3	750	0	0	0
	1945	5	22,050	5	22,050	0	0	0	0	5
Grand Junction	1943	250	64,662	0	0	52	5,601	198	59,061	0
	1944	269	188,431	27	119,950	36	12,070	206	56,411	35
	1945	442	416,159	29	130,450	54	115,315	359	170,394	29
Greeley	1943	107	63,350	1	380	56	39,800	50	23,170	1
	1944	130	52,013	11	5,930	44	8,940	75	37,143	11
	1945	232	452,737	59	203,371	62	157,855	111	91,511	59
Gunnison	1943	14	2,065	0	0	6	470	8	1,595	0
	1944	23	5,158	0	0	5	758	18	4,400	0
	1945	55	38,896	0	0	10	20,461	45	18,435	0
Haxtun	1943	6	1,850	0	0	4	1,200	2	650	0
	1944	4	1,400	0	0	3	400	1	1,000	0
	1945	18	22,265	2	4,500	14	16,265	2	1,500	2
Julesburg	1943	18	4,800	0	0	0	0	18	4,800	0
	1944	29	6,350	0	0	0	0	29	6,350	0
	1945	28	14,000	2	1,500	0	0	26	12,500	2
Lafayette	1943	11	5,700	2	1,600	5	2,050	4	2,050	2
	1944	14	2,250	0	0	6	950	8	1,300	0
	1945	23	15,625	3	9,500	5	2,375	15	3,750	3
La Junta	1943	57	190,125	29	78,200	3	30,000	25	81,925	29
	1944	20	61,280	4	6,850	5	17,950	11	36,480	4
Lamar	1943	8	5,225	2	1,200	1	2,000	5	2,025	2
	1944	7	5,650	0	0	3	4,000	4	1,650	0
	1945	5	2,991	0	0	3	450	2	2,541	0
Littleton	1943	26	44,387	3	8,500	11	29,950	12	5,937	3
	1944	28	66,865	4	3,650	8	57,500	16	5,715	7
	1945	45	123,956	17	43,656	14	72,400	14	7,900	20
Longmont	1943	73	17,457	0	0	25	3,700	48	13,757	0
	1944	61	13,617	0	0	23	6,755	38	6,862	0
	1945	108	210,552	24	91,350	27	75,810	57	43,392	24
Milliken	1943	1	500	0	0	0	0	1	500	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Monte Vista	1943	98	14,687	4	1,110	22	1,902	72	11,675	4
	1944	112	31,281	5	1,325	17	15,127	90	14,829	5
	1945	77	90,540	16	17,865	30	63,995	31	8,680	17
Montrose	1943	4	602	0	0	0	0	4	602	0
	1944	31	15,181	1	800	7	1,100	23	13,281	1
	1945	55	59,075	24	34,250	8	11,775	23	13,050	13
*Pueblo	1943	480	536,275	53	213,936	60	11,969	367	310,370	103
	1944	671	736,866	52	67,806	68	356,971	551	312,089	52
	1945	835	884,650	150	430,535	101	180,875	584	273,240	152
Rocky Ford	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Salida	1943	0	0	0	0	0	0	0	0	0
	1944	64	69,125	0	0	0	0	64	69,125	0
	1945	25	21,165	2	5,500	2	2,500	21	13,165	2
Sanford	1943	2	1,000	0	0	2	1,000	0	0	0
	1944	3	4,800	2	3,800	0	0	1	1,000	2
	1945	6	12,000	6	12,000	0	0	0	0	6
Sterling	1943	30	4,909	1	250	15	2,525	14	2,134	1
	1944	34	27,665	1	1,000	8	13,225	25	13,440	1
	1945	80	176,267	9	43,500	25	98,785	46	33,982	9

* In sample of 257 cities. See text and tables, pp. 12 to 16.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

MOUNTAIN STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Colorado—Continued										
Trinidad	1943	8	$1,800	0	0	4	$1,200	4	$600	0
	1944	10	77,410	0	0	5	7,200	5	70,210	0
	1945	19	42,900	2	$8,500	2	18,000	15	16,400	2
Windsor	1943	23	2,275	0	0	14	1,610	9	665	0
	1944	8	1,425	0	0	2	600	6	825	0
	1945	11	3,660	0	0	5	1,685	6	1,975	0
daho:										
Blackfoot	1943	24	5,745	1	2,000	21	3,345	2	400	1
	1944	31	30,520	6	6,900	16	19,920	9	3,700	6
	1945	41	126,015	15	45,150	18	60,915	8	19,950	15
Boise City	1943	513	221,895	8	49,500	26	21,575	479	150,820	12
	1944	683	530,084	16	63,505	35	237,602	632	228,977	16
	1945	858	1,399,986	66	280,167	87	636,519	705	483,300	70
Buhl	1943	23	7,735	0	0	12	4,030	11	3,705	0
	1944	37	10,652	17	4,642	13	4,410	7	1,600	17
	1945	54	84,095	25	33,395	20	39,300	9	11,400	24
Caldwell	1943	57	43,495	3	1,450	18	24,900	36	17,145	3
	1944	166	307,824	86	191,557	32	70,517	48	45,750	86
	[2] 1945	171	361,630	93	269,125	45	70,600	33	21,905	94
Coeur d'Alene	1943	235	349,813	83	189,419	30	6,805	122	153,589	95
	1944	205	171,218	39	33,300	38	78,550	128	59,368	39
	1945	234	420,272	36	167,300	70	189,353	128	63,619	36
Filer	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
Glenns Ferry	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	2	3,500	0	0	0	0	2	3,500	0
Grangeville	1943	23	5,270	0	0	15	3,730	8	1,540	0
	1944	25	7,825	2	1,500	16	4,025	7	2,300	1
	1945	79	82,530	11	33,100	18	25,965	50	23,465	9
Idaho Falls	1943	114	65,165	0	0	43	49,283	71	15,882	0
	1944	176	160,475	5	7,600	46	80,190	125	72,685	7
	1945	271	796,833	82	454,420	47	147,575	142	194,838	85
Lewiston	1943	338	63,090	0	0	56	6,370	282	56,720	0
	1944	336	133,140	5	2,800	37	61,879	294	68,461	5
	1945	401	356,954	42	151,700	46	58,940	313	146,314	42
McCall	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Mullan	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Nampa	1943	167	24,528	0	0	35	5,870	132	18,658	0
	1944	255	131,318	12	11,700	49	71,995	194	47,623	12
New Plymouth	1943	6	2,210	2	1,050	1	450	3	710	1
	1944	10	9,350	1	1,500	1	2,500	8	5,350	1
Payette	1943	68	15,014	0	0	5	8,410	63	6,604	0
	1944	97	46,856	1	200	12	25,725	84	20,931	1
	1945	162	191,645	33	80,014	25	74,677	104	36,954	33
Pocatello	1943	225	428,659	96	372,700	16	4,016	113	51,943	96
	1944	248	638,483	100	394,500	26	139,638	122	104,345	103
	1945	263	1,079,368	76	405,500	43	446,691	144	227,177	76
Preston	1943	2	20,900	0	0	2	20,900	0	0	0
	1944	1	22,300	0	0	1	22,300	0	0	0
	1945	8	31,250	4	11,000	4	20,250	0	0	4
Priest River	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	1	250	0	0	0	0	1	250	0
St. Anthony	1943	5	1,840	0	0	5	1,840	0	0	0
	1944	18	11,610	10	6,610	7	4,500	1	500	10
St. Maries	1943	12	11,440	0	0	10	7,940	2	3,500	0
	1944	14	23,000	2	9,500	9	8,700	3	4,800	2
Shelley	1943	9	4,300	0	0	9	4,300	0	0	0
	1944	1	4,000	0	0	1	4,000	0	0	0
	1945	11	27,965	6	21,500	4	6,315	1	150	8
Shoshone	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	2	13,000	0	0	2	13,000	0	0	0
Spirit Lake	1943	2	255	0	0	1	55	1	200	0
	1944	3	80,000	0	0	0	0	3	80,000	0
	1945	0	0	0	0	0	0	0	0	0
Troy	1943	1	800	1	800	0	0	0	0	1
	1944	1	700	0	0	0	0	1	700	0
	1945	0	0	0	0	0	0	0	0	0

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[2] 10 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

MOUNTAIN STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Idaho—Continued										
Twin Falls	1943	118	$82,714	0	0	27	$43,346	91	$39,368	0
	1944	176	189,530	4	$16,000	35	119,460	137	54,070	7
	1945	373	608,917	53	183,075	64	258,555	256	167,287	64
Wallace	1943	43	12,351	0	0	4	180	39	12,171	0
	1944	53	17,493	0	0	2	100	51	17,393	0
	1945	40	57,045	0	0	4	29,400	36	27,645	0
Weiser	1943	12	9,700	0	0	4	5,350	8	4,350	0
	1944	10	7,380	0	0	5	1,205	5	6,175	0
	1945	31	90,815	10	44,500	8	25,000	13	21,315	10
Wilder	1943	3	260	0	0	1	50	2	210	0
	1944	9	5,800	0	0	6	2,800	3	3,000	0
	1945	4	1,460	0	0	0	0	4	1,460	0
Montana:										
Anaconda	1943	5	12,000	2	3,500	2	6,000	1	2,500	2
	1944	3	11,000	0	0	3	11,000	0	0	0
	1945	1	3,000	0	0	1	3,000	0	0	0
Billings	1943	76	22,863	0	0	40	12,928	36	9,935	0
	1944	123	245,147	18	42,700	27	121,280	78	81,167	20
	1945	298	1,061,056	92	416,370	82	520,568	124	124,118	93
Bozeman	[1] 1943	38	31,720	14	11,515	16	16,648	8	3,557	14
	1944	0	0	0	0	0	0	0	0	0
	1945	1	144,219	0	0	1	144,219	0	0	0
*Butte	1943	45	9,230	2	400	6	3,395	37	5,435	2
	1944	51	71,060	1	150	7	15,270	43	55,640	1
	1945	36	95,063	0	0	6	39,150	30	55,913	0
Chinook	1943	12	3,925	0	0	10	3,590	2	335	0
	1944	16	8,240	1	4,000	2	490	13	3,750	3
	1945	23	21,600	0	0	10	7,575	13	14,025	0
Cut Bank	1943	72	12,395	0	0	46	7,855	26	4,540	0
	1944	68	14,848	5	700	19	5,755	44	8,393	5
Fairview	1943	6	2,275	1	400	2	600	3	1,275	1
	1944	5	2,250	1	600	1	600	3	1,050	1
	1945	9	7,750	5	6,550	4	1,200	0	0	5
Fort Benton	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
Glasgow	1944	13	13,700	0	0	1	3,500	12	10,200	0
	1945	23	31,000	0	0	8	10,950	15	20,050	0
Glendive	1943	32	9,515	0	0	17	6,450	15	3,065	0
	1944	22	69,175	1	200	8	63,850	13	5,125	1
	1945	40	56,380	3	8,500	10	19,930	27	27,950	3
Great Falls	1943	363	783,468	157	457,900	97	96,428	109	229,140	199
	1944	506	1,006,466	220	741,460	152	138,028	134	126,978	220
	1945	484	978,027	115	392,000	155	430,054	214	155,973	125
Hardin	1944	0	0	0	0	0	0	0	0	0
	1945	3	17,000	1	2,000	2	15,000	0	0	1
Harlowton	1943	5	900	0	0	5	900	0	0	0
	1944	7	8,900	0	0	6	5,900	1	3,000	0
	1945	16	38,690	5	15,400	3	18,190	8	5,100	5
Havre	1943	9	1,780	0	0	4	640	5	1,140	0
	1944	37	84,065	24	80,050	3	690	10	3,325	26
	1945	39	48,385	15	39,400	7	2,080	17	6,905	15
Helena	1943	62	12,597	0	0	26	5,305	36	7,292	0
	1944	46	22,275	0	0	18	6,840	28	15,435	0
	1945	105	709,033	14	27,500	32	208,277	59	473,256	8
Hot Springs	1943	0	0	0	0	0	0	0	0	0
	1944	13	10,800	10	8,700	1	500	2	1,600	16
	1945	19	30,335	9	20,200	6	8,685	4	1,450	18
Kalispell	1945	36	27,775	36	27,775	0	0	0	0	36
Laurel	1943	2	2,500	1	1,000	1	1,500	0	0	1
	1944	28	106,768	17	91,700	3	10,175	8	4,893	18
	1945	45	69,287	4	30,500	12	11,522	29	27,265	12
Lewistown	[1] 1943	16	18,060	1	350	4	760	11	16,950	1
	1944	15	21,150	3	2,900	2	4,000	10	14,250	3
	1945	42	107,850	15	18,800	4	55,900	23	33,150	4
Libby	1943	7	750	0	0	2	150	5	600	0
	1944	3	400	0	0	0	0	3	400	0
	1945	6	6,100	5	6,000	0	0	1	100	5
Livingston	1943	17	2,350	0	0	10	1,400	7	950	0
	1944	35	1,257,646	14	54,750	13	1,201,321	8	1,575	14
	1945	22	21,845	13	15,950	5	1,150	4	4,745	13
Miles City	1943	57	19,900	1	800	18	8,565	38	10,535	1
	1944	50	21,860	0	0	13	7,025	37	14,835	0
	1945	92	263,583	13	42,350	27	104,390	52	116,843	13

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* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

MOUNTAIN STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
ontana—Continued										
Missoula	1943	109	$38,190	0	0	6	$960	103	$37,230	0
	1944	141	98,190	1	$3,500	15	16,575	125	78,115	1
	1945	163	520,391	18	46,900	29	356,072	116	117,419	18
Philipsburg	[1]1943	6	3,400	3	3,000	2	200	1	200	3
	1944	7	6,950	1	2,000	0	0	6	4,950	1
	1945	4	2,600	0	0	0	0	4	2,600	0
Plains	1943	4	500	0	0	4	500	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	1	5,500	0	0	1	5,500	0	0	0
Plentywood	1944	52	17,500	0	0	0	0	52	17,500	0
Polson	1943	1	100	0	0	1	100	0	0	0
	1944	4	13,000	0	0	3	10,000	1	3,000	0
	[2]1945	9	16,000	2	8,000	2	2,000	5	6,000	2
Roundup	1943	9	7,060	1	1,400	7	5,560	1	100	1
	1944	41	77,046	25	69,496	10	3,525	6	4,025	25
	1945	1	150	0	0	1	150	0	0	0
St. Ignatius	1943	2	650	0	0	1	250	1	400	0
	1944	5	7,400	0	0	0	0	5	7,400	0
	1945	9	20,550	0	0	3	15,350	6	5,200	0
Scobey	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	[1]1945	0	0	0	0	0	0	0	0	0
Sidney	1943	18	14,600	0	0	8	11,000	10	3,600	0
	1944	53	47,850	4	10,750	12	23,250	37	13,850	4
	1945	30	141,220	5	93,000	8	24,400	17	23,820	7
Whitefish	1943	16	3,550	1	1,000	8	1,250	7	1,300	1
	1944	21	5,798	2	2,700	9	1,205	10	1,893	2
	1945	15	15,725	3	5,200	3	3,900	9	6,625	3
Wolf Point	1943	0	0	0	0	0	0	0	0	0
	1944	4	440	0	0	2	200	2	240	0
	1945	0	0	0	0	0	0	0	0	0
w Mexico:										
Artesia	1943	78	16,570	15	2,361	16	2,943	47	11,266	15
	1944	130	235,846	46	127,740	14	86,800	70	21,306	46
	1945	179	250,777	76	115,074	37	78,075	66	57,628	86
Bayard	1943	2	650	2	650	0	0	0	0	2
	1944	7	1,050	5	850	2	200	0	0	5
	1945	9	7,280	2	2,600	2	4,000	5	680	2
Carlsbad	1943	130	340,976	80	312,500	9	4,045	41	24,431	89
	1944	146	385,567	94	349,500	5	13,021	47	23,046	94
	1945	159	297,612	24	57,950	28	140,745	107	98,917	24
Clovis	1943	183	127,194	58	62,670	24	16,553	101	47,971	67
	1944	179	270,533	93	215,498	23	19,245	63	35,790	102
	1945	442	864,243	255	524,043	78	271,665	109	68,535	260
Deming	1943	37	15,040	9	1,815	0	0	28	13,225	9
	1944	34	25,254	12	4,635	5	2,295	17	18,324	7
	1945	67	100,818	16	9,425	10	65,650	41	25,743	10
Gallup	1943	51	22,985	6	6,400	0	0	45	16,585	5
	1944	143	177,420	77	134,185	4	11,450	62	31,785	77
	1945	93	551,583	8	9,685	8	336,559	77	205,339	8
Las Cruces	1943	29	13,000	10	2,500	5	6,000	14	4,500	10
	1944	55	29,880	14	5,750	6	2,980	35	21,150	14
	1945	124	173,982	52	55,180	13	60,300	59	58,502	51
Las Vegas City	1943	25	25,925	4	3,850	6	1,125	15	20,950	5
	1944	17	14,600	5	10,600	5	2,600	7	1,400	5
	1945	32	80,969	11	15,200	12	47,750	9	18,019	11
Magdalena	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Mountainair	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	13	23,095	8	5,605	5	17,490	0	0	8
Portales	1943	30	25,575	15	6,020	15	19,555	0	0	15
	1944	60	67,030	35	34,255	23	31,675	2	1,100	35
Raton	1943	10	12,590	0	0	4	11,250	6	1,340	0
	1944	9	7,700	0	0	1	6,000	8	1,700	0
	1945	19	21,150	3	10,000	2	7,500	14	3,650	3
Roswell	1943	285	248,220	125	162,740	4	675	156	84,805	126
	1944	329	324,054	113	199,598	31	45,900	185	78,556	113
	1945	538	1,555,424	330	695,945	73	775,963	135	83,516	331
vada:										
Elko	1943	6	4,950	1	4,000	1	500	4	450	1
	1944	18	9,545	0	0	3	650	15	8,895	0
	1945	116	304,830	48	176,200	20	51,810	48	76,820	36

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11 months only.

[2] 10 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

MOUNTAIN STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Nevada—Continued										
Fallon	1943	24	$8,250	2	$2,000	7	$645	15	$5,605	2
	1944	68	72,230	13	61,000	19	2,480	36	8,750	13
	1945	72	46,201	3	10,000	19	6,265	50	29,936	3
Las Vegas	1943	798	1,728,793	550	1,489,362	33	136,762	215	102,669	557
	1944	345	685,756	40	85,400	75	429,831	230	170,525	57
	1945	635	2,816,600	187	1,086,700	83	1,206,250	365	523,650	187
Reno	1943	540	211,381	2	1,700	20	44,467	518	165,214	2
	1944	663	669,758	112	357,389	29	27,998	522	284,371	111
	1945	1,196	4,624,564	233	1,756,728	87	1,979,551	876	888,285	233
Sparks	1943	246	575,860	69	329,089	31	214,020	146	32,751	68
	1944	271	85,886	7	7,950	32	10,280	232	67,656	7
	1945	430	267,419	34	90,775	71	82,170	325	94,474	32
Wells	1943	6	1,800	0	0	6	1,800	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Winnemucca	1943	3	5,700	2	5,000	1	700	0	0	4
	1944	2	8,000	1	5,000	1	3,000	0	0	1
	1945	21	105,000	21	105,000	0	0	0	0	21
Utah:										
Bountiful	1943	131	201,083	47	164,550	49	17,715	35	18,818	47
	1944	59	94,350	22	58,275	16	8,275	21	27,800	22
Brigham	1943	92	389,926	41	223,750	28	116,115	23	50,061	47
	1944	111	518,230	44	374,900	26	69,247	41	74,083	81
	1945	120	826,011	43	355,350	38	354,511	39	116,150	71
Cedar City	1943	33	94,675	23	72,000	3	21,200	7	1,475	23
	1944	77	217,550	39	167,000	14	24,000	24	26,550	71
	1945	66	288,800	25	141,500	16	105,600	25	41,700	24
Eureka	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Heber	1943	0	0	0	0	0	0	0	0	0
	1944	3	3,200	2	3,000	0	0	1	200	2
	1945	4	19,000	2	4,000	2	15,000	0	0	2
Helper	1943	5	3,100	1	350	1	150	3	2,600	1
	1944	23	63,750	1	800	18	57,500	4	5,450	1
	1945	94	341,200	19	70,800	4	69,000	71	201,400	19
Logan	1943	32	11,402	0	0	14	7,150	18	4,252	0
	1944	74	49,888	0	0	23	29,262	51	20,626	0
	1945	189	307,181	36	103,950	45	108,416	108	94,815	35
Midvale	1943	34	72,490	17	66,575	11	2,090	6	3,825	17
	1944	37	57,360	17	44,650	7	3,915	13	8,795	16
	1945	29	79,250	9	27,000	12	34,650	8	17,600	12
Milford	1943	32	102,930	25	99,500	0	0	7	3,430	25
	1944	36	102,150	2	1,700	11	88,150	23	12,300	2
	1945	51	135,767	37	125,667	7	3,450	7	6,650	17
*Ogden	1943	753	2,925,827	306	1,758,492	164	885,754	283	281,581	721
	1944	612	2,074,293	128	374,237	137	1,456,326	347	243,730	128
	1945	632	2,421,782	144	488,300	192	859,056	296	1,074,426	169
Pleasant Grove	1943	82	230,550	81	229,850	1	700	0	0	126
	1944	20	49,700	17	47,400	0	0	3	2,300	17
	1945	28	102,300	17	76,600	6	16,800	5	8,900	16
Price	1943	3	3,000	0	0	1	2,000	2	1,000	0
	1944	32	120,500	29	111,000	1	3,000	2	6,500	30
	1945	63	346,800	34	148,500	12	184,300	17	14,000	32
Provo	1943	972	3,397,465	855	3,296,025	68	54,892	49	46,548	867
	1944	144	198,315	45	97,900	54	31,770	45	68,645	45
	1945	159	395,680	61	129,645	68	237,960	30	28,075	60
*Salt Lake City	1943	1,135	2,626,078	266	1,145,725	274	756,581	595	723,772	292
	1944	1,624	4,621,393	686	3,311,250	271	580,486	667	729,657	734
	1945	1,611	6,233,433	372	2,379,002	448	2,633,445	791	1,220,986	400
Sandy	1943	15	15,570	11	12,600	4	2,970	0	0	11
	1944	3	6,450	2	6,200	1	250	0	0	2
Spanish Fork	1943	54	194,100	39	142,000	1	100	14	52,000	39
	1944	31	41,200	5	17,700	4	1,200	22	22,300	5
	1945	72	199,453	19	78,300	15	87,303	38	33,850	18
Springville	1943	135	295,560	94	276,580	13	10,330	28	8,650	94
	1944	19	42,545	9	26,000	6	10,545	4	6,000	9
	1945	61	167,455	25	88,000	21	66,190	15	13,265	22
Tooele	1943	294	1,111,280	287	1,100,900	4	6,380	3	4,000	287
	1944	18	35,200	15	26,900	2	3,300	1	5,000	15
	1945	25	641,722	5	11,000	15	505,327	5	125,395	4
Wyoming:										
Buffalo	1943	19	4,615	0	0	9	2,945	10	1,670	0
	1944	13	3,150	0	0	2	675	11	2,475	0
	1945	20	18,210	2	1,200	9	9,260	9	7,750	2

* In sample of 257 cities. See text and tables, pp. 12 to 16.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

MOUNTAIN STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
yoming—Continued										
Casper	1943	196	$95,558	8	$40,000	43	$19,930	145	$35,628	8
	1944	248	342,193	27	136,400	12	84,657	209	121,136	37
	1945	269	494,938	54	293,600	33	120,052	182	81,286	53
Cheyenne	1943	1,066	2,475,782	624	2,211,297	214	55,818	228	208,667	911
	1944	429	446,554	13	172,623	188	172,744	228	101,187	55
	1945	528	1,042,777	99	431,596	234	454,568	195	156,613	98
Cody	1943	19	3,685	0	0	4	1,800	15	1,885	0
	1944	13	16,290	2	1,500	5	10,990	6	3,800	2
	1945	34	108,100	8	21,000	13	63,800	13	23,300	10
Douglas	1944	25	4,288	0	0	0	0	25	4,288	0
	1945	36	18,787	3	9,500	8	800	25	8,487	3
Gillette	1943	6	1,150	0	0	0	0	6	1,150	0
	1944	4	1,200	0	0	3	700	1	500	0
	[1]1945	9	6,350	5	2,650	1	200	3	3,500	3
Guernsey	1943	5	2,825	1	2,000	4	825	0	0	1
	1944	4	7,950	0	0	2	7,150	2	800	0
	1945	1	600	1	600	0	0	0	0	1
Jackson	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Kemmerer	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
Laramie	1943	300	49,861	1	3,000	63	7,074	236	39,787	1
	1944	280	66,927	2	1,875	36	13,143	242	51,909	2
	1945	335	353,559	32	214,700	45	20,572	258	118,287	72
Lovell	1943	12	13,597	3	11,000	2	700	7	1,897	7
	1944	32	126,300	23	113,000	2	4,200	7	9,100	23
	1945	41	147,250	31	132,000	4	10,250	6	5,000	30
Lusk	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
Newcastle	1943	0	0	0	0	0	0	0	0	0
Riverton	1943	14	10,497	1	200	6	8,740	7	1,557	1
	1944	64	195,985	38	181,250	12	9,725	14	5,010	38
	1945	67	126,725	16	38,600	33	77,575	18	10,550	17
Sheridan	1943	22	5,615	2	200	19	5,315	1	100	2
	1944	62	14,575	7	2,025	27	7,050	28	5,500	7
	1945	68	117,585	33	54,535	15	51,200	20	11,850	33
Wheatland	1943	8	1,585	0	0	4	535	4	1,050	0
	1944	14	6,705	1	600	4	3,055	9	3,050	1
	1945	34	75,645	6	23,100	11	44,895	17	7,650	7

PACIFIC STATES

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
alifornia:										
*Alameda	1943	2,669	$8,445,938	2,148	$4,795,077	48	$3,145,787	473	$505,074	2,762
	1944	1,047	18,119,667	343	792,500	69	16,564,607	635	762,560	350
	1945	872	6,095,761	61	266,777	103	4,643,395	708	1,185,589	76
Albany	1943	176	296,977	55	267,100	3	1,275	118	28,602	96
	1944	290	409,232	122	339,124	22	16,949	146	53,159	24
	1945	393	720,444	163	498,328	57	129,277	173	92,839	177
Alhambra	1943	897	465,256	3	5,600	77	201,405	817	258,251	3
	1944	1,103	511,774	48	155,590	115	95,806	940	260,378	61
	1945	1,075	2,265,021	140	796,300	169	1,025,713	766	443,008	171
Anaheim	1943	234	119,249	0	0	5	26,900	229	92,349	0
	1944	288	264,960	23	73,700	4	86,800	261	104,460	23
	1945	259	921,172	59	302,300	16	446,132	184	172,740	59
Antioch	1945	114	209,430	35	112,300	14	53,400	65	43,730	35
Arcadia	1943	195	49,290	12	6,250	69	18,500	114	24,540	12
	1944	457	300,905	91	170,950	148	57,885	218	72,070	92
	1945	894	2,900,360	391	2,311,250	239	358,880	264	230,230	391
Arcata	1943	17	57,575	0	0	4	52,225	13	5,350	0
	1944	27	56,575	11	41,200	0	0	16	15,375	11
	1945	25	131,750	11	79,000	9	51,100	5	1,650	11
Atherton	1943	88	29,835	1	6,000	52	8,520	35	15,315	1
	1944	67	21,400	0	0	34	6,065	33	15,335	0
	1945	137	716,369	45	626,150	38	24,634	54	65,585	45
Auburn	1943	70	1,605,974	5	4,400	17	1,580,051	48	21,523	5
	1944	88	134,117	24	72,800	25	44,064	39	17,253	24
	1945	135	701,935	20	55,400	24	446,601	91	199,934	24
Avalon	1943	5	1,000	0	0	0	0	5	1,000	0
	1944	20	5,020	0	0	0	0	20	5,020	0

* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

PACIFIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
California—Continued										
Azusa	1943	55	$193,100	0	0	11	$180,325	44	$12,775	0
	1944	89	251,152	11	$20,050	16	165,910	62	65,192	11
	1945	141	1,427,815	48	189,300	37	1,176,535	56	61,980	48
Bakersfield	1943	253	181,156	21	7,430	24	72,025	208	101,701	0
	1944	512	1,001,605	145	577,100	36	160,665	331	263,840	148
	1945	782	2,534,957	244	870,445	218	1,239,086	320	425,426	245
Banning	1943	130	37,976	10	2,590	33	9,062	87	26,324	10
	1944	130	62,565	8	7,300	34	11,805	88	43,460	8
	1945	391	643,935	153	388,077	95	123,177	143	132,681	162
Beaumont	1943	63	18,795	5	990	31	12,313	27	5,492	5
	1944	102	32,787	7	2,635	38	17,084	57	13,068	7
	1945	167	198,363	58	108,179	71	75,687	38	14,497	52
Bell	1943	160	111,801	12	81,000	54	12,327	94	18,474	27
	1944	235	234,070	32	137,360	60	21,730	143	74,980	56
	[1]1945	249	435,520	75	321,850	61	69,520	113	44,150	89
Belmont	1943	14	14,770	0	0	0	0	14	14,770	0
	1944	38	31,261	0	0	0	0	38	31,261	0
	1945	106	566,300	58	409,650	14	118,000	34	38,650	58
*Berkeley	1943	3,343	6,290,026	2,166	4,566,339	146	655,106	1,031	1,068,581	2,571
	1944	1,631	2,855,521	401	1,484,904	136	228,321	1,094	1,142,296	540
	1945	1,764	4,331,141	318	1,748,941	217	1,614,639	1,229	967,561	383
Beverly Hills	1943	244	88,746	0	0	6	20,100	238	68,646	0
	1944	468	271,926	1	8,000	10	15,925	457	248,001	1
Brawley	1943	60	15,925	0	0	0	0	60	15,925	0
	1944	99	99,272	0	0	4	15,425	95	83,847	0
	1945	148	102,752	0	0	0	0	148	102,752	0
Brea	1943	44	10,330	0	0	30	4,830	14	5,500	0
	1944	42	45,215	2	7,500	13	22,850	27	14,865	2
	1945	84	220,600	37	179,600	20	25,025	27	15,975	33
Burbank	1943	1,504	5,486,409	584	2,113,160	203	2,751,509	717	621,740	844
	1944	2,223	8,811,231	1,046	5,291,079	388	2,787,459	789	732,693	1,557
	1945	2,156	5,829,824	423	2,266,080	889	2,683,272	844	880,472	464
Burlingame	1943	115	256,077	25	175,000	6	1,200	84	79,877	50
	1944	135	91,520	1	5,000	14	8,122	120	78,398	1
	1945	260	1,305,905	84	859,800	35	284,250	141	161,855	116
Calexico	1943	16	2,708	0	0	0	0	16	2,708	0
	1944	4	1,500	0	0	0	0	4	1,500	0
Calistoga	1943	3	1,180	1	180	0	0	2	1,000	1
	1944	5	1,700	0	0	2	350	3	1,350	0
	1945	21	32,215	7	19,000	5	1,015	9	12,200	9
Chico	1943	477	89,198	0	0	21	24,900	456	64,298	0
	1944	518	121,674	2	1,000	24	39,085	492	81,589	2
	1945	503	271,229	33	71,540	60	92,115	410	107,574	33
Chino	1943	41	8,000	1	1,000	0	0	40	7,000	1
	1944	37	11,765	3	6,000	0	0	34	5,765	3
Chowchilla	1943	37	7,295	8	2,125	13	3,335	16	1,835	8
	1944	62	53,475	24	20,475	10	25,250	28	7,750	24
	1945	96	123,510	63	91,800	14	20,400	19	11,310	62
Chula Vista	1943	590	1,924,300	462	867,380	33	1,037,940	95	18,980	464
	1944	221	921,043	32	136,550	75	727,906	114	56,587	46
	1945	333	775,889	89	302,100	90	371,668	154	102,121	83
Claremont	1943	33	17,445	1	1,200	1	1,270	31	14,975	1
	1944	78	56,395	5	20,700	5	1,510	68	34,185	5
	[1]1945	72	127,575	19	95,360	15	3,060	38	29,155	19
Clovis	1943	1	3,000	0	0	1	3,000	0	0	0
	1944	4	4,200	3	4,000	0	0	1	200	3
Coalinga	1943	41	9,944	0	0	5	700	36	9,244	0
	1944	37	11,242	1	200	8	3,230	28	7,812	1
	1945	46	35,120	2	3,000	16	16,113	28	16,007	6
Colton	1943	588	828,711	272	754,400	48	14,044	268	60,267	272
	1944	406	126,918	4	8,350	76	35,840	326	82,728	4
	1945	524	469,464	83	249,070	98	103,745	343	116,649	83
Colusa	1943	54	8,750	0	0	0	0	54	8,750	0
	1944	65	29,600	0	0	3	7,150	62	22,450	0
	1945	88	30,850	2	5,000	1	3,500	85	22,350	2
Compton	1943	349	595,138	151	473,887	49	70,194	149	51,057	157
	1944	806	2,184,760	477	1,920,700	126	167,812	203	96,248	591
	1945	947	2,012,986	218	741,025	412	958,136	317	313,825	211
Concord	1943	6	9,225	2	7,500	2	1,125	2	600	2
	1944	19	44,250	2	13,800	5	18,400	12	12,050	3
	1945	39	132,725	4	25,100	11	70,450	24	37,175	4
Corcoran	1943	49	11,021	0	0	9	1,980	40	9,041	0
	1944	39	30,516	1	12,000	3	400	35	18,116	0

* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

PACIFIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
California—Continued										
Corning	1943	22	$11,260	1	$150	9	$6,310	12	$4,800	1
	1944	29	23,810	3	4,575	9	9,050	17	10,185	3
	1945	92	154,535	31	53,350	16	42,940	45	58,245	33
Corona	1943	249	151,063	28	93,850	35	6,090	186	51,123	28
	1944	288	123,738	21	19,350	46	38,435	221	65,953	21
	1945	409	720,536	73	160,800	72	466,009	264	93,727	74
Coronado	1943	882	1,353,879	544	1,222,600	5	17,646	333	113,633	561
	1944	797	2,021,768	472	1,885,300	16	5,465	309	131,003	534
	1945	209	401,603	23	134,150	63	197,501	123	69,952	30
Corte Madera	1943	57	201,180	51	200,195	5	835	1	150	51
	1944	16	3,755	0	0	4	740	12	3,015	0
	1945	39	46,660	7	35,300	1	400	31	10,960	7
Covina	1943	17	6,750	0	0	4	3,300	13	3,450	0
	1944	70	48,145	6	21,500	10	11,275	54	15,370	10
	1945	91	306,418	24	91,625	29	178,930	38	35,863	30
Culver City	1943	210	565,308	121	520,208	24	9,564	65	35,536	156
	1944	547	1,413,307	248	1,077,534	106	283,342	193	52,431	304
	1945	598	1,896,605	207	1,197,768	157	574,084	234	124,753	225
Daly City	1943	34	22,365	0	0	4	1,040	30	21,325	0
	1944	60	58,140	9	27,135	3	6,000	48	25,005	9
	1945	168	439,990	105	345,250	8	40,850	55	53,890	106
Davis	1943	26	4,301	0	0	2	295	24	4,006	0
	1944	23	7,565	0	0	0	0	23	7,565	0
	1945	31	35,413	3	6,950	3	20,210	25	8,253	4
Delano	1943	69	32,225	10	4,780	13	14,920	46	12,525	10
	1944	148	82,544	51	42,350	20	11,330	77	28,864	52
	1945	276	482,323	145	277,450	47	163,335	84	41,538	143
Dinuba	1943	147	36,652	12	5,450	26	10,390	109	20,812	9
	1944	129	121,295	25	21,755	28	66,765	76	32,775	25
	1945	175	235,711	52	144,010	40	49,033	83	42,668	51
Dunsmuir	1943	6	888	0	0	0	0	6	888	0
	1944	11	12,290	0	0	0	0	11	12,290	0
	1945	10	136,585	0	0	0	0	10	136,585	0
El Cajon	1943	151	73,946	70	43,850	50	21,246	31	8,850	70
	1944	302	332,452	133	238,290	83	52,365	86	41,797	133
	1945	515	1,141,329	157	388,741	259	631,805	99	120,783	161
El Centro	1943	189	266,953	44	88,180	8	123,861	137	54,912	44
	1944	239	347,072	98	200,139	17	71,728	124	75,205	98
	1945	359	839,310	175	444,199	23	255,200	161	139,911	181
El Cerrito	1944	208	311,025	78	268,200	0	0	130	42,825	78
El Monte	1943	94	46,040	8	10,610	20	5,935	66	29,495	8
	1944	314	595,193	137	489,400	69	35,383	108	70,410	137
	1945	276	855,186	74	313,985	101	427,693	101	113,508	73
El Segundo	1943	158	3,505,512	99	340,200	20	3,156,932	39	8,380	127
	1944	126	375,906	4	9,550	45	334,736	77	31,620	4
	1945	149	461,562	9	37,150	57	393,085	83	31,327	10
Elsinore	1943	6	545	0	0	0	0	6	545	0
	1944	41	23,125	2	7,000	1	185	38	15,940	2
Emeryville	1943	71	236,781	1	8,000	22	99,748	48	129,033	4
	1944	89	518,306	20	123,750	30	267,510	39	127,046	43
	1945	80	1,197,631	3	2,500	39	1,092,945	38	102,186	5
Escondido	1943	83	19,678	2	695	33	10,877	48	8,106	2
	1944	132	27,788	15	5,175	32	8,110	85	14,503	15
	1945	180	287,721	50	88,675	72	157,565	58	41,481	49
Eureka	1943	630	819,797	342	603,445	96	77,355	192	138,997	342
	1944	364	519,570	51	184,372	54	74,225	259	260,973	51
	1945	566	553,115	22	105,300	74	201,056	470	246,759	22
Exeter	1943	58	13,410	0	0	3	1,250	55	12,160	0
	1944	56	39,875	1	3,000	7	21,450	48	15,425	1
	1945	90	177,310	20	45,400	12	103,900	58	28,010	21
Fairfield	1943	53	140,850	47	138,300	4	1,600	2	950	47
	1944	3	18,000	0	0	3	18,000	0	0	0
	1945	34	178,634	5	67,500	14	104,099	15	7,035	6
Fillmore	1943	23	13,835	10	1,000	4	10,475	9	2,360	10
	1944	19	13,849	2	1,711	5	8,588	12	3,550	2
	1945	34	36,950	14	19,750	12	7,690	8	9,510	14
Fowler	1943	35	9,295	0	0	0	0	35	9,295	0
	1944	45	17,615	3	8,100	1	500	41	9,015	3
	1945	62	65,490	10	23,700	7	23,300	45	18,490	10
Fresno	1943	1,011	876,026	0	0	95	549,221	916	326,805	0
	1944	1,675	1,318,312	207	678,740	130	96,040	1,338	543,532	206
	1945	1,774	3,102,943	255	1,082,720	226	990,445	1,293	1,029,778	255
Fullerton	1943	158	199,264	30	116,190	22	53,319	106	29,755	28
	1944	327	348,488	34	119,750	81	150,237	212	78,501	34
	1945	360	829,509	88	500,644	82	180,950	190	147,915	89

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

PACIFIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
California—Continued										
Gardena	1943	335	$1,076,316	195	$1,015,400	43	$21,330	97	$39,586	420
	1944	385	704,693	194	613,600	70	35,025	121	56,068	216
	1945	391	878,219	146	506,825	149	278,619	96	92,775	160
Gilroy	1943	15	14,205	1	200	5	2,955	9	11,050	1
	1944	48	156,286	20	65,200	12	74,961	16	16,125	16
	1945	70	226,103	23	142,850	22	42,163	25	41,090	33
Glendale	1943	574	343,578	14	103,600	120	94,127	440	145,851	38
	1944	923	1,596,871	145	1,070,452	215	235,822	563	290,597	359
	1945	1,567	4,098,116	317	2,095,991	433	1,201,541	817	800,584	454
Glendora	1943	43	9,740	0	0	7	960	36	8,780	0
	1944	51	24,195	6	12,350	3	350	42	11,495	6
	1945	71	99,335	15	62,450	20	18,070	36	18,815	14
Grass Valley	1944	1	300	0	0	0	0	1	300	0
	1945	1	3,425	0	0	0	0	1	3,425	0
Gridley	1943	40	17,790	6	3,700	19	11,105	15	2,985	6
	1944	107	49,997	9	11,900	20	13,500	78	24,597	9
	1945	142	143,220	37	81,550	28	22,200	77	39,470	37
Hanford	1943	234	95,575	41	22,810	20	32,175	173	40,590	41
	1944	230	130,713	35	18,810	18	44,330	177	67,573	35
	1945	341	412,195	93	163,405	53	81,150	195	167,640	95
Hawthorne	1943	283	483,133	118	409,000	41	45,857	124	28,276	118
	1944	233	251,624	43	149,650	66	41,670	124	60,304	49
	1945	418	1,047,895	127	462,000	127	499,842	164	86,053	133
Hayward	1943	50	76,225	3	10,150	12	2,675	35	63,400	4
	1944	96	107,833	10	18,910	5	6,580	81	82,343	10
	1945	203	645,212	50	198,735	29	343,710	124	102,767	50
Healdsburg	1943	30	4,635	0	0	1	200	29	4,435	0
	1944	37	8,625	2	400	6	1,550	29	6,675	2
	1945	26	36,965	9	19,480	8	14,710	9	2,775	9
Hemet	1943	42	65,545	15	54,200	10	6,440	17	4,905	15
	1944	44	11,220	3	2,850	12	2,170	29	6,200	3
	1945	116	154,566	61	97,850	26	41,528	29	15,188	41
Hermosa Beach	1943	174	40,861	1	200	41	5,372	132	35,289	1
	1944	237	110,623	4	9,700	31	11,596	202	89,327	6
	1945	366	390,410	46	159,050	68	124,353	252	107,007	45
Hillsborough	1943	15	9,365	0	0	1	96	14	9,269	0
	1944	35	46,482	0	0	10	6,950	25	39,532	0
	1945	74	325,036	16	226,300	22	38,170	36	60,566	16
Holtville	1943	29	39,195	9	4,000	2	25,500	18	9,695	9
	1944	18	28,800	4	3,450	6	11,400	8	13,950	4
	1945	71	132,730	33	34,500	13	36,045	25	62,185	21
Huntington Beach	1943	58	160,809	0	0	33	149,432	25	11,377	0
	1944	166	350,340	47	227,300	66	105,695	53	17,345	47
	1945	247	291,392	27	66,350	83	176,505	137	48,537	34
Huntington Park	[1] 1943	231	216,431	3	12,100	23	43,821	205	160,510	5
	1944	370	274,151	13	24,900	62	39,155	295	210,096	13
	1945	477	1,265,094	84	390,200	132	625,268	261	249,626	149
Imperial	[1] 1945	17	10,150	3	3,000	1	500	13	6,650	3
Inglewood	1943	375	985,514	143	707,400	3	120,585	229	157,529	236
	1944	530	2,734,332	77	511,650	25	2,011,940	428	210,742	168
	1945	908	4,795,365	278	1,996,335	125	2,095,243	505	703,787	467
Isleton	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	5	21,245	0	0	1	1,000	4	20,245	0
King City	1943	22	11,360	0	0	10	2,075	12	9,285	0
	1944	21	18,552	0	0	5	8,582	16	9,970	0
Kingsburg	1943	5	7,400	0	0	3	900	2	6,500	0
	1944	15	30,300	8	20,300	5	8,400	2	1,600	8
	[1] 1945	41	152,700	34	136,350	7	16,350	0	0	34
Laguna Beach	1943	251	46,994	0	0	8	1,550	243	45,444	0
	1944	361	169,597	17	30,600	27	43,565	317	95,432	19
La Habra	1943	31	7,162	0	0	0	0	31	7,162	0
	1944	49	13,017	0	0	1	150	48	12,867	0
	1945	86	112,284	14	50,146	7	28,300	65	33,838	14
Lakeport	1943	12	4,725	3	1,650	2	600	7	2,475	3
	1944	18	8,460	6	3,400	11	4,060	1	1,000	6
	1945	375	1,193,891	154	786,710	113	329,730	108	77,451	157
La Mesa	1943	166	335,744	80	281,180	30	36,210	56	18,354	87
	1944	194	353,330	72	295,250	47	28,150	75	29,930	88
	1945	33	48,700	27	36,000	5	11,200	1	1,500	27
Larkspur	1943	1	7,500	1	7,500	0	0	0	0	2
	1944	17	58,505	14	56,000	1	500	2	2,005	14
	[1] 1945	19	45,850	8	30,500	6	12,150	5	3,200	8

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[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

PACIFIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
California—Continued										
La Verne	1943	49	$19,515	0	0	12	$8,070	37	$11,445	0
	1944	65	28,510	5	$9,980	11	3,150	49	15,380	5
	1945	68	88,535	9	32,780	8	2,250	51	53,505	9
Lemoore	1943	19	11,620	4	6,750	4	975	11	3,895	4
	1944	25	36,310	1	200	9	31,525	15	4,585	1
	1945	35	86,511	8	22,400	14	54,200	13	9,911	8
Lincoln	1943	8	33,790	1	300	3	27,200	4	6,290	1
	1944	40	10,699	1	2,000	7	1,060	32	7,639	1
	1945	82	41,028	3	11,300	13	6,697	66	23,031	3
Lindsay	1943	66	31,542	3	1,000	5	5,650	58	24,892	3
	1944	86	54,415	7	6,565	13	24,700	66	23,150	7
	1945	124	187,731	36	106,100	32	47,650	56	33,981	36
Livermore	1943	69	50,707	15	43,500	13	2,230	41	4,977	15
	1944	269	539,331	185	508,433	22	3,175	62	27,723	185
	1945	107	58,671	6	22,500	25	7,480	76	28,691	6
Lodi	1943	121	45,615	2	500	12	12,850	107	32,265	2
	1944	172	233,625	37	96,895	35	91,550	100	45,180	39
	1945	412	1,020,558	156	743,850	106	189,325	150	87,383	150
Lompoc	1943	187	261,336	161	250,086	8	3,550	18	7,700	161
	1944	33	17,569	2	1,500	8	5,475	23	10,594	2
	1945	58	59,629	6	8,507	19	39,966	33	11,156	5
•Long Beach	1943	10,556	10,816,004	2,448	7,402,674	549	1,184,080	7,559	2,229,250	2,971
	1944	5,752	16,673,409	3,178	8,961,247	734	4,258,692	1,840	3,453,470	3,354
	1945	11,824	16,073,175	1,702	8,470,120	2,007	4,632,795	8,115	2,970,260	2,679
•Los Angeles	1943	7,950	39,590,679	2,815	8,501,189	2,808	25,075,092	2,327	6,014,398	3,408
	1944	29,306	66,295,181	8,087	28,822,698	4,502	27,045,344	16,717	10,427,139	9,091
	1945	32,999	91,569,739	6,811	40,648,666	10,402	30,919,217	15,786	20,001,856	8,063
Los Banos	1943	7	6,640	1	2,000	1	500	5	4,140	1
	1944	8	7,250	0	0	1	3,000	7	4,250	0
	1945	32	95,200	9	29,500	11	56,800	12	8,900	9
Los Gatos	1943	41	12,100	0	0	13	6,750	28	5,350	0
	1944	59	62,575	3	48,250	10	2,700	46	11,625	22
	1945	122	263,996	25	127,245	10	55,900	87	80,851	25
Lynwood	1943	225	391,638	96	356,150	1	3,000	128	32,488	97
	1944	521	1,339,869	287	1,136,300	20	95,749	214	107,820	290
Madera	1943	125	34,700	4	3,300	37	13,654	84	17,746	4
	1944	164	77,006	21	14,465	41	33,145	102	29,396	21
	1945	265	413,154	59	192,700	77	143,060	129	77,394	59
Manhattan Beach	1943	92	109,395	34	77,000	15	11,100	43	21,295	34
	1944	149	199,842	57	124,000	27	43,782	65	32,060	57
	1945	320	635,365	141	505,850	59	35,300	120	94,215	142
Manteca	1943	75	125,115	28	77,365	18	7,615	29	40,135	28
	1944	53	24,980	9	1,730	11	11,675	33	11,575	9
Martinez	1943	172	52,766	4	6,500	1	2,000	167	44,266	4
	1944	199	439,062	41	205,000	1	193,100	157	40,962	41
	1945	251	290,138	4	23,500	14	91,650	233	174,988	4
Marysville	1943	270	389,127	147	330,834	7	17,595	116	40,698	147
	1944	234	186,423	3	15,800	14	49,025	217	121,598	2
	1945	194	953,534	13	107,442	24	186,150	157	659,942	16
Maywood	1943	173	39,132	2	3,900	0	0	171	35,232	3
	1944	203	79,460	6	12,900	3	8,600	194	57,960	5
	1945	224	367,236	51	158,430	25	147,200	148	61,606	39
Merced	1943	112	43,183	15	6,115	23	15,580	74	21,488	16
	1944	151	97,925	25	17,825	18	7,550	108	72,550	25
	1945	222	462,567	50	90,465	45	243,460	127	128,642	48
Mill Valley	1943	184	296,602	62	257,900	20	18,473	102	20,229	62
	1944	164	201,865	36	152,800	18	14,227	110	34,838	37
	1945	339	655,835	123	503,261	49	92,765	167	59,809	123
Modesto	1943	257	255,968	51	143,525	24	27,600	182	84,843	49
	1944	337	212,067	11	29,700	64	66,294	262	116,073	17
	1945	430	1,221,681	81	391,255	85	537,120	264	293,306	83
Monrovia	1943	644	117,308	13	7,890	91	19,739	540	89,679	14
	1944	764	271,699	57	110,505	105	28,262	602	132,932	57
	1945	985	1,828,148	266	1,270,654	175	291,918	544	265,576	269
Montebello	1943	140	130,515	26	99,300	42	11,930	72	19,285	26
	1944	302	874,505	178	837,400	57	17,935	67	19,170	222
	1945	473	1,646,653	261	1,196,800	131	410,959	81	38,894	256
Monterey	1943	131	143,907	0	0	11	65,527	120	78,380	0
	1944	176	240,170	3	4,500	19	93,780	154	141,890	3
	1945	207	677,141	19	90,200	32	411,471	156	175,470	23
Monterey Park	1943	150	40,138	5	5,200	33	9,720	112	25,218	5
	1944	321	191,312	58	115,100	77	30,020	186	46,192	58
	1945	358	830,761	151	542,025	86	205,875	121	82,861	154

• In sample of 257 cities. See text and tables, pp. 12 to 16.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

PACIFIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new famil dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
California—Continued										
Morgan Hill	1943	7	$5,475	0	0	6	$5,350	1	$125	0
	1944	8	3,700	0	0	2	650	6	3,050	0
	1945	26	59,225	22	$55,850	3	1,775	1	1,600	8
Mount Shasta	1944	4	14,300	0	0	2	200	2	14,100	0
Napa	1943	312	110,034	5	15,500	96	29,355	211	65,179	5
	1944	165	69,455	1	1,200	32	12,115	132	56,140	1
	1945	213	266,931	15	60,200	76	146,690	122	60,041	15
National City	1943	676	1,793,635	637	1,171,910	7	609,095	32	12,630	673
	1944	167	497,692	43	175,648	13	285,812	111	36,232	57
Newman	1943	26	9,890	0	0	1	5,500	25	4,390	0
	1944	16	8,365	0	0	0	0	16	8,365	0
Newport Beach	1943	254	141,048	18	14,050	43	37,775	193	89,223	18
	1944	496	657,193	157	297,550	71	197,700	268	161,943	157
	1945	769	2,046,589	362	1,587,590	88	165,585	319	293,414	369
North Sacramento	1943	50	15,054	0	0	11	9,489	39	5,565	0
	1944	64	30,869	0	0	11	15,482	53	15,387	0
	1945	119	229,821	45	134,400	14	55,150	60	40,271	93
*Oakland	1943	4,315	19,440,986	2,331	8,120,726	390	8,063,964	1,594	3,256,296	3,239
	1944	3,499	24,689,185	786	3,096,650	547	18,235,422	2,166	3,357,113	1,022
	1945	4,885	15,561,844	1,001	4,765,071	1,044	5,854,385	2,840	4,942,388	1,130
Oceanside	1943	322	424,877	84	308,006	4	28,700	234	88,171	83
	1944	856	1,976,343	602	1,706,862	30	121,300	224	148,181	606
	[1]1945	529	2,197,911	298	808,482	47	1,291,351	184	98,078	298
Ontario	1943	290	74,552	4	3,625	66	13,780	220	57,147	4
	1944	513	394,207	103	269,475	126	41,767	284	82,965	103
	1945	802	1,264,714	207	677,850	211	417,599	384	169,265	206
Orange	1943	157	40,661	0	0	6	5,700	151	34,961	0
	1944	224	184,863	7	3,400	14	117,345	203	64,118	7
	1945	307	475,407	84	343,110	42	47,100	181	85,197	84
Oroville	1943	97	60,547	2	30,374	6	13,965	89	16,208	1
	1944	140	84,247	2	1,200	23	34,575	115	48,472	2
	1945	239	424,222	48	188,750	17	132,410	174	103,062	46
Oxnard	1943	706	1,340,892	617	1,258,471	2	11,000	87	71,421	680
	1944	1,051	2,023,393	893	1,935,971	6	34,400	152	53,022	893
	1945	457	977,935	121	369,133	139	527,453	197	81,349	118
Pacific Grove	1943	90	22,890	4	5,700	0	0	86	17,190	4
	1944	130	76,015	9	21,100	2	27,500	119	27,415	9
	1945	167	272,830	45	173,450	12	18,975	110	80,405	44
Palo Alto	1943	529	154,375	9	32,000	47	10,075	473	112,300	9
	1944	543	230,890	9	48,125	39	27,850	495	154,915	8
	1945	739	1,793,178	150	1,101,775	146	395,625	443	295,778	157
*Pasadena	1943	1,905	582,923	2	5,800	149	109,707	1,754	467,416	2
	1944	2,468	1,520,690	28	68,650	101	451,185	2,339	1,000,855	34
	1945	2,973	4,395,371	355	2,175,217	420	983,444	2,198	1,236,710	379
Paso Robles	1943	86	44,817	15	11,900	13	15,347	58	17,570	18
	1944	96	93,986	19	32,500	26	28,691	51	32,795	19
	1945	152	325,938	50	164,600	45	125,683	57	35,655	40
Patterson	1943	2	250	0	0	2	250	0	0	0
	1944	16	19,156	3	7,331	6	4,025	7	7,800	4
Petaluma	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
Piedmont	1943	113	37,355	0	0	2	419	111	36,936	0
	1944	126	67,595	0	0	0	0	126	67,595	0
	1945	155	251,979	17	165,310	0	0	138	86,669	17
Pittsburg	1943	151	355,977	84	285,000	4	30,000	63	40,977	84
	1944	245	438,346	151	290,336	8	82,700	86	65,310	151
	1945	147	444,492	14	70,500	19	265,602	114	108,390	14
Placentia	[1]1943	2	3,200	0	0	1	200	1	3,000	0
	1944	7	8,504	2	1,000	1	6,500	4	1,004	2
	[1]1945	4	17,100	1	8,000	1	8,000	2	1,100	1
Placerville	1943	30	16,289	0	0	3	10,395	27	5,894	0
	1944	41	28,255	2	3,700	2	11,645	37	12,910	2
	1945	79	144,987	13	38,250	19	72,200	47	34,537	13
Pleasanton	1943	12	7,525	0	0	1	5,000	11	2,525	0
	1944	86	188,552	52	151,300	5	6,825	29	30,427	52
	1945	37	42,359	8	12,900	6	9,350	23	20,109	8
Pomona	1943	593	373,259	42	145,350	76	28,335	475	199,574	42
	1944	660	633,479	102	364,300	126	74,042	432	195,137	102
	1945	1,282	2,373,271	284	1,200,997	280	709,083	718	463,191	275
Porterville	1943	254	47,425	80	18,000	4	1,654	170	27,771	0
	1944	128	75,191	4	10,900	6	13,057	118	51,234	4
	1945	147	250,452	26	86,500	26	84,400	95	79,552	26

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* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

PACIFIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
California—Continued										
Redding	1943	163	$66,503	4	$4,250	34	$6,245	125	$56,008	4
	1944	235	147,797	15	16,425	28	46,080	192	85,292	13
	1945	315	411,650	44	158,625	49	53,000	222	200,025	44
Redlands	1943	408	167,016	0	0	15	7,503	393	159,513	0
	1944	465	133,983	5	5,750	24	10,220	436	118,013	5
	1945	593	696,856	72	323,440	73	157,338	448	216,078	84
Redondo Beach	1943	620	1,002,526	286	869,402	110	42,245	224	90,879	292
	1944	522	744,259	215	587,810	93	56,085	214	100,364	215
	1945	624	759,295	141	371,675	198	223,331	285	164,289	141
Redwood City	1943	215	450,988	111	390,400	28	25,848	76	34,740	111
	1944	208	473,922	30	55,800	34	332,789	144	85,333	36
	1945	502	3,378,810	255	1,594,898	38	1,511,257	209	272,655	295
Reedley	1943	29	16,165	4	750	3	4,400	22	11,015	4
	1944	41	32,504	0	0	0	0	41	32,504	0
	[1]1945	78	125,350	11	29,300	10	56,600	57	39,450	11
Rio Vista	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	32	161,500	23	111,000	8	48,500	1	2,000	23
Riverside	1943	1,520	1,856,629	695	1,448,238	32	85,173	793	323,218	767
	1944	1,316	836,576	37	153,949	90	303,144	1,189	379,483	35
	1945	1,589	1,620,953	213	764,130	180	310,940	1,196	545,883	213
Roseville	1943	340	277,048	61	244,156	27	2,035	252	30,857	60
	1944	241	42,857	0	0	12	1,495	229	41,362	0
	1945	245	128,101	9	29,976	0	0	236	98,125	9
Ross	1943	1	1,500	0	0	0	0	1	1,500	0
	1944	5	5,000	1	2,000	1	600	3	2,400	1
*Sacramento	1943	994	579,950	3	8,850	109	212,882	882	358,218	3
	1944	1,273	1,084,979	7	16,275	159	232,712	1,107	835,992	7
	1945	1,669	11,756,518	327	1,892,145	319	8,501,478	1,023	1,362,895	377
Salinas	1943	196	89,967	1	2,750	14	18,977	181	68,240	0
	1944	268	225,884	2	8,496	23	68,247	243	149,141	0
	1945	269	596,773	29	184,001	43	261,182	197	151,590	41
San Anselmo	1943	62	56,188	12	43,500	11	6,160	39	6,528	14
	1944	0	0	0	0	0	0	0	0	0
	1945	100	350,420	49	274,811	7	30,050	44	45,559	61
San Bernardino	1943	2,649	3,162,472	1,090	2,407,150	190	373,459	1,369	381,863	1,106
	1944	2,383	1,377,842	221	467,575	289	326,546	1,873	583,721	222
	1945	2,962	4,129,543	481	2,184,124	515	1,043,379	1,966	902,040	495
San Bruno	1943	264	818,802	215	642,950	5	134,352	44	41,500	214
	1944	384	2,371,467	277	729,800	4	1,583,667	103	58,000	279
	1945	213	568,500	68	308,500	14	168,000	131	92,000	69
San Buenaventura	1943	172	62,788	0	0	16	796	156	61,992	0
	1944	660	688,717	146	549,650	59	22,650	455	116,417	145
	1945	568	599,697	43	226,754	115	178,087	410	194,856	41
San Carlos	1943	44	133,450	28	122,000	4	5,550	12	5,900	32
	1944	39	103,600	3	26,000	20	63,200	16	14,400	9
	1945	435	2,774,541	307	2,086,020	53	603,297	75	85,224	311
*San Diego	1943	8,993	21,393,104	5,385	13,211,307	1,206	6,080,343	2,402	2,101,454	5,827
	1944	6,488	19,697,242	1,689	6,369,792	1,668	11,451,156	3,131	1,876,294	1,942
	1945	9,598	22,166,543	2,103	7,578,672	2,530	11,715,552	4,965	2,872,319	2,244
*San Francisco	1943	6,471	28,432,173	4,724	11,302,746	161	12,953,616	1,586	4,175,811	4,722
	1944	5,899	24,564,073	3,767	9,990,112	151	10,478,472	1,981	4,095,489	3,814
	1945	6,269	27,820,127	3,343	12,848,252	189	9,278,534	2,737	5,693,341	3,762
San Gabriel	1943	270	49,672	2	3,320	32	11,052	236	35,300	2
	1944	320	127,650	11	19,600	32	14,271	277	93,779	11
	1945	475	2,413,206	153	927,066	88	470,796	234	1,015,344	154
San Jacinto	1943	44	8,005	2	400	9	2,000	33	5,605	2
	1944	40	11,000	3	1,400	6	2,800	31	6,800	3
	1945	89	108,550	25	49,320	21	42,800	43	16,430	25
*San Jose	1943	535	428,750	0	0	93	127,580	442	301,170	0
	1944	710	1,130,971	1	18,000	113	594,860	596	518,111	8
	1945	1,138	3,525,580	243	1,698,725	189	1,023,874	706	802,981	269
San Leandro	1943	659	2,065,180	576	1,936,000	25	44,357	58	84,823	671
	1944	477	1,097,009	327	1,019,000	71	41,928	79	36,081	351
	1945	443	1,771,841	170	1,067,475	133	429,000	140	275,366	203
San Luis Obispo	1943	104	133,373	21	92,500	11	15,465	72	25,408	20
	1944	142	131,697	16	71,000	17	15,425	109	45,272	16
	1945	227	402,523	34	169,750	39	118,535	154	114,238	48
San Marino	1943	224	33,190	0	0	0	0	224	33,190	0
	1944	332	78,382	3	8,800	41	7,026	288	62,556	3
	1945	325	1,050,849	51	626,968	1	15,000	273	408,881	51
San Mateo	1943	362	527,479	78	405,000	61	30,900	223	91,579	88
	1944	506	838,407	117	574,285	77	65,574	312	198,548	117
	1945	1,071	4,726,581	534	3,686,956	156	542,809	381	496,816	577

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* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

PACIFIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
California—Continued										
San Rafael	1943	277	$649,926	173	$575,172	28	$7,056	76	$67,698	182
	1944	185	148,147	14	43,125	54	31,613	117	73,409	16
	1945	250	536,295	42	298,600	56	87,295	152	150,400	41
Santa Ana	1943	1,003	608,942	83	284,400	76	143,455	844	181,087	84
	1944	1,283	1,114,281	299	683,183	121	65,813	863	365,285	197
	1945	1,644	3,075,522	569	2,101,766	223	468,304	852	505,452	639
Santa Barbara	1943	437	421,576	11	50,600	51	135,021	375	235,955	6
	1944	632	284,308	6	5,090	78	26,830	548	252,388	6
	1945	821	1,588,105	166	695,403	142	234,243	513	658,459	182
Santa Clara	1943	141	254,445	44	165,500	16	9,980	81	78,965	44
	1944	113	232,263	2	1,500	34	122,760	77	108,003	0
	1945	178	609,446	56	332,571	44	206,950	78	69,925	60
Santa Cruz	1943	287	100,589	3	1,440	98	27,419	186	71,730	3
	1944	477	236,263	22	35,560	118	79,065	337	121,638	24
	1945	739	940,004	121	584,470	167	106,785	451	248,749	200
Santa Maria	1943	265	274,769	66	223,008	20	9,817	179	41,944	70
	1944	286	107,023	5	16,800	15	28,620	266	61,603	8
	1945	262	555,640	39	204,244	23	244,185	200	107,211	50
Santa Monica	1943	574	1,375,187	89	485,550	77	737,623	408	152,014	166
	1944	888	1,665,645	224	1,049,421	129	173,915	535	442,309	352
	1945	1,258	3,244,839	216	1,595,636	354	1,129,335	688	519,868	364
Santa Paula	1943	146	84,968	8	18,375	13	7,774	125	58,819	14
	1944	220	140,033	1	8,500	25	37,821	194	93,712	4
	1945	205	407,343	13	43,380	17	61,500	175	302,463	13
Santa Rosa	1943	140	40,963	0	0	29	5,826	111	35,137	0
	1944	245	176,120	12	18,500	31	44,225	202	113,395	12
	1945	470	1,258,110	136	586,775	72	353,025	262	318,310	153
Sausalito	1944	44	98,625	3	11,400	5	4,940	36	82,285	3
Seal Beach	1943	184	512,570	112	498,700	1	500	71	13,370	112
	1944	181	357,210	32	232,100	4	54,490	145	70,620	68
	1945	152	333,410	39	155,550	23	151,921	90	25,939	42
Sebastopol	1943	49	15,940	0	0	3	1,300	46	14,640	0
	1944	87	59,322	3	4,150	5	26,700	79	28,472	3
	1945	120	446,553	13	28,000	24	377,522	83	41,031	13
Selma	1943	14	202,900	2	700	10	201,900	2	300	2
	1944	22	12,775	16	6,400	4	5,875	2	500	16
	1945	58	108,960	28	65,050	25	37,475	5	6,435	23
Shafter	1944	79	83,810	16	20,075	5	35,400	58	28,335	16
Sierra Madre	1943	140	26,092	1	4,000	12	2,160	127	19,932	1
	1944	190	71,206	7	20,000	5	2,050	178	49,156	7
	1945	261	460,192	77	353,500	55	50,440	129	56,252	77
Signal Hill	1943	83	65,047	4	19,425	15	29,085	64	16,537	11
	1944	151	97,115	4	7,200	17	51,607	130	38,308	4
	1945	306	329,593	30	124,750	57	145,656	219	59,187	36
Sonora	1943	37	8,605	0	0	1	3,000	36	5,605	0
	1944	19	13,290	2	3,000	5	1,600	12	8,690	2
	[1]1945	34	20,350	1	500	3	3,000	30	16,850	1
South Gate	1943	868	883,169	192	575,000	12	17,780	664	290,389	192
	1944	964	913,569	146	478,600	34	89,497	784	345,472	158
	1945	1,140	3,079,117	326	1,372,305	118	786,597	696	920,215	306
South Pasadena	1943	162	63,640	1	750	14	15,625	147	47,265	1
	1944	277	139,775	5	13,700	19	8,950	253	117,125	5
	1945	370	669,702	77	402,700	51	180,600	242	86,402	77
South San Francisco	1943	901	1,516,592	856	1,378,340	13	97,951	32	40,301	873
	1944	421	1,562,042	336	1,284,100	42	197,860	43	80,082	336
	1945	385	1,330,411	220	903,800	99	362,850	66	63,761	221
*Stockton	1943	1,306	2,239,996	671	1,519,349	82	157,895	553	562,752	715
	1944	763	1,374,763	20	29,510	111	668,317	632	676,936	21
	1945	1,266	10,662,381	430	1,633,121	257	8,131,095	579	898,165	445
Sunnyvale	1943	332	1,082,523	217	937,500	11	134,775	104	10,248	217
	1944	54	68,002	2	2,900	9	47,325	43	17,777	2
	1945	79	111,131	17	44,450	17	34,400	45	32,281	22
Susanville	1944	18	16,100	1	1,000	4	2,200	13	12,900	1
Taft	1943	44	13,597	0	0	1	150	43	13,447	0
	1944	54	90,522	15	71,000	7	875	32	18,647	15
	[1]1945	20	26,515	0	0	2	225	18	26,290	0
Torrance	1943	209	5,121,058	77	600,000	57	4,433,549	75	87,509	263
	1944	286	914,345	85	335,255	102	462,150	99	116,940	121
	1945	337	5,541,859	63	215,910	159	5,217,895	115	108,054	61
Tracy	1943	255	457,781	218	439,614	5	505	32	17,662	217
	1944	63	25,431	6	8,350	11	2,610	46	14,471	2
	1945	103	234,802	25	121,725	24	57,800	54	55,277	28
Tulare	1944	19	4,100	13	3,100	6	1,000	0	0	19
	1945	435	687,905	183	496,270	90	102,200	162	89,435	183

* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

PACIFIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
California—Continued										
Turlock	1943	78	$57,703	4	$6,200	28	$40,578	46	$10,925	7
	1944	125	107,622	27	59,500	19	17,827	79	30,295	24
	1945	141	310,910	35	109,300	54	97,525	52	104,085	35
Upland	1943	298	385,331	108	342,175	44	13,843	146	29,313	101
	1944	431	537,934	213	426,600	49	12,422	169	98,912	210
	1945	273	378,136	56	197,550	57	111,257	160	69,329	57
Vallejo	[1] 1943	244	4,429,022	3	1,180,132	37	3,042,918	204	205,972	344
	1944	1,539	7,146,263	1,255	2,474,601	45	3,577,053	239	1,094,609	1,255
	1945	529	4,898,438	196	629,600	57	3,581,177	276	687,661	196
Vernon	1943	161	649,355	0	0	115	584,304	46	65,051	0
	1944	287	1,172,796	0	0	131	791,453	156	381,343	0
	1945	339	5,573,199	0	0	193	4,803,380	146	769,819	0
Visalia	1943	168	57,991	0	0	2	2,520	166	55,471	0
	1944	173	166,420	0	0	14	118,240	159	48,180	0
	1945	229	566,455	44	190,434	31	270,660	154	105,361	46
Walnut Creek	1943	0	0	0	0	0	0	0	0	0
	1944	11	17,185	2	5,800	2	4,000	7	7,385	2
	1945	65	252,275	32	118,500	12	88,850	21	44,925	32
Watsonville	1943	70	90,163	1	32,503	0	0	69	57,660	0
	1944	113	213,184	1	2,200	13	142,700	99	68,284	1
	1945	116	263,930	8	41,300	14	131,200	94	91,430	9
Williams	1943	0	0	0	0	0	0	0	0	0
Willits	1943	9	2,495	0	0	2	400	7	2,095	0
	1944	44	92,035	30	82,000	7	5,985	7	4,050	30
	[1] 1945	20	29,400	3	9,000	11	13,500	6	6,900	3
Willows	1943	8	9,775	1	500	1	5,000	6	4,275	1
	1944	9	5,900	0	0	2	1,250	7	4,650	0
	1945	14	31,650	4	9,500	3	14,000	7	8,150	4
Woodland	1943	121	44,288	1	2,000	6	6,595	114	35,693	1
	1944	161	161,303	15	60,000	27	69,203	119	32,100	15
	1945	211	304,947	43	185,300	23	46,075	145	73,572	43
Yuba City	1943	99	40,357	10	21,500	12	1,768	77	17,089	13
	1944	147	122,317	4	11,600	19	74,365	124	36,352	4
	1945	157	223,610	22	84,435	28	92,027	107	47,148	25
regon:										
Arlington	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Ashland	1943	40	24,440	7	8,850	13	7,780	20	7,810	7
	1944	59	62,205	10	12,700	18	34,125	31	15,380	10
	1945	108	201,100	47	144,585	20	21,340	41	35,175	45
Astoria	1943	219	317,172	9	73,500	19	5,450	191	238,222	26
	1944	257	542,287	5	6,500	31	443,571	221	92,216	5
	1945	344	798,603	30	80,488	29	546,253	285	171,862	34
Baker	1943	5	15,675	1	200	1	15,000	3	475	1
	1944	29	20,720	0	0	4	8,550	25	12,170	0
	1945	53	147,110	14	63,400	9	55,150	30	28,560	10
Bend	1943	61	220,739	16	160,900	18	18,890	27	40,949	45
	1944	39	35,735	7	5,800	10	16,990	22	12,945	7
	1945	126	118,885	15	32,900	40	49,925	71	36,060	12
Coquille	1943	27	5,100	0	0	17	2,975	10	2,125	0
	1944	19	6,125	2	1,900	8	1,700	9	2,525	2
	1945	16	29,175	1	1,000	7	21,975	8	6,200	1
Corvallis	1943	244	379,599	34	214,925	35	27,170	175	137,504	67
	1944	186	83,536	5	12,900	20	12,760	161	57,876	5
	1945	249	421,760	29	142,500	28	171,633	192	107,627	29
Cottage Grove	1943	80	10,385	0	0	11	1,115	69	9,270	0
	1944	97	59,325	11	43,000	24	4,500	62	11,825	11
	1945	163	185,374	59	137,199	30	12,090	74	36,085	59
Elgin	1943	6	2,200	0	0	0	0	6	2,200	0
	1944	2	500	0	0	1	300	1	200	0
Eugene	1943	1,026	139,106	6	2,400	87	17,344	933	119,362	6
	1944	1,076	640,316	158	379,536	87	66,040	831	194,740	161
	1945	1,439	1,778,817	352	988,717	189	443,709	898	346,391	358
Forest Grove	1943	55	18,005	5	900	11	7,380	39	9,725	5
	1944	118	165,175	38	123,900	33	17,995	47	23,280	38
	[1] 1945	77	166,970	16	49,500	21	65,575	40	51,895	16
Freewater	1943	12	30,100	2	800	4	27,500	6	1,800	2
	1944	17	4,855	5	2,450	6	855	6	1,550	5
	1945	31	36,375	16	15,300	9	5,400	6	15,675	16
Glendale	1943	3	275	0	0	3	275	0	0	0
	1944	6	5,656	1	900	3	4,300	2	456	1
	[1] 1945	8	14,450	4	8,750	4	5,700	0	0	8

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[1] 11 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

PACIFIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Oregon—Continued										
Grants Pass	1943	327	$63,690	14	$6,800	51	$29,410	262	$27,480	14
	1944	472	179,724	66	91,768	11	24,980	395	62,976	66
	1945	461	309,152	58	142,103	143	84,226	260	82,823	58
Gresham	1943	32	58,675	20	50,500	4	1,050	8	7,125	20
	1944	25	70,850	16	39,000	6	29,100	3	2,750	16
	1945	38	154,000	23	59,500	11	87,500	4	7,000	22
Heppner	1943	1	200	0	0	1	200	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Hillsboro	1943	91	20,130	12	3,485	39	10,080	40	6,565	12
	1944	133	225,617	61	153,547	16	34,630	56	37,440	61
	1945	150	224,255	38	92,200	36	74,000	76	58,055	38
Jacksonville	1943	2	1,800	2	1,800	0	0	0	0	2
	1944	4	3,250	2	1,500	0	0	2	1,750	2
	1945	21	16,935	10	13,550	0	0	11	3,385	10
Junction City	1943	67	7,410	0	0	16	3,450	51	3,960	0
	1944	52	13,495	3	4,100	15	4,630	34	4,765	3
	1945	74	58,575	11	18,465	26	32,290	37	7,820	9
Klamath Falls	1943	244	73,010	0	0	4	5,550	240	67,460	0
	1944	296	1,559,561	40	101,842	7	1,305,815	249	151,904	40
	1945	432	1,343,036	62	186,570	67	770,275	303	386,191	68
La Grande	1943	96	40,119	0	0	14	17,065	82	23,054	0
	1944	120	47,965	4	1,200	9	23,875	107	22,890	4
	1945	244	235,512	97	181,962	28	5,925	119	47,625	99
Lakeview	1943	14	3,500	1	200	2	400	11	2,900	1
	1944	5	2,675	1	200	2	350	2	2,125	1
	1945	21	63,680	7	18,600	5	28,850	9	16,230	7
Lebanon	1944	108	49,895	19	15,300	35	13,790	54	20,805	19
McMinnville	1943	10	9,250	0	0	7	8,650	3	600	0
	1944	24	46,000	3	4,700	14	30,700	7	10,600	3
	1945	111	398,585	40	119,050	40	246,840	31	32,695	40
Marshfield	1943	42	19,254	3	2,300	6	1,785	33	15,169	3
	1944	63	116,469	21	63,985	7	24,050	35	28,434	21
	1945	89	135,475	17	51,600	14	34,625	58	49,250	17
Medford	1943	404	688,030	220	538,982	42	95,735	142	53,313	220
	1944	169	158,873	8	9,400	34	92,832	127	56,641	6
	1945	500	624,621	101	319,200	96	162,669	303	142,752	103
Milton	1943	37	18,352	2	900	7	700	28	16,752	2
	1944	66	168,466	5	6,400	16	141,410	45	20,656	4
	1945	51	150,891	7	14,300	12	98,750	32	37,841	7
Milwaukie	1943	53	30,939	0	0	11	3,450	42	27,489	0
	1944	28	46,105	8	15,600	14	24,205	6	6,300	7
	[1] 1945	40	135,950	18	62,800	20	72,450	2	700	18
Myrtle Point	1943	3	450	0	0	0	0	3	450	0
	1944	16	22,750	4	3,600	8	16,750	4	2,400	4
	[1] 1945	11	28,800	3	8,700	3	18,400	5	1,700	4
Newberg	1943	158	28,655	8	4,330	31	6,535	119	17,790	8
	1944	116	55,717	17	20,150	21	15,810	78	19,757	17
	1945	149	302,297	44	148,150	40	130,180	65	23,967	46
Newport	1943	6	2,200	0	0	1	1,000	5	1,200	0
	1944	28	32,250	2	1,000	2	1,700	24	29,550	2
	1945	94	294,100	33	54,200	23	174,400	38	65,500	28
North Bend	1944	28	130,700	26	130,500	2	200	0	0	27
	1945	30	58,453	15	24,600	8	7,950	7	25,903	17
Nyssa	1943	2	1,500	0	0	0	0	2	1,500	0
	1944	21	21,050	0	0	6	11,900	15	9,150	0
	1945	50	136,655	25	72,600	12	58,305	13	5,750	16
Ontario	1943	24	9,750	0	0	8	6,890	16	2,860	0
	1944	34	86,575	7	14,650	12	62,175	15	9,750	7
	1945	109	341,659	47	131,050	31	169,347	31	41,262	43
Pendleton	1943	54	72,621	1	500	8	30,400	45	41,721	1
	1944	80	93,580	7	8,300	14	44,400	59	40,880	7
	1945	134	212,759	17	60,250	20	84,599	97	67,910	17
Philomath	1943	30	6,010	5	2,500	22	2,875	3	635	5
	1944	11	3,100	1	500	9	2,300	1	300	1
	1945	18	23,380	9	19,880	9	3,500	0	0	10
•Portland	1943	7,467	18,850,356	4,196	14,287,483	593	2,042,725	2,678	2,520,148	4,830
	1944	3,699	8,022,380	468	3,089,000	633	2,454,730	2,598	2,478,650	666
	1945	4,518	12,335,814	649	4,109,700	948	5,066,632	2,921	3,159,482	710
Port Orford	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0

• In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

PPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

PACIFIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
ontinued										
Prineville	1943	32	$10,224	0	0	8	$5,414	24	$4,810	0
	1944	14	18,200	0	0	7	15,600	7	2,600	0
	1945	37	102,805	12	$25,950	12	68,350	13	8,505	12
Rainier	1944	8	13,900	0	0	4	12,550	4	1,350	0
	1945	13	11,575	2	3,000	4	1,725	7	6,850	2
Redmond	1943	18	4,550	0	0	8	1,225	10	3,325	0
	1944	55	119,016	5	4,200	22	92,786	28	22,030	4
	1945	54	133,370	14	48,900	15	63,975	25	20,495	17
Reedsport	1943	15	5,123	4	3,200	5	338	6	1,585	3
	1944	14	8,710	4	6,375	6	1,610	4	725	4
	1945	25	18,130	2	5,000	17	6,940	6	6,190	2
Roseburg	1943	56	48,560	8	3,900	25	22,040	23	22,620	8
	1944	110	162,600	20	40,450	36	71,535	54	50,615	20
	[1]1945	135	399,900	60	246,350	30	72,775	45	80,775	68
Saint Helens	1943	35	19,545	6	14,200	14	2,050	15	3,295	6
	1944	51	93,700	32	85,500	9	3,900	10	4,300	32
	1945	27	35,800	7	14,800	8	10,200	12	10,800	7
Salem	1943	736	138,684	26	10,313	63	12,186	647	116,185	26
	1944	681	339,277	22	8,700	108	183,064	551	147,513	22
	[1]1945	711	1,281,640	112	457,230	117	639,617	482	184,793	120
Sheridan	1944	20	85,000	20	85,000	0	0	0	0	20
	1945	37	127,500	36	124,500	1	3,000	0	0	36
Springfield	1943	433	50,240	77	14,290	185	21,617	171	14,333	77
	1944	397	947,670	162	135,211	116	799,457	119	13,002	162
	1945	507	581,599	120	306,000	145	211,718	242	63,881	126
Sweet Home	1943	62	33,820	24	27,420	21	3,650	17	2,750	24
	1944	62	51,030	19	25,250	23	15,940	20	9,840	19
	1945	86	90,000	26	36,350	22	35,755	38	17,895	26
The Dalles	1943	11	61,900	1	1,700	4	55,150	6	5,050	1
	1944	65	173,289	57	161,239	5	8,800	3	3,250	17
	1945	117	200,050	16	54,900	14	25,550	87	119,600	16
Tillamook	1943	163	286,144	102	270,947	11	8,117	50	7,080	102
	1944	119	248,466	56	160,586	17	53,045	46	34,835	58
	1945	88	149,202	15	51,300	37	80,418	36	17,484	15
Vale	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
hington:										
Aberdeen	1943	467	49,737	3	600	104	6,021	360	43,116	3
	1944	513	87,563	9	4,150	57	12,705	447	70,708	9
	1945	594	222,312	11	23,800	89	83,235	494	115,277	11
Anacortes	1943	243	370,145	156	312,265	36	12,795	51	45,085	156
	1944	88	41,897	8	7,050	8	10,055	72	24,792	8
	1945	123	91,203	18	31,850	20	20,075	85	39,278	21
Asotin	1943	7	1,800	0	0	1	500	6	1,300	0
	1944	15	4,350	0	0	0	0	15	4,350	0
	[1]1945	12	10,400	7	7,675	3	2,350	2	375	8
Auburn	1943	143	166,325	53	136,000	44	9,150	46	21,175	66
	1944	163	527,574	64	245,661	34	254,643	65	27,270	99
Bellingham	1943	878	433,964	7	17,500	284	112,038	587	304,426	7
	1944	910	806,174	14	17,350	124	524,835	772	263,989	14
	1945	1,497	1,606,754	67	269,005	195	881,313	1,235	456,436	59
Bremerton	1943	1,608	4,583,794	1,055	2,157,869	14	2,192,074	539	233,851	1,156
	1944	521	983,935	20	95,200	18	500,430	483	388,305	20
	1945	1,843	5,884,776	1,261	4,646,978	20	511,971	562	725,827	1,260
Buckley	1943	8	9,650	4	7,100	2	1,500	2	1,050	4
	1944	8	6,010	2	2,000	4	3,650	2	360	2
Cashmere	1943	1	1,200	0	0	0	0	1	1,200	0
	1944	0	0	0	0	0	0	0	0	0
	1945	6	41,000	6	41,000	0	0	0	0	6
Castle Rock	1943	6	1,900	0	0	5	900	1	1,000	0
	1944	2	450	0	0	1	250	1	200	0
	1945	14	17,250	9	15,300	3	1,825	2	125	9
Centralia	1943	238	35,940	2	500	37	5,438	199	30,002	2
	1944	302	39,194	0	0	22	3,574	280	35,620	0
	1945	435	142,606	17	26,100	62	30,127	356	86,379	19
Chehalis	1943	146	39,361	1	2,500	26	8,370	119	28,491	1
	1944	113	69,896	1	1,500	18	37,115	94	31,281	1
	1945	181	234,060	8	24,100	22	152,350	151	57,610	8
Chewelah	1943	30	21,965	3	5,200	14	11,995	13	4,770	3
	1944	31	27,125	0	0	15	20,150	16	6,975	0
	1945	34	38,229	2	5,000	17	13,135	15	20,094	2

1 months only.

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

PACIFIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Washington—Continued										
Clarkston	1943	100	$22,255	0	0	12	$1,600	88	$20,655	0
	1944	120	42,197	5	$6,500	5	2,050	110	33,647	5
	1945	170	142,272	32	75,550	23	19,150	115	47,572	32
Cle Elum	1944	7	23,800	0	0	2	10,600	5	13,200	0
	1945	6	21,100	1	1,000	4	18,600	1	1,500	0
Colfax	1943	22	8,790	0	0	14	5,910	8	2,880	0
	1944	47	17,420	0	0	12	8,280	35	9,140	0
	1945	44	76,725	10	28,800	8	4,575	26	43,350	6
Colville	1943	64	16,170	2	1,000	29	9,175	33	5,995	2
	1944	58	34,937	7	13,400	19	9,890	32	11,647	6
	1945	10	8,270	3	3,550	1	20	6	4,700	2
Cosmopolis	1943	2	145	0	0	0	0	2	145	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
Davenport	1943	3	675	0	0	1	250	2	425	0
	1944	9	6,250	0	0	6	4,850	3	1,400	0
	1945	5	16,700	1	6,500	4	10,200	0	0	1
Ellensburg	1943	88	23,465	1	195	16	4,460	71	18,810	1
	1944	105	80,105	4	4,200	18	34,220	83	41,685	4
	1945	106	280,890	21	78,715	23	126,550	62	75,625	21
Enumclaw	1943	19	8,350	1	3,500	6	700	12	4,150	1
	1944	23	51,250	6	14,200	6	31,600	11	5,450	6
	1945	35	98,150	6	18,000	18	74,350	11	5,800	5
Everett	1943	1,409	2,608,248	888	2,101,683	83	62,565	438	444,000	931
	1944	710	457,230	15	30,600	84	109,460	611	317,170	15
	1945	749	912,365	40	137,450	140	505,650	569	269,265	57
Goldendale	1943	0	0	0	0	0	0	0	0	0
	1944	1	150	0	0	1	150	0	0	0
	1945	14	67,500	11	22,500	3	45,000	0	0	6
Grandview	1943	12	27,100	1	500	3	15,000	8	11,600	1
	1944	18	15,000	6	5,400	3	4,800	9	4,800	6
	1945	26	156,500	5	17,000	17	137,500	4	2,000	5
Hoquiam	1943	255	33,952	0	0	43	6,527	212	27,425	0
	1944	321	90,147	0	0	46	19,017	275	71,130	0
	1945	332	103,913	2	9,000	51	22,295	279	72,618	2
Kalama	1943	0	0	0	0	0	0	0	0	0
	1944	1	10,000	0	0	1	10,000	0	0	0
	1945	6	24,500	5	14,500	1	10,000	0	0	8
Kennewick	1943	345	796,676	210	713,905	76	48,195	59	34,576	210
	1944	160	216,411	32	79,950	59	101,275	69	35,186	35
	1945	184	311,088	44	101,360	67	186,220	73	23,508	40
Kent	1943	37	26,655	22	10,450	5	725	10	15,480	22
	1944	48	98,590	19	59,000	6	1,990	23	37,600	19
	1945	57	107,175	10	27,700	22	41,525	25	37,950	10
Kirkland	1943	25	52,400	7	29,000	7	14,950	11	8,450	10
	1944	43	63,600	11	40,000	8	12,300	24	11,300	11
	1945	39	135,180	18	74,800	6	39,380	15	21,000	20
Leavenworth	1943	0	0	0	0	0	0	0	0	0
	1944	13	1,950	0	0	2	450	11	1,500	0
	1945	25	49,800	5	20,000	13	25,450	7	4,350	5
Longview	1943	635	381,515	138	306,200	299	35,040	198	40,275	150
	1944	493	566,205	20	50,350	234	430,965	239	84,890	20
	1945	686	1,549,580	107	530,252	281	844,180	298	175,148	114
Marysville	1943	36	9,963	4	4,750	16	1,605	16	3,608	4
	1944	34	31,810	12	22,600	11	4,700	11	4,510	12
	1945	74	98,695	21	53,000	19	31,865	34	13,830	21
Montesano	1943	26	4,725	0	0	0	0	26	4,725	0
	1944	30	7,730	1	225	1	100	28	7,405	1
	1945	53	32,747	4	13,300	5	2,575	44	16,872	11
Morton	1943	36	15,404	6	8,949	18	3,180	12	3,275	5
	1944	21	4,290	3	1,600	3	80	15	2,610	3
	1945	21	13,680	0	0	5	9,015	16	4,665	0
Odessa	1943	11	3,590	0	0	10	3,310	1	280	0
	1944	8	3,650	0	0	3	500	5	3,150	0
	1945	21	39,100	6	27,300	14	9,800	1	2,000	6
Olympia	1943	275	88,011	1	5,000	47	8,350	227	74,661	1
	1944	386	284,254	1	800	56	125,355	329	158,099	1
	1945	678	979,565	47	235,090	139	513,688	492	230,787	72
Omak	1943	15	2,985	0	0	11	1,735	4	1,250	0
	1944	11	6,275	0	0	4	825	7	5,450	0
	1945	45	111,355	18	74,130	12	25,275	15	11,950	25
Orting	1943	35	7,782	5	2,600	9	705	21	4,477	5
	1944	25	6,240	1	100	5	815	19	5,325	1
	1945	47	20,443	2	3,000	11	1,920	34	15,523	2

APPENDIX.—*Building Construction Reported to the Bureau of Labor Statistics, by City and by Class of Construction, 1943, 1944, and 1945—Continued.*

PACIFIC STATES—Continued

State and city	Year	All building construction		New residential building		New nonresidential building		Additions, alterations, and repairs		Number of new family dwelling units
		Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	Number of buildings	Valuation	
Washington—Continued										
Pasco	1943	466	$907,477	370	$789,642	33	$78,939	63	$38,896	370
	1944	110	293,961	28	92,295	34	113,415	48	88,251	42
	1945	207	810,679	135	295,216	33	462,041	39	53,422	146
Pe Ell	1943	1	200	0	0	1	200	0	0	0
	1944	0	0	0	0	0	0	0	0	0
Port Angeles	1943	100	17,170	2	1,900	34	4,340	64	10,930	2
	1944	115	48,189	11	29,550	19	3,220	85	15,419	18
	1945	199	208,347	29	108,000	15	11,500	155	88,847	29
Port Orchard	1944	5	24,800	4	24,500	1	300	0	0	4
	1945	16	81,550	3	9,500	9	63,750	4	8,300	5
Port Townsend	1943	105	210,780	61	122,850	15	81,715	29	6,215	61
	1944	32	7,458	1	1,000	15	2,275	16	4,183	1
	1945	30	12,830	2	3,000	7	1,470	21	8,360	2
Pullman	1943	30	52,994	2	400	12	47,834	16	4,760	4
	1944	42	44,535	0	0	13	36,440	29	8,095	0
	1945	78	128,250	34	47,000	11	56,950	33	24,300	34
Puyallup	1944	208	113,259	30	44,730	51	12,590	127	55,939	30
Raymond	1943	40	5,605	0	0	11	1,350	29	4,255	0
	1944	44	22,154	0	0	15	11,900	29	10,254	0
	1945	60	35,293	1	600	15	3,450	44	31,243	1
Ritzville	1943	0	0	0	0	0	0	0	0	0
	1944	0	0	0	0	0	0	0	0	0
	1945	0	0	0	0	0	0	0	0	0
*Seattle	1943	7,308	24,147,735	4,105	12,555,300	857	8,749,715	2,346	2,842,720	4,306
	1944	4,970	17,289,710	1,445	6,935,890	955	7,346,542	2,570	3,007,278	1,724
	1945	6,593	20,828,227	2,572	11,077,969	1,080	5,445,027	2,941	4,305,231	2,827
Sequim	1943	10	4,610	1	110	0	0	9	4,500	1
	1944	28	19,950	0	0	2	2,150	26	17,800	0
	1945	37	57,035	9	29,900	13	12,250	15	14,885	9
*Spokane	1943	5,559	12,162,341	3,070	9,643,617	986	398,617	1,503	2,120,107	3,453
	1944	2,396	3,320,129	64	182,445	693	2,253,604	1,639	884,080	64
	1945	3,207	7,622,235	334	1,896,728	1,213	4,075,057	1,660	1,650,450	333
*Tacoma	1943	2,539	6,011,432	1,095	3,886,235	510	920,375	934	1,204,822	1,099
	1944	1,795	2,057,870	269	1,135,225	400	174,630	1,126	748,015	270
	1945	2,565	5,750,046	469	2,773,955	630	1,607,454	1,466	1,368,637	457
Toppenish	1943	0	0	0	0	0	0	0	0	0
	1944	22	31,655	2	8,000	5	15,100	15	8,555	2
	1945	71	103,636	30	55,396	15	15,315	26	32,925	31
Vancouver	1943	1,122	1,345,198	142	462,775	374	559,133	606	323,290	152
	1944	877	1,107,886	83	584,719	297	293,473	497	229,694	118
	1945	961	1,403,696	51	174,150	256	668,572	654	560,974	51
Walla Walla	1943	452	163,779	23	43,085	74	26,696	355	93,998	23
	1944	610	305,811	28	79,400	73	64,470	509	161,941	30
	1945	506	1,431,472	64	174,759	88	1,028,454	354	228,259	64
Wapato	1944	4	17,000	4	17,000	0	0	0	0	4
	[1]1945	16	66,800	10	29,000	6	37,800	0	0	10
Wenatchee	1943	127	97,805	1	500	11	21,085	115	76,220	1
	1944	154	109,920	3	6,050	17	34,230	134	69,640	3
	1945	281	452,965	42	143,550	46	189,575	193	119,840	45
Woodland	1943	16	6,222	2	4,000	6	505	8	1,717	2
	1944	15	9,130	6	7,800	2	165	7	1,165	6
	1945	18	45,450	5	9,700	6	29,650	7	6,100	5

* In sample of 257 cities. See text and tables, pp. 12 to 16.

[1] 11 months only.

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UNITED STATES DEPARTMENT OF LABOR
L. B. Schwellenbach, *Secretary*

BUREAU OF LABOR STATISTICS
Ewan Clague, *Commissioner*

★

Handbook of Labor Statistics
1947 Edition

Bulletin No. 916

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Letter of Transmittal

United States Department of Labor,
Bureau of Labor Statistics,
Washington, D. C., February 18, 1948.

The Secretary of Labor:

I have the honor to transmit the Handbook of Labor Statistics, 1947 Edition. This is the sixth in the handbook series to be published by the Bureau of Labor Statistics. The previous volumes were the editions for 1926, 1929, 1931, 1936, and 1941.

In the fullest sense, the preparation of the present volume was a cooperative enterprise, to which the various branches, divisions, and staffs of the Bureau of Labor Statistics contributed. Several other public agencies made data available, as noted in the text and tables. The planning of the coverage and the organization of the facts were directed by Aryness Joy Wickens, Assistant Commissioner for Program Operations, and the volume was coordinated and edited by the Publications Staff, under the supervision of Margaret H. Schoenfeld.

Ewan Clague, *Commissioner.*

Hon. L. B. Schwellenbach,
Secretary of Labor.

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[1] Table was in process of revision when Handbook was sent to press and will be supplied later.

Handbook of Labor Statistics
1947 Edition

EXPLANATORY NOTE

In this edition of the Handbook of Labor Statistics—the sixth in a series that started in 1926—the Bureau of Labor Statistics has introduced a number of changes for the purpose of increasing the usefulness of the volume. All of the major statistical series compiled by the Bureau are included. In general, annual data are given for the period beginning before World War I (or from such later time as the series started) through 1947. Monthly figures are also shown for recent periods, including 1947 insofar as available. Results were included for a few nonrecurring Bureau studies that are particularly pertinent to an analysis of labor matters.

To insure the fullest usefulness of the Handbook, selected labor and related economic series have been reproduced that were compiled by other executive departments, boards, and commissions of the Federal Government and by the Board of Governors of the Federal Reserve System.

National averages are supplemented by regional series, such as those by States, groups of States, and by cities, to a wide extent in the tables that make up this Handbook. Unless otherwise stated the general series apply to continental United States only.

Text material consists of definitions of the series and explanations of the coverage of the statistics and the general methods of computation. The descriptions of method are nontechnical in character. Technical descriptions of formulas, weighting, and other methodology used in compiling the Bureau of Labor Statistics series which are included in the Handbook will be furnished, if requested. No analysis of the data was prepared, the purpose of the Handbook of Labor Statistics being to present in one convenient volume a broad selection of economic statistics useful to the individuals and groups studying labor subjects. It is hoped that all groups working in the labor field will find in the Handbook the figures they need when dealing with specific matters.

Provision has been made for continuing usefulness of the volume by the adoption of the loose leaf form. Upon request, insert sheets will be supplied from time to time covering new material and bringing regular series to date. Availability of such inserts will be announced in the monthly list of Publications of the Bureau of Labor Statistics, in the Monthly Labor Review, and in the Monthly Catalog of United States Publications of the Superintendent of Documents. Many of the series are also available currently in the Monthly Labor Review.

The present volume contains an unbound full cover. The full cover may be utilized as a permanent jacket by inserting rings through the punched holes, or it may be severed at the perforation and the printed portion pasted on the outside of a standard 8½ x 11 inch loose leaf binder as an identifying label.

Section A: Employment, Pay Rolls, and Unemployment

A continuing and important function of the Bureau of Labor Statistics of the United States Department of Labor is the compilation of estimates showing the volume of nonagricultural employment. Employer reports and the records of various governmental agencies are the basis of such estimates. The main employment series issued are those for total number of employees in nonagricultural establishments; for manufacturing as a whole and for different industries; and for selected nonmanufacturing industries. Indexes of pay rolls are prepared for manufacturing industries as a whole, for different groups, and for selected nonmanufacturing industries. Employment data by State are compiled for manufacturing industries and for contract construction.

From the Bureau of Agricultural Economics of the United States Department of Agriculture, data are obtained which show the volume of hired farm employment and estimated pay rolls as well as the total number of persons engaged in agriculture. A broader series of statistics—that is, for the labor force, including both agricultural and nonagricultural workers both employed and unemployed—is issued by the Bureau of the Census of the United States Department of Commerce and reproduced here.

Nonagricultural Employment

All persons working for wages or salaries during a specified pay-roll period of each month are covered by the nonagricultural employment estimates compiled by the Bureau of Labor Statistics. The pay-roll period is usually 1 week ending nearest the 15th of the month, because this is the period in the month least affected by such factors as holidays. All persons on the pay roll are included whether or not actually employed in the designated week. Excluded groups are agricultural workers, proprietors, self-employed persons, domestic servants, unpaid family workers, casual workers, and personnel of the armed forces.

Workers who hold two or more jobs at the same time or who change jobs are counted as often in the estimates as they were employed by different employers during the reporting week. Therefore, estimates of the Bureau of Labor Statistics somewhat overstate the volume of employment at any one time. However, persons temporarily absent from their jobs without pay (for example, on strike or on unpaid vacation) are not counted in the estimates.

The employment figures of the Bureau of Labor Statistics provide detailed information on trends and levels of industrial activity. The figures are particularly useful in measuring the trend of activity within a particular industry or group of industries and also give an indication of the magnitude of interindustrial shifts. The estimate for any given industry in terms of numbers of persons actually at work is also useful in connection with series on hours, earnings, and turn-over rates.

The estimates for most industries are based on samples consisting of monthly pay-roll reports voluntarily provided by employers to the Bureau of Labor Statistics. Reports are obtained from all of the larger employers in most industries and from a representative sample of smaller establishments. About 33,500 manufacturing establishments (one-fifth of the total), employing about 8 million workers (60 percent of the total), report employment, pay rolls, and man-hours. For nonmanufacturing industries, in which the average establishment is smaller, considerably less coverage yields statistically adequate estimates.

Less than half of the employers send their reports directly to the Bureau of Labor Statistics and the others report to cooperating State agencies which transmit the statistics to the Bureau.

Each month a tabulation is made comparing the employment in an establishment with that for the previous month. From this comparison, percentage changes in employment over the month are computed. These changes are then linked to form an index. This method is used because firms in the sample may change from month to month, or their reports may be late.

To provide a measure of the number of persons employed at any given time, the index of employment is related to a comprehensive base figure (or bench mark) such as is obtained from censuses of manufactures and business or from the reports of the Federal Security Agency. These data are also used to give each industry its proper weight. Periodic adjustments are needed to take into account new firms. Consequently, when a new base figure becomes available, data for the intervening period are revised to make a continuous series between the two points.

The estimates of employment for certain industries are obtained from sources other than those described above. The most important of these are the United States Interstate Commerce Commission (railroad employees); United States Maritime Commission (water transport personnel); United States Civil Service Commission (Federal employees); and Bureau of the Census (State and local government employees).

Estimates of the number of wage and salaried employees in nonagricultural establishments are shown in table A–1, by industry division. As previously stated, the estimates exclude agricultural workers, proprietors, self-employed persons, domestic servants, unpaid family workers, casual workers, and personnel of the armed forces. All types of establishments are included which hire wage or salaried workers, except those engaged in agriculture or in private households. The classification of any particular establishment into one of eight industrial divisions appearing in table A–1 is determined on the basis of the major product or activity of that establishment in 1939. An establishment that was not in operation in 1939 is classified according to its initial product or activity. The individual establishments of firms engaged in more than one type of activity are classified according to the principal activity of each such establishment. (For example, a concern manufacturing and distributing its own product may have establishments classified in both manufacturing and trade if these activities are carried on in different establishments.)

Employees of firms whose major activity is the performance of construction work on contract are included in the contract construction averages. The contract construction estimates cover all persons employed on and off the construction site. Excluded are employees of nonconstruction organizations (including force-account workers of public bodies and private firms) actively engaged in construction.

Force-account employees are workers hired, not through a contractor, but directly by a business or government agency, and utilized as a separate work force to perform nonmaintenance construction work on the agency's own properties.

The major industry division of trade includes wholesale and retail trade, eating and drinking places, filling stations and automotive repair services, and garages.

The transportation and public utilities group includes interstate railroads, communications, and transportation and utilities of all types except those operated by the Federal Government or by a municipality.

The government estimates include Federal Government employment including manufacturing operations carried on in arsenals and navy yards, and also the employment of State and local agencies. Public education is included in the government estimates; private education is included in the service category. The major industry division—service—includes all types of service establishments and all other nonagricultural establishments not included in the other seven categories. For all segments except the government segment, the employment estimates are adjusted to levels indicated by the Federal Security Agency reports, for years from 1939 through 1946.

Estimates for years prior to 1939 are derived from various Bureau of the Census statistics adjusted insofar as possible for comparability with the estimates from 1939 to date. These estimates are not directly comparable with those obtained from population or household reports because (1) they do not include persons with jobs but not at work unless they are receiving pay; (2) they include persons more than once if such persons had more than one employer during the specified pay-roll period; and (3) they are classified according to the employer's statement of his product or activity which may differ from the classification reported by the respondent in a household survey.

Estimates of the number of employees in manufacturing industries and on contract conconstruction are given by State in table A–2 for 1943–47. The estimates for manufacturing industries cover all wage and salaried workers, but do not add to the national totals as shown in table A–1 because of varying bench mark periods and somewhat different methods of computation used by or for the States. Those for construction include both on- and off-site wage earners and salaried employees of construction contractors.

Work on the development of estimates of employment by State was initiated in January 1945, in response to the need for evaluating the extent and effect of war-induced expansion in manufacturing industries. Varying economic interests in the many sections of the country needed a more detailed knowledge of local change than could be obtained from the national estimates. States were grouped together and regional offices were established to administer this program. The regional offices of the Bureau of Labor Statistics or State cooperating agencies[1] prepared the estimates of employment by State.

Estimates of manufacturing employment by State and by month, made available for the years 1943 to 1947, are shown in table A–2. In addition, the regional offices[2] have released data for other industry divisions as well as more detailed information about manufacturing industries that are important in the respective States.

Estimates of employment on contract construction for 46 States and the District of Columbia have been compiled thus far, as a part of the State employment statistics program, and cover the same period as the manufacturing estimates (see table A–2). Employment information from a representative sample of contractors is related to the data for all contractors in a base month.

The base month data for manufacturing and contract construction were obtained chiefly from records of the unemployment compensation agencies of the respective States, supplemented by records obtained from the Bureau of Old-Age and Survivors Insurance of the Federal Security Agency.

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[1] State agencies cooperating with the Bureau of Labor Statistics are as follows:

Alabama—Department of Industrial Relations, Montgomery 5.
Arizona—Unemployment Compensation Division, Employment Security Commission, Phoenix.
Arkansas—Employment Security Division, Department of Labor, Little Rock.
California—Division of Labor Statistics and Research, Department of Industrial Relations, San Francisco 3.
Connecticut—Employment Security Division, Department of Labor and Factory Inspection, Hartford 15.
Delaware—Federal Reserve Bank of Philadelphia, Philadelphia 1, Pa.
Florida—Unemployment Compensation Division, Industrial Commission, Tallahassee.
Georgia—Employment Security Agency, Department of Labor, Atlanta 3.
Idaho—Employment Security Agency, Industrial Accident Board, Boise.
Illinois—Department of Labor, Chicago 1.
Indiana—Employment Security Division, Indianapolis 4.
Iowa—Employment Security Commission, Des Moines 8.
Kansas—State Labor Department, Topeka.
Louisiana—Division of Employment Security, Department of Labor, Baton Rouge 4.
Maine—Unemployment Compensation Commission, Augusta.
Maryland—Department of Labor and Industry, Baltimore 2.
Massachusetts—Division of Statistics, Department of Labor and Industries, Boston 10.
Michigan—Department of Labor and Industry, Lansing 13.
Minnesota—Division of Employment and Security, Department of Social Security, St. Paul 1.
Missouri—Division of Employment Security, Department of Labor and Industrial Relations, Jefferson City.
Montana—Unemployment Compensation Commission, Helena.
Nebraska—Division of Placement and Unemployment Insurance, Department of Labor, Lincoln 1.
Nevada—Employment Security Department, Carson City.
New Jersey—Department of Labor, Trenton 8.
New Mexico—Employment Security Commission, Albuquerque.
New York—Division of Placement and Unemployment Insurance, Department of Labor, New York 17.
North Carolina—Department of Labor, Raleigh.
Oklahoma—Employment Security Commission, Oklahoma City 2.
Pennsylvania—Federal Reserve Bank of Philadelphia, Philadelphia 1 (Manufacturing); Bureau of Research and Information, Department of Labor and Industry, Harrisburg (Nonmanufacturing).
Rhode Island—Division of Census and Information, Department of Labor, Providence 2.
Tennessee—Department of Employment Security, Nashville 3.
Texas—Bureau of Business Resarch, University of Texas, Austin 12.
Utah—Department of Employment Security, Industrial Commission, Salt Lake City 13.
Vermont—Unemployment Compensation Commission, Montpelier.
Virginia—Division of Research and Statistics, Department of Labor and Industry, Richmond 21.
Washington—Employment Security Department, Olympia.
Wisconsin—Statistical Department, Industrial Commission, Madison 3.
Wyoming—Employment Security Commission, Casper.

[2] Regional offices of the Bureau of Labor Statistics were reduced to five, effective on July 25, 1947, with headquarters as follows:
Region I—Boston 8, Mass.
Region II—New York 1, N. Y.
Region III—Atlanta 3, Ga.
Region IV—Chicago 6, Ill.
Region V—San Francisco 2, Calif.

TABLE A-1: Estimated number of wage and salary workers in nonagricultural establishments, by industry division, 1929-47[1]

[In thousands]

Period	Total	Manufacturing	Mining	Contract construction[2]	Transportation and public utilities	Trade[3]	Finance	Service[4]	Government[5]
1929 Av.	31,041	10,534	1,078	1,497	3,907	6,401	1,431	3,127	3,066
1930 Av.	29,143	9,401	1,000	1,372	3,675	6,064	1,398	3,084	3,149
1931 Av.	26,383	8,021	864	1,214	3,243	5,531	1,333	2,913	3,264
1932 Av.	23,377	6,797	722	970	2,804	4,907	1,270	2,682	3,225
1933 Av.	23,466	7,258	735	809	2,659	4,999	1,225	2,614	3,167
1934 Av.	25,699	8,346	874	862	2,736	5,552	1,247	2,784	3,298
1935 Av.	26,792	8,907	888	912	2,771	5,692	1,262	2,883	3,477
1936 Av.	28,802	9,653	937	1,145	2,956	6,076	1,313	3,060	3,662
1937 Av.	30,718	10,606	1,006	1,112	3,114	6,543	1,355	3,233	3,749
1938 Av.	28,902	9,253	882	1,055	2,840	6,453	1,347	3,196	3,876
1939 Av.	30,287	10,078	845	1,150	2,912	6,705	1,382	3,228	3,987
1940 Av.	32,031	10,780	916	1,294	3,013	7,055	1,419	3,362	4,192
1941 Av.	36,164	12,974	947	1,790	3,248	7,567	1,462	3,554	4,622
1942 Av.	39,697	15,051	983	2,170	3,433	7,481	1,440	3,708	5,431
1943 Av.	42,042	17,381	917	1,567	3,619	7,322	1,401	3,786	6,049
1944 Av.	41,480	17,111	883	1,094	3,798	7,399	1,374	3,795	6,026
1945 Av.	40,069	15,302	826	1,132	3,872	7,685	1,394	3,891	5,967
1946 Av.	41,494	14,515	852	1,661	4,023	8,820	1,586	4,430	5,607
1947 Av.	43,970	15,901	911	1,921	4,060	9,450	1,656	4,622	5,449
1945: Jan.	40,878	16,753	848	950	3,780	7,450	1,357	3,725	6,015
Feb.	40,943	16,801	845	959	3,811	7,423	1,356	3,725	6,023
Mar.	41,111	16,728	844	1,002	3,839	7,520	1,361	3,750	6,067
Apr.	40,853	16,528	806	1,053	3,843	7,425	1,368	3,768	6,062
May	40,719	16,292	769	1,093	3,858	7,470	1,374	3,797	6,066
June	40,707	16,061	843	1,147	3,906	7,475	1,391	3,870	6,014
July	40,401	15,693	832	1,187	3,927	7,473	1,404	3,883	6,002
Aug.	40,127	15,343	832	1,232	3,922	7,482	1,410	3,898	6,008
Sept.	38,407	13,414	833	1,232	3,876	7,710	1,404	3,916	6,022
Oct.	38,369	13,307	762	1,252	3,861	7,940	1,416	4,041	5,790
Nov.	38,833	13,367	843	1,266	3,912	8,219	1,432	4,126	5,668
Dec.	39,481	13,331	855	1,215	3,932	8,634	1,456	4,196	5,862
1946: Jan.	39,112	13,524	861	1,220	3,932	8,230	1,490	4,242	5,613
Feb.	38,576	12,798	857	1,251	3,943	8,301	1,513	4,284	5,629
Mar.	39,737	13,510	859	1,375	3,983	8,466	1,542	4,332	5,670
Apr.	40,548	14,147	547	1,528	3,991	8,633	1,567	4,474	5,661
May	40,909	14,235	765	1,617	3,946	8,618	1,586	4,448	5,694
June	41,406	14,493	884	1,701	3,996	8,681	1,607	4,430	5,614
July	41,676	14,681	901	1,802	4,051	8,708	1,615	4,426	5,492
Aug.	42,337	15,062	915	1,887	4,103	8,810	1,624	4,430	5,506
Sept.	42,769	15,245	912	1,923	4,064	8,957	1,611	4,456	5,601
Oct.	43,048	15,303	911	1,910	4,093	9,139	1,621	4,514	5,557
Nov.	43,574	15,541	912	1,887	4,101	9,437	1,625	4,555	5,516
Dec.	44,234	15,642	901	1,826	4,071	9,865	1,628	4,573	5,728
1947: Jan.	43,063	15,677	910	1,690	4,018	9,160	1,626	4,527	5,455
Feb.	43,169	15,783	907	1,668	4,016	9,143	1,628	4,561	5,463
Mar.	43,410	15,826	906	1,709	4,027	9,236	1,638	4,565	5,503
Apr.	43,221	15,750	881	1,798	3,845	9,255	1,636	4,552	5,504
May	43,345	15,569	910	1,865	3,981	9,277	1,643	4,590	5,510
June	43,816	15,672	919	1,957	4,129	9,324	1,650	4,711	5,454
July	43,686	15,580	890	2,043	4,155	9,316	1,675	4,686	5,341
Aug.	44,125	15,962	923	2,096	4,163	9,356	1,688	4,619	5,318
Sept.	44,513	16,175	921	2,107	4,134	9,471	1,668	4,634	5,403
Oct.	44,758	16,209	922	2,099	4,097	9,684	1,671	4,662	5,414
Nov.	44,918	16,256	923	2,046	4,077	9,886	1,673	4,670	5,387
Dec.	45,618	16,354	925	1,978	4,071	10,288	1,676	4,688	5,638

[1] Estimates include all full- and part-time wage and salary workers in nonagricultural establishments who worked or received pay during the pay period ending nearest the 15th of the month. Proprietors, self-employed persons, domestic servants, and personnel of the armed forces are excluded. These estimates have been adjusted to levels indicated by Federal Security Agency data through 1946.

[2] Covers all employees of firms whose major activity is construction. The estimates are based on employment reports of these firms and include all off-site employees (regardless of whether or not they are engaged in work relevant to construction activities) as well as employees at the site of construction projects. They do not cover self-employed persons, working proprietors, and employees of nonconstruction organizations (including force account workers of public bodies and private firms) actively engaged in construction activities.

[3] Includes wholesale and retail trade, eating and drinking places, filling stations, automotive repair services, and garages.

[4] Includes all types of service except automotive repair services and all types of nonagricultural establishments not included in any of the other major industry divisions.

[5] Includes Federal, State, and local government including public education and Federal force-account construction.

TABLE A-2: Estimated number of wage and salary workers in manufacturing industries[1] and on contract construction,[2] by State, 1943-47

[In thousands]

Period	MANUFACTURING											
	Alabama	Arizona	Arkansas	California	Colorado	Connecticut	Delaware	District of Columbia	Florida	Georgia	Idaho	Illinois
Bench mark period[3]	1947 Dec.	1947 Sept.	1947 March	1944 3d Quarter	1945 Sept.	1947 June	1945 Sept.	1944 Sept.	1947 1st Quarter	1944 3d Quarter	1945 Sept.	1945 3d Quarter
1943 average	258.5	19.4	76.7	1,165.5	67.5	504.2	55.2	15.6	136.0	302.9	15.9	1,263.7
1944 average	251.7	23.1	77.0	1,109.6	55.5	464.5	53.9	15.3	135.3	307.4	17.9	1,286.8
1945 average	223.4	20.0	71.4	857.2	54.9	395.4	46.6	14.7	103.2	270.6	17.3	1,171.1
1946 average	205.9	11.9	67.1	677.1	51.8	382.0	44.6	16.4	80.5	250.5	19.7	1,160.8
1947 average	225.3	14.0	75.3	711.8	56.5	415.6	45.8	17.3	93.2	252.0	19.3	1,248.0
1945: January	252.5	24.6	74.3	1,024.3	53.1	440.3	51.4	15.2	129.9	302.2	16.6	1,253.5
February	250.9	25.5	74.6	1,020.2	55.0	441.9	51.1	15.1	125.4	297.2	16.4	1,258.3
March	242.7	25.3	73.4	996.1	56.7	442.1	50.8	15.2	120.7	290.6	16.5	1,251.7
April	237.6	25.2	71.7	975.1	57.0	437.1	50.3	14.9	116.7	283.1	17.1	1,237.3
May	234.2	24.7	70.8	932.1	58.3	431.6	48.5	14.4	111.7	277.7	18.2	1,222.5
June	231.8	22.8	67.6	889.2	58.8	421.4	47.8	14.3	108.2	279.4	18.3	1,214.1
July	227.9	22.2	73.0	887.9	58.7	405.7	46.3	14.0	103.4	281.0	17.6	1,183.3
August	221.3	20.7	74.3	889.1	56.6	375.6	47.3	14.1	100.0	272.8	17.9	1,162.8
September	199.0	13.2	69.4	742.7	48.7	336.1	42.8	14.4	82.8	241.6	18.5	1,058.7
October	194.4	12.0	70.6	689.0	52.1	335.1	40.9	14.5	78.3	243.0	17.8	1,045.2
November	193.5	12.0	71.6	622.1	52.9	337.5	40.4	14.7	80.6	241.0	17.2	1,072.4
December	194.9	11.2	65.2	618.9	51.4	340.7	41.5	15.2	80.4	237.5	16.2	1,093.6
1946: January	196.0	11.0	61.9	622.3	47.6	337.1	42.2	15.8	83.0	239.2	15.9	1,119.0
February	179.9	10.9	64.4	602.5	43.3	324.6	41.0	16.3	83.0	240.3	15.4	1,063.4
March	199.3	10.8	68.5	611.5	48.4	341.0	43.5	16.2	81.2	241.0	15.7	1,111.2
April	201.1	11.0	66.2	651.5	48.6	369.3	43.9	16.3	79.0	242.0	17.2	1,129.0
May	201.3	11.0	66.0	655.4	49.2	379.0	43.3	16.2	77.9	243.5	19.5	1,130.6
June	202.4	11.1	65.5	665.1	50.0	392.0	44.7	16.1	76.8	244.9	20.8	1,159.8
July	208.3	12.1	65.6	700.8	52.6	390.9	45.4	16.1	73.9	251.6	22.2	1,165.8
August	210.3	11.9	67.8	740.8	54.5	396.5	47.9	16.4	74.3	257.1	23.0	1,186.0
September	212.0	12.2	69.1	738.8	55.5	406.7	48.0	16.7	77.1	260.8	23.2	1,195.7
October	215.2	12.7	69.6	725.5	56.9	410.9	45.1	16.7	79.6	261.5	21.7	1,203.4
November	221.6	13.5	70.1	705.4	58.7	416.1	45.0	17.0	89.4	263.6	21.9	1,229.
December	222.9	13.9	70.0	705.9	56.2	420.6	45.2	17.3	90.4	260.0	20.1	1,236.0
1947: January	[4]222.9	[4]14.0	[4]70.2	697.1	56.0	[4]424.4	45.3	16.9	[4]103.1	257.9	17.9	1,244.4
February	225.1	13.6	71.6	693.6	53.5	426.5	44.6	16.9	100.5	255.9	17.7	1,251.1
March	226.3	14.1	71.5	692.6	53.6	424.0	45.0	17.1	99.5	254.0	18.4	1,249.4
April	225.2	14.5	74.1	699.6	54.1	419.9	44.9	17.2	94.9	253.9	18.4	1,248.2
May	222.8	14.2	74.7	693.0	53.8	415.0	45.4	17.1	88.9	249.7	19.2	1,232.0
June	221.1	14.4	74.2	689.1	54.6	410.4	45.4	17.2	88.2	246.2	20.1	1,238.3
July	219.6	13.8	75.1	703.8	55.9	403.3	45.2	17.4	85.7	238.2	20.8	1,228.6
August	221.4	13.2	80.5	760.1	56.6	406.0	48.4	17.3	86.8	248.5	19.5	1,237.8
September	226.5	13.6	81.2	744.6	57.9	409.2	48.2	17.5	88.6	251.9	19.3	1,249.0
October	228.9	14.0	77.1	736.3	60.6	414.8	45.8	17.5	90.4	253.9	20.4	1,257.0
November	231.8	14.5	77.1	717.4	60.3	415.7	45.8	17.4	95.0	256.7	20.1	1,266.3
December	231.9	14.6	76.1	714.8	61.0	417.8	46.1	17.5	97.8	257.4	19.2	1,273.6

See footnotes at end of table.

TABLE A-2: Estimated number of wage and salary workers in manufacturing industries[1] and on contract construction,[2] by State, 1943-47—Continued

[In thousands]

Period	CONTRACT CONSTRUCTION											
	Alabama	Arizona	Arkansas	California	Colorado	Connecticut	Delaware	District of Columbia	Florida	Georgia	Idaho	Illinois
Bench mark period[3]	1946	1947 Sept.	1946	(5)	1946	1946	1946	1946	1946	1947 Sept.	1946	1945 Sept.
1943 average	25.4	14.0	18.9	...	10.8	17.6	5.5	17.1	42.5	34.0	6.0	81.2
1944 average	12.0	5.3	7.0	...	6.9	14.1	3.2	12.3	23.9	17.6	3.8	59.5
1945 average	13.9	6.0	19.0	...	8.7	15.2	3.4	12.6	26.2	16.6	3.4	63.3
1946 average	19.7	8.9	13.2	...	12.8	25.9	6.2	16.7	43.0	28.4	5.4	88.1
1947 average	...	11.1	...	...	...	29.7	...	...	...	36.0	...	111.7
1945: January	11.5	4.9	14.3	...	6.8	12.0	2.5	10.5	20.1	12.1	3.0	47.9
February	12.5	5.3	21.8	...	6.4	11.5	2.4	10.8	19.7	12.2	2.8	49.8
March	14.9	5.6	26.0	...	7.3	12.2	3.0	11.4	19.2	13.7	3.1	55.1
April	15.6	6.0	26.1	...	8.4	13.2	2.7	12.4	21.2	14.0	3.0	57.6
May	15.0	6.0	22.8	...	9.5	13.7	2.8	12.7	23.6	15.4	3.3	59.7
June	15.0	6.2	20.7	...	10.4	14.3	3.3	13.0	25.8	16.6	3.6	62.8
July	14.4	6.1	24.1	...	10.7	15.2	3.2	12.8	26.7	17.5	3.3	66.8
August	14.4	6.1	26.7	...	10.2	15.9	3.5	13.1	28.3	19.3	3.5	69.8
September	14.4	6.3	15.1	...	9.1	17.2	4.0	13.5	29.8	19.4	3.7	71.8
October	13.0	6.5	11.9	...	8.6	18.3	4.6	13.9	31.0	19.3	3.9	74.3
November	13.4	6.4	9.3	...	8.7	19.2	4.6	13.7	34.1	20.3	4.1	74.6
December	12.9	6.8	8.7	...	8.6	19.2	4.4	13.2	35.4	19.3	3.7	68.9
1946: January	13.0	7.0	8.8	...	8.7	18.7	4.2	12.9	36.5	19.5	3.1	62.9
February	14.1	7.5	9.6	...	9.1	18.9	4.2	13.4	37.7	21.1	3.1	69.7
March	15.4	8.0	10.6	...	10.2	21.2	4.8	15.3	38.7	22.6	3.9	76.6
April	17.2	8.1	11.7	...	11.3	24.5	6.2	16.6	39.6	23.9	4.1	84.2
May	19.8	8.3	12.6	...	12.6	25.8	6.7	16.9	40.7	25.8	4.7	86.4
June	21.7	8.8	14.1	...	13.4	26.8	6.9	17.2	41.6	28.2	5.7	88.9
July	22.0	9.4	14.8	...	13.8	28.1	7.0	17.2	43.4	30.6	6.5	92.0
August	23.5	10.1	16.4	...	15.1	28.9	7.0	18.4	46.3	33.6	6.9	96.1
September	23.7	10.2	16.5	...	15.2	29.4	7.2	18.9	47.1	35.0	6.7	98.8
October	22.6	10.0	14.8	...	15.3	29.6	7.1	18.0	47.4	33.6	7.4	102.4
November	22.1	9.7	14.1	...	14.3	29.7	6.9	18.0	48.4	34.8	6.9	100.8
December	20.8	9.6	14.1	...	14.5	29.0	6.6	17.2	48.0	32.5	6.0	97.9
1947: January	18.8	9.9	12.9	...	14.7	26.0	5.7	15.8	46.6	32.3	4.9	92.9
February	19.8	10.0	12.9	...	14.0	25.1	5.5	16.3	44.1	32.6	5.0	96.1
March	20.2	10.3	12.9	...	14.0	25.5	5.7	16.9	43.2	33.2	5.7	100.4
April	20.6	10.4	13.2	...	14.2	27.2	6.4	17.8	44.5	33.7	6.4	107.8
May	22.2	11.0	13.5	...	15.5	29.4	6.6	19.1	45.2	36.0	7.5	114.1
June	24.0	11.4	13.6	...	16.5	31.2	6.6	20.1	45.7	38.1	7.7	115.6
July	(6)	11.0	(6)	...	(6)	32.6	(6)	(6)	(6)	39.3	(6)	120.6
August	(6)	11.2	(6)	...	(6)	32.7	(6)	(6)	(6)	39.3	(6)	122.2
September	(6)	11.6	(6)	...	(6)	32.3	(6)	(6)	(6)	38.6	(6)	121.7
October	(6)	11.9	(6)	...	(6)	32.4	(6)	(6)	(6)	37.2	(6)	121.6
November	(6)	11.8	(6)	...	(6)	31.8	(6)	(6)	(6)	37.1	(6)	116.9
December	(6)	12.1	(6)	...	(6)	30.4	(6)	(6)	(6)	35.0	(6)	110.9

See footnotes at end of table.

TABLE A-2: Estimated number of wage and salary workers in manufacturing industries[1] and on contract construction,[2] by State, 1943-47—Continued

[In thousands]

Period	MANUFACTURING—Continued											
	Indiana	Iowa	Kansas	Kentucky	Louisiana	Maine	Maryland	Massachusetts	Michigan	Minnesota	Mississippi	Missour
Bench mark period[3]	1945	1947 1st Quarter	1944 Sept.	1945 3d Quarter	1944 Sept.	1947 3d Quarter	1945 3d Quarter	1943 Sept.	1945 3d Quarter	1945 3d Quarter	1944 3d Quarter	1945 Sept.
1943 average	633.1	161.7	144.2	131.7	166.1	144.4	348.8	835.6	1,181.8	215.1	95.1	412.9
1944 average	619.1	158.0	147.4	137.6	177.1	133.7	322.0	798.8	1,171.5	216.2	95.6	395.9
1945 average	535.5	143.8	113.2	128.7	153.9	112.7	268.2	734.6	960.6	205.8	85.1	364.8
1946 average	498.5	137.2	76.6	122.4	130.7	114.1	231.5	730.9	938.9	191.1	84.9	332.8
1947 average	556,7	153.3	79.7	127.8	138.5	114.5	230.3	742.6	1,019.3	199.6	92.9	358.1
1945: January	597.9	157.2	140.2	135.4	175.8	125.2	303.7	776.1	1,120.3	220.1	93.1	403.1
February	597.5	157.7	139.4	135.6	170.2	123.5	303.4	774.5	1,121.9	223.8	91.9	405.4
March	593.8	156.8	136.3	135.0	167.8	120.3	303.3	774.2	1,111.9	223.7	89.8	405.9
April	588.7	153.1	133.4	136.2	162.6	114.0	298.7	768.8	1,086.6	219.0	86.4	403.4
May	584.1	151.6	132.6	136.2	156.3	113.3	292.9	760.0	1,046.5	214.5	85.0	402.0
June	570.3	153.0	125.6	134.4	154.1	114.5	284.9	749.8	1,012.0	213.3	83.5	394.2
July	547.1	148.2	120.4	133.9	160.0	113.7	275.4	732.9	972.0	217.0	82.8	376.9
August	532.6	138.9	119.7	130.9	153.5	111.6	275.3	724.4	921.3	206.3	83.0	358.2
September	467.5	129.8	81.0	118.1	143.2	108.3	230.7	679.1	759.1	189.0	79.9	306.9
October	453.7	122.8	77.2	116.8	136.6	103.8	220.7	679.2	787.6	182.2	79.7	306.7
November	447.7	125.9	75.4	114.4	133.1	96.9	212.5	687.7	831.9	179.2	82.0	309.2
December	445.6	130.6	77.0	117.5	133.5	107.3	217.0	708.1	756.2	181.8	83.7	305.3
1946: January	448.7	132.6	77.8	118.6	128.3	109.9	214.5	685.3	782.5	185.4	82.6	309.9
February	392.8	132.9	76.3	113.3	128.7	111.4	211.2	678.6	764.4	181.9	81.8	314.7
March	440.1	135.8	77.1	116.8	131.3	110.1	217.5	695.0	783.4	186.7	81.0	316.6
April	486.0	134.8	75.7	119.4	132.5	108.3	222.7	730.5	913.0	185.8	81.7	322.5
May	495.2	135.4	76.2	121.0	132.9	110.7	224.2	738.3	939.2	184.7	81.4	326.4
June	511.7	136.3	74.8	123.1	132.9	113.7	234.5	740.6	942.9	183.3	83.4	330.4
July	511.3	136.1	76.1	124.8	132.4	115.6	238.2	727.9	982.3	193.6	83.7	333.9
August	530.7	143.3	78.1	126.7	128.0	118.7	249.0	741.2	1,010.4	195.1	87.1	341.4
September	545.1	136.4	73.8	126.2	127.0	117.6	245.5	750.0	1,040.6	200.0	87.2	340.2
October	538.3	132.0	74.1	122.2	128.7	117.7	238.6	754.1	1,033.3	196.0	87.3	343.7
November	538.4	144.0	79.5	127.4	132.5	117.1	240.7	762.1	1,041.6	200.2	90.5	356.0
December	544.2	146.9	79.6	129.1	133.5	117.8	241.3	766.9	1,032.8	200.1	91.5	357.9
1947: January	549.6	[4]150.3	78.8	129.1	132.7	[4]116.4	237.9	761.6	1,027.8	199.0	92.7	355.3
February	556.2	150.1	78.1	129.9	132.6	115.7	237.3	765.5	1,038.5	199.1	93.5	359.7
March	555.8	150.2	78.0	129.1	133.3	114.8	236.2	763.5	1,046.7	197.8	92.1	355.9
April	554.4	149.4	79.2	130.7	135.2	107.2	230.7	749.9	1,035.4	195.1	90.4	355.9
May	550.1	150.3	79.5	123.9	136.5	106.8	228.9	734.3	980.3	193.5	88.5	351.3
June	553.2	152.3	81.0	123.6	138.3	108.2	224.3	724.7	1,013.1	194.5	90.9	355.5
July	550.0	153.5	80.7	122.4	140.9	112.9	217.4	707.2	997.0	205.1	91.4	352.9
August	552.3	155.0	80.0	125.8	142.6	119.4	228.2	720.4	1,004.6	201.6	95.3	356.6
September	580.0	156.1	79.4	128.2	142.8	119.6	232.4	732.5	1,023.3	209.9	95.0	356.8
October	561.0	155.0	79.8	130.3	143.5	116.9	229.3	741.6	1,021.8	199.0	94.1	362.6
November	558.7	157.7	79.9	130.7	141.1	117.4	231.1	753.2	1,019.0	199.9	95.5	366.8
December	559.0	160.2	81.9	130.4	142.1	118.5	229.6	757.2	1,024.2	200.3	95.7	367.6

See footnotes at end of table.

TABLE A-2: Estimated number of wage and salary workers in manufacturing industries[1] and on contract construction,[2] by State, 1943-47—Continued

[In thousands]

Period	CONTRACT CONSTRUCTION—Continued											
	Indiana	Iowa	Kansas	Kentucky	Louisiana	Maine	Maryland	Massachusetts	Michigan	Minnesota	Mississippi	Missouri
Bench mark period[3]	1947 Sept.	1946	1946	1946	1945 Sept.	1947 Sept.	1946	1945 Oct.	1945 Sept.	1945 Sept.	1946	1946
1943 average	36.6	13.7	34.8	19.0	49.4	10.1	44.0	36.3	47.4	18.1	15.7	28.4
1944 average	24.4	12.0	12.1	11.4	27.4	5.0	24.6	31.7	32.5	15.7	9.0	19.6
1945 average	30.0	13.8	13.0	11.6	18.7	5.0	24.0	36.6	36.4	19.0	8.6	26.8
1946 average	39.4	24.0	18.1	17.4	25.6	9.0	36.2	54.7	58.1	29.4	12.7	39.8
1947 average	47.4	....	....	....	....	11.3	....	....	....	29.8	....	....
1945: January	23.3	10.7	11.5	9.8	17.9	3.8	19.5	29.8	26.0	16.3	7.8	20.5
February	22.7	10.4	11.8	9.7	18.2	3.6	19.6	30.7	25.6	17.6	7.7	22.1
March	26.2	10.9	13.0	9.9	17.5	3.8	20.7	31.3	26.3	17.9	7.9	24.1
April	29.5	12.6	13.2	9.8	17.8	4.0	22.5	33.1	29.7	18.8	7.8	23.1
May	32.4	12.3	13.6	10.1	17.8	4.3	23.1	34.1	31.3	16.8	7.8	24.0
June	33.4	13.2	13.3	10.5	19.1	4.7	24.1	35.7	35.4	17.8	8.3	26.0
July	35.6	14.0	13.6	11.7	17.7	5.3	24.6	37.2	39.4	18.5	8.9	28.5
August	33.9	14.7	13.4	12.9	20.1	5.8	26.0	38.7	41.2	19.8	9.4	30.3
September	31.2	15.6	13.2	13.8	20.8	6.2	26.9	40.2	46.3	20.5	10.0	30.9
October	30.7	17.4	13.2	14.3	19.5	6.3	27.9	42.2	46.4	22.1	8.8	30.9
November	30.7	17.2	13.5	13.6	18.9	6.5	27.2	43.7	46.8	22.0	9.5	32.0
December	30.0	16.0	12.9	12.7	18.6	6.1	26.4	42.8	43.1	20.0	9.0	29.3
1946: January	30.5	15.4	13.2	12.3	19.6	5.8	26.7	41.2	42.6	20.5	8.8	28.6
February	30.4	15.9	15.0	12.5	20.5	6.0	27.1	39.6	40.7	20.4	9.1	30.6
March	33.9	17.3	15.4	13.8	21.2	6.7	30.7	43.8	46.1	22.9	9.6	33.7
April	36.5	20.6	16.2	15.6	22.7	8.2	34.0	50.1	54.4	27.3	10.0	36.2
May	37.4	22.3	17.8	16.2	23.5	8.9	36.3	52.4	58.9	29.9	10.5	38.2
June	39.1	24.3	18.6	16.9	25.4	9.4	37.8	54.3	61.5	32.8	11.8	40.2
July	41.2	26.6	19.1	19.1	29.7	10.4	39.6	61.2	63.5	34.3	13.8	43.4
August	43.5	29.0	20.6	20.0	31.7	10.8	40.1	64.4	67.1	34.6	15.2	44.7
September	46.0	29.5	20.8	21.1	32.1	10.9	41.4	65.4	68.7	33.7	15.9	46.2
October	46.2	30.1	20.7	20.9	28.3	10.9	40.0	64.3	67.6	33.6	16.4	46.1
November	45.2	29.5	20.1	20.5	26.8	10.6	40.9	62.1	64.0	32.3	16.5	45.4
December	43.3	27.9	19.5	19.7	26.3	9.7	40.2	58.0	62.6	30.4	15.3	44.5
1947: January	39.5	24.0	17.6	17.0	24.4	8.5	36.6	52.2	59.7	29.3	12.5	40.5
February	41.1	23.3	18.3	16.3	23.4	8.0	36.8	50.8	54.6	24.6	12.7	40.5
March	42.7	23.8	18.6	16.9	24.9	8.3	38.8	52.5	57.2	25.4	13.2	41.7
April	45.2	25.1	19.9	18.5	24.7	9.8	43.1	54.0	58.2	26.6	13.7	39.8
May	46.6	27.5	21.6	19.5	25.9	11.1	46.3	59.4	48.6	29.0	15.1	38.6
June	49.2	29.2	23.1	20.5	26.9	12.5	48.7	64.5	55.6	31.0	15.6	43.4
July	50.2	(6)	(6)	(6)	(6)	13.0	(6)	(6)	(6)	32.3	(6)	(6)
August	50.9	(6)	(6)	(6)	(6)	13.3	(6)	(6)	(6)	33.1	(6)	(6)
September	51.8	(6)	(6)	(6)	(6)	13.5	(6)	(6)	(6)	34.5	(6)	(6)
October	52.2	(6)	(6)	(6)	(6)	13.4	(6)	(6)	(6)	34.0	(6)	(6)
November	50.6	(6)	(6)	(6)	(6)	12.8	(6)	(6)	(6)	30.6	(6)	(6)
December	48.5	(6)	(6)	(6)	(6)	11.4	(6)	(6)	(6)	27.3	(6)	(6)

See footnotes at end of table.

TABLE A-2: Estimated number of wage and salary workers in manufacturing industries[1] and on contract construction,[2] by State, 1943-47—Continued

[In thousands

Period	MANUFACTURING—Continued											
	Montana	Nebraska	Nevada	New Hampshire	New Jersey	New Mexico	New York	North Carolina	North Dakota	Ohio	Oklahoma	Oregon
Bench mark period[3]	1945 3d Quarter	1945 3d Quarter	1947 1st Quarter	1943 Sept.	1945 Sept.	1947 1st Quarter	1945 Sept.	1944 3d Quarter	1945 3d Quarter	1945 3d Quarter	1944 Sept.	1945 3d Quarter
1943 average	15.7	60.8	7.9	77.0	951.1	7.9	2,115.7	399.9	5.6	1,363.3	99.7	192.1
1944 average	15.6	61.3	5.8	75.4	923.9	8.2	2,070.7	383.2	6.0	1,332.8	101.9	186.
1945 average	14.5	56.7	3.0	72.8	805.3	8.6	1,908.1	353.0	5.5	1,193.2	86.7	151.3
1946 average	15.7	42.5	3.1	78.7	725.4	9.8	1,865.2	359.4	5.9	1,159.4	53.8	116.2
1947 average	17.7	43.7	3.4	81.7	749.6	9.3	1,894.0	372.0	6.7	1,245.3	54.8	116.6
1945: January	14.6	65.6	3.6	75.0	883.9	8.1	2,025.0	369.3	5.7	1,286.6	105.4	179.8
February	14.4	65.6	3.5	74.8	886.7	8.4	2,030.3	367.7	5.6	1,299.4	107.2	172.9
March	14.4	64.8	3.5	75.0	882.5	8.7	2,036.4	364.6	5.5	1,295.0	107.1	166.3
April	14.4	63.3	3.4	73.7	872.8	8.5	2,026.9	358.9	5.4	1,281.2	105.7	165.5
May	14.9	62.5	2.6	73.5	859.3	8.7	2,009.7	355.3	5.2	1,272.1	103.6	165.9
June	14.8	62.6	2.7	73.3	848.9	8.9	1,971.0	358.3	5.4	1,269.6	94.1	167.5
July	14.6	59.5	2.7	71.7	821.3	8.9	1,908.4	354.6	5.4	1,237.4	90.2	163.7
August	14.7	57.4	2.8	72.0	810.0	9.1	1,886.0	350.9	5.4	1,204.1	86.2	163.3
September	14.6	46.3	2.7	69.7	706.9	8.6	1,749.4	340.7	5.5	1,017.5	62.0	139.6
October	14.2	43.1	2.7	71.4	692.2	8.4	1,738.5	331.7	5.3	1,037.3	60.6	116.5
November	14.0	44.4	2.7	68.5	698.1	8.5	1,752.0	339.0	5.8	1,045.7	59.6	107.0
December	13.8	44.9	2.7	75.4	700.7	8.5	1,764.1	344.7	5.7	1,072.0	58.5	107.8
1946: January	12.9	43.3	2.8	76.1	675.1	8.4	1,783.4	345.3	5.5	1,099.7	56.4	108.0
February	12.9	43.4	2.8	75.8	665.3	8.7	1,740.2	351.1	5.4	977.2	54.5	106.0
March	13.5	43.0	2.9	77.0	680.2	9.0	1,794.7	358.2	5.5	1,087.6	54.1	106.9
April	14.0	42.8	2.9	77.5	716.9	9.5	1,851.0	357.4	5.8	1,138.9	52.7	109.4
May	15.4	42.4	3.0	78.9	727.8	9.9	1,857.6	356.4	6.1	1,147.5	51.8	111.8
June	15.7	42.1	3.0	79.3	735.8	10.1	1,864.2	359.9	5.8	1,161.2	52.8	118.2
July	16.5	41.5	3.2	77.2	733.2	10.5	1,855.3	359.6	5.9	1,171.5	52.5	121.2
August	16.7	43.3	3.4	79.2	742.8	10.6	1,910.8	361.2	6.2	1,205.1	54.7	126.5
September	16.9	40.3	3.4	79.6	748.9	10.5	1,926.8	361.9	5.9	1,223.5	52.2	127.4
October	18.0	39.6	3.4	79.0	753.2	10.3	1,928.9	363.7	6.0	1,230.5	52.6	122.2
November	18.1	44.0	3.5	81.6	757.7	10.2	1,939.6	367.0	6.5	1,238.3	55.6	118.4
December	17.9	44.5	3.5	83.0	768.0	10.2	1,930.3	371.5	6.6	1,231.1	55.4	118.0
1947: January	16.6	44.1	[4]3.3	82.4	770.3	[4]8.4	1,922.9	373.9	6.4	1,242.7	54.7	116.1
February	16.4	42.8	3.2	83.5	768.4	8.5	1,939.1	375.7	6.3	1,251.3	54.6	115.2
March	16.4	42.8	3.2	83.0	768.6	9.0	1,934.5	376.0	6.5	1,255.4	54.2	114.4
April	16.6	41.9	3.4	81.1	738.5	9.3	1,893.4	372.9	6.5	1,254.6	54.0	115.5
May	17.1	42.5	3.3	78.7	727.0	9.6	1,858.0	366.4	6.7	1,238.7	53.0	117.1
June	17.8	43.1	3.3	79.3	745.2	9.6	1,841.6	366.0	6.8	1,244.5	53.5	119.1
July	18.4	43.4	3.4	77.6	719.6	9.6	1,801.9	365.2	6.8	1,232.0	53.8	116.6
August	18.2	43.2	3.4	80.7	735.9	9.8	1,870.8	366.6	6.9	1,238.1	55.2	122.4
September	18.1	43.1	3.4	82.1	749.2	9.6	1,900.1	368.1	6.7	1,243.8	55.2	122.2
October	19.1	45.1	3.5	82.9	751.4	9.4	1,922.8	374.1	6.7	1,244.7	55.7	117.2
November	18.7	45.9	3.5	83.9	757.4	9.1	1,918.6	378.7	6.8	1,247.3	56.5	112.2
December	18.5	46.3	3.3	85.3	764.0	9.1	1,924.6	380.8	6.7	1,250.9	57.0	111.4

See footnotes at end of table.

TABLE A-2: Estimated number of wage and salary workers in manufacturing industries[1] and on contract construction,[2] by State, 1943-47—Continued

[In thousands]

Period	CONTRACT CONSTRUCTION—Continued											
	Montana	Nebraska	Nevada	New Hampshire	New Jersey	New Mexico	New York	North Carolina	North Dakota	Ohio	Oklahoma	Oregon
Bench mark period[3]	1947 Sept.	1946	1946	1946	1946	(5)	1946	1946	1946	1946	1946	1946
1943 average	3.3	14.7	7.5	3.0	47.5	....	123.8	35.8	1.4	70.3	30.4	17.9
1944 average	3.1	7.5	2.6	2.4	38.5	....	100.7	17.0	1.5	52.2	10.6	14.4
1945 average	3.7	7.7	3.4	3.1	38.9	....	107.8	17.0	1.7	55.0	10.1	13.0
1946 average	5.8	11.6	5.5	6.4	60.2	....	171.7	34.2	3.6	92.4	18.0	20.4
1947 average	6.9	....	....	....	64.2	....	196.1	....	....	....	....	....
1945: January	2.8	7.0	1.8	2.2	33.4	....	93.9	12.6	1.0	39.6	8.2	11.3
February	2.8	5.8	1.9	2.0	31.6	....	91.8	13.0	1.0	40.0	8.4	10.9
March	2.7	5.4	2.4	2.1	32.1	....	92.8	14.0	1.0	43.8	8.3	11.1
April	3.2	6.4	3.0	2.5	33.9	....	100.0	14.2	1.4	48.9	8.4	11.7
May	3.5	7.3	3.3	2.7	34.8	....	102.7	15.0	1.6	50.7	8.9	12.1
June	3.9	7.6	4.2	3.0	35.9	....	107.0	16.3	2.2	54.5	9.5	12.9
July	4.1	8.2	4.7	3.2	38.2	....	112.7	16.9	2.1	58.1	10.2	13.8
August	4.2	8.4	4.6	3.3	40.0	....	116.2	18.2	2.4	61.3	11.4	14.7
September	4.3	8.9	3.5	3.8	43.5	....	117.5	19.2	2.3	63.2	12.1	14.1
October	4.6	9.3	4.0	4.1	48.5	....	118.3	20.6	2.1	68.0	12.1	15.3
November	4.4	9.3	3.7	4.3	48.1	....	122.3	22.2	2.0	68.0	12.2	14.5
December	4.2	8.5	3.7	4.2	46.5	....	118.6	21.6	1.8	63.8	11.7	13.7
1946: January	3.7	8.0	3.5	4.0	44.9	....	119.3	23.4	1.9	65.3	12.0	14.1
February	3.7	8.1	3.9	4.0	45.0	....	119.0	25.1	1.8	67.6	12.5	15.0
March	4.0	9.4	4.4	4.5	50.6	....	132.2	27.7	1.9	78.0	13.5	16.4
April	5.2	10.8	5.3	5.8	58.5	....	152.5	30.9	2.7	85.7	15.0	18.3
May	5.9	12.3	5.9	6.3	61.6	....	162.1	33.1	3.5	90.4	16.2	20.6
June	6.7	13.3	6.1	6.9	62.8	....	168.9	35.4	4.2	93.9	18.3	21.2
July	7.1	13.5	6.3	7.4	64.4	....	185.9	36.9	4.5	102.2	20.4	22.9
August	7.5	14.5	6.5	7.9	65.6	....	195.1	39.5	4.8	107.2	22.2	24.5
September	7.3	13.7	6.5	7.5	66.0	....	200.4	39.3	4.8	107.1	22.6	24.2
October	6.7	12.5	6.0	7.8	67.8	....	209.9	39.9	4.5	107.5	21.8	24.1
November	6.7	11.8	5.8	7.6	68.1	....	211.0	40.2	4.7	103.9	21.4	22.8
December	5.6	11.3	5.7	7.2	66.7	....	203.8	39.5	3.9	99.5	20.5	21.2
1947: January	5.1	9.7	5.4	5.8	61.4	....	179.2	38.5	3.3	90.7	21.0	19.9
February	5.2	9.7	5.0	5.3	57.5	....	173.4	38.4	3.2	86.2	21.4	20.0
March	5.1	10.1	4.8	5.3	58.2	....	173.1	38.4	3.2	89.7	21.6	20.8
April	6.2	12.8	4.9	6.3	62.3	....	186.5	39.1	3.7	97.0	21.0	21.4
May	7.1	15.1	4.7	6.8	61.6	....	197.4	40.7	4.8	101.4	21.7	22.7
June	7.5	15.8	4.9	7.2	65.3	....	203.8	41.9	5.3	105.3	22.9	23.8
July	8.5	(6)	(6)	(6)	68.9	....	209.5	(6)	(6)	(6)	(6)	(6)
August	8.4	(6)	(6)	(6)	70.5	....	213.2	(6)	(6)	(6)	(6)	(6)
September	8.3	(6)	(6)	(6)	69.1	....	212.5	(6)	(6)	(6)	(6)	(6)
October	7.4	(6)	(6)	(6)	67.0	....	208.8	(6)	(6)	(6)	(6)	(6)
November	7.1	(6)	(6)	(6)	65.2	....	203.7	(6)	(6)	(6)	(6)	(6)
December	6.6	(6)	(6)	(6)	63.7	....	192.0	(6)	(6)	(6)	(6)	(6)

See footnotes at end of table.

TABLE A-2: Estimated number of wage and salary workers in manufacturing industries[1] and on contract construction,[2] by State, 1943-47—Continued

[In thousands]

Period	MANUFACTURING—Continued												
	Pennsylvania	Rhode Island	South Carolina	South Dakota	Tennessee	Texas	Utah	Vermont	Virginia	Washington	West Virginia	Wisconsin	Wyoming
Bench mark period[3]	1945 3d Quarter	1945 Sept.	1944 3d Quarter	1945 3d Quarter	1944 3d Quarter	1943 3d Quarter	1946 3d Quarter	1947 3d Quarter	1944 3d Quarter	1946 2d Quarter	1945 3d Quarter	1946 June	1945 Sept.
1943 average	1,579.3	169.4	191.8	10.3	255.9	424.8	33.5	41.3	231.9	285.6	132.2	442.8	5.1
1944 average	1,578.5	159.2	180.0	10.1	271.1	425.0	24.9	42.2	220.2	279.6	131.9	452.2	5.2
1945 average	1,461.5	141.0	170.5	10.0	255.5	364.5	23.6	40.1	202.0	232.3	132.9	425.3	5.4
1946 average	1,398.5	144.9	180.2	10.1	236.6	308.8	22.1	40.8	201.6	168.0	127.0	(7)	5.9
1947 average	1,505.7	150.1	191.9	11.4	249.9	334.5	25.9	95.3	211.8	176.0	132.3	434.3	6.4
1945: January	1,563.1	156.2	177.2	10.4	272.2	407.4	23.1	42.1	212.8	271.2	134.5	450.7	5.1
February	1,567.2	155.4	175.6	10.1	274.5	402.8	22.9	42.2	215.1	271.2	136.1	456.4	5.0
March	1,563.6	154.8	174.1	10.1	273.9	402.2	22.6	41.9	214.1	267.7	136.8	457.9	5.0
April	1,545.8	151.4	170.4	9.7	272.4	397.8	22.8	41.6	212.3	263.3	138.3	449.1	4.9
May	1,529.1	148.8	168.7	9.8	270.8	391.9	22.7	41.1	210.2	260.0	138.7	443.7	5.0
June	1,523.3	145.8	170.5	9.9	268.9	378.6	23.0	41.3	208.1	257.4	141.7	440.5	5.2
July	1,492.7	136.4	170.3	10.0	258.3	378.1	26.6	40.6	203.2	254.6	139.3	452.8	5.5
August	1,468.2	129.7	169.4	10.0	252.0	368.1	25.9	40.3	200.4	242.2	138.8	433.8	5.5
September	1,300.6	125.5	165.4	9.8	233.9	320.0	25.8	37.7	187.6	197.2	123.5	378.6	5.5
October	1,309.5	126.6	166.6	9.9	231.8	312.0	24.3	37.2	186.5	174.1	122.8	370.4	6.1
November	1,322.6	127.3	168.5	10.3	228.7	312.1	22.6	37.0	186.8	166.6	121.7	379.4	6.4
December	1,351.8	133.7	169.6	10.3	228.4	303.0	20.9	38.6	187.1	162.5	122.9	389.7	5.7
1946: January	1,379.3	135.8	171.8	10.5	226.3	302.0	19.3	38.8	191.7	160.8	124.6	385.9	5.2
February	1,093.8	138.9	175.1	10.8	220.8	294.0	17.0	39.8	192.6	156.9	110.9	384.5	5.2
March	1,294.1	141.3	175.8	10.6	226.0	295.6	17.4	40.2	194.8	157.6	116.8	388.9	5.3
April	1,365.8	142.6	176.6	10.3	229.7	297.9	17.7	40.1	195.1	162.9	124.9	395.1	5.2
May	1,345.9	143.6	178.4	10.2	232.1	299.8	18.3	40.1	193.5	163.3	128.7	381.1	5.3
June	1,423.9	144.6	179.8	10.3	235.0	305.1	19.9	40.5	197.3	170.8	128.4	[4]384.1	5.7
July	1,444.8	141.7	180 0	9.8	240.2	308.3	25.9	40.6	200.2	176.9	128.0	425.5	6.0
August	1,466.7	145.2	183.9	9.9	244.8	315.7	24.8	41.4	205.0	177.3	132.0	410.9	6.1
September	1,482.6	147.7	182.8	8.2	243.2	312.0	28.8	41.6	211.4	179.4	132.9	419.0	5.9
October	1,458.1	150.5	183.3	8.4	245.0	315.9	26.2	42.1	211.4	175.4	131.4	411.6	6.7
November	1,511.7	152.0	186 7	10.5	248.6	328.9	25.4	41.8	212.6	168.8	133.4	418.3	7.0
December	1,515.1	154.4	188.0	11.5	247.7	329.8	24.5	43.1	213.3	166.0	131.9	420.2	6.7
1947: January	1,518.9	153.6	188.5	11.4	250.0	324.8	23.0	[4]95.6	211.4	162.3	131.9	419.1	5.8
February	1,513.2	154.0	189.5	11.5	250.9	326.2	22.5	95.4	210.1	166.1	132.0	423.4	5.8
March	1,511.8	153.8	189.8	11.3	249.9	325.0	23.0	95.1	210.1	169.2	131.9	427.9	5.8
April	1,507.8	150.6	189.7	11.5	249.2	326.0	23.5	94.9	209.2	170.4	133.0	427.1	5.9
May	1,494.6	147.7	188.7	11.3	245.7	324.5	24.1	93.7	209.4	174.9	131.5	423.5	6.1
June	1,487.2	147.0	188.9	11.5	245.2	339.3	24.9	94.6	207.9	179.3	132.6	427.9	6.3
July	1,470.9	141.4	191.5	11.8	246.2	335.1	29.1	94.1	208.2	176.5	131.0	461.5	6.7
August	1,490.9	143.0	192.0	11.5	250.8	341.3	26.3	96.1	211.5	185.0	132.5	446.6	6.8
September	1,504.5	148.1	192.3	11.3	251.8	337.9	30.1	95.9	214.5	191.7	132.8	452.0	6.8
October	1,517.9	152.9	194.8	11.4	253.8	339.8	29.4	95.7	217.0	183.9	133.4	433.3	7.1
November	1,523.0	154.3	197.6	11.5	253.0	347.7	27.3	95.3	217.3	178.2	133.0	433.1	7.2
December	1,527.2	154.6	198.9	11.3	252.4	346.6	26.8	96.9	215.1	174.6	132.5	436.1	7.0

See footnotes at end of table.

TABLE A-2: Estimated number of wage and salary workers in manufacturing industries[1] and on contract construction,[2] by State, 1943-47—Continued

[In thousands]

Period	CONTRACT CONSTRUCTION—Continued												
	Pennsylvania	Rhode Island	South Carolina	South Dakota	Tennessee	Texas	Utah	Vermont	Virginia	Washington	West Virginia	Wisconsin	Wyoming
Bench mark period[3]	1946	1946	1946	1946	1946	1946	1946	1947 Mar.	1946	1946	1946	1945 Sept.	1946
1943 average	95.8	16.2	16.5	2.8	52.6	122.6	22.2	1.3	54.7	45.0	14.7	21.4	3.9
1944 average	69.8	8.6	9.6	1.6	55.4	71.9	9.2	1.1	27.7	55.2	7.9	21.2	3.4
1945 average	76.5	8.3	8.8	2.0	45.2	63.1	5.4	1.5	25.5	26.7	9.3	25.8	2.4
1946 average	118.8	8.8	16.5	3.7	30.4	92.3	7.7	3.6	35.4	35.0	13.2	35.0	4.1
1947 average	136.2	9.5	....	....	....	119.2	....	....	....	....	....	37.4	....
1945: January	63.0	7.5	7.4	1.3	48.0	53.3	5.7	0.9	21.9	35.2	8.4	24.6	2.0
February	61.5	7.2	7.5	1.3	52.7	54.6	5.3	0.9	22.5	27.7	8.6	25.3	1.7
March	65.7	7.5	7.8	1.3	53.3	58.7	4.8	1.0	23.8	24.4	8.8	25.6	1.8
April	70.1	8.0	7.9	1.6	52.1	60.4	4.7	1.2	25.2	23.8	9.1	25.7	2.0
May	73.4	8.2	8.1	1.9	53.1	61.7	5.1	1.2	26.7	24.9	9.0	25.9	2.4
June	78.0	8.4	8.1	2.0	49.5	65.8	5.3	1.3	27.1	26.6	9.5	26.2	2.7
July	78.7	9.1	8.9	2.3	46.3	66.9	5.4	1.4	27.6	26.6	9.2	25.4	2.6
August	81.3	9.3	9.8	2.3	47.0	67.1	5.5	1.6	25.5	28.6	9.6	25.7	2.8
September	83.9	8.9	10.1	2.4	41.6	65.9	5.5	1.9	25.1	27.5	9.7	25.6	3.0
October	87.9	8.5	10.0	2.6	37.0	65.9	5.9	2.1	27.0	26.9	10.1	26.3	2.8
November	89.9	8.7	10.3	2.5	33.4	69.2	5.8	2.3	27.3	24.6	10.0	26.7	2.8
December	84.1	8.2	10.2	2.3	28.6	67.8	5.5	2.3	26.2	23.4	9.5	26.4	2.4
1946: January	86.2	7.1	10.9	2.3	25.6	68.9	4.6	2.1	26.5	24.3	9.3	25.8	1.9
February	85.1	6.7	11.5	2.3	25.8	75.0	4.7	2.2	27.1	25.9	9.1	26.0	1.8
March	94.8	7.4	12.9	2.5	26.4	81.9	5.7	2.5	29.2	29.3	10.5	26.9	2.3
April	108.5	8.6	14.1	3.0	29.0	88.2	6.7	3.1	31.2	32.1	11.4	30.2	3.2
May	115.7	9.3	15.6	3.4	30.8	90.6	7.7	3.5	33.1	35.6	12.0	33.9	4.0
June	123.4	9.5	16.9	3.9	31.8	95.1	8.3	3.7	35.7	37.4	13.1	36.1	4.3
July	131.0	9.5	18.5	4.3	33.1	97.8	8.8	4.2	38.7	39.9	14.1	38.7	5.0
August	135.6	9.5	19.5	4.5	33.8	101.4	9.3	4.5	41.1	41.9	15.0	39.6	5.8
September	140.2	9.6	19.9	4.7	33.7	105.2	9.6	4.4	42.2	41.5	15.6	41.2	5.7
October	138.2	9.8	19.6	4.6	32.8	101.8	9.1	4.1	40.6	40.1	16.5	40.7	5.2
November	136.2	9.6	20.2	4.6	31.7	101.0	8.9	4.3	40.7	37.7	16.6	40.8	5.2
December	130.2	9.4	18.9	4.6	30.4	100.8	8.5	4.1	38.9	34.0	15.5	39.6	4.7
1947: January	114.4	8.0	18.3	4.0	29.1	99.0	6.7	3.5	37.0	29.6	14.0	37.5	3.6
February	110.3	7.8	18.5	3.8	29.1	107.3	6.8	3.3	37.1	32.2	13.8	33.0	3.6
March	112.5	8.3	19.0	4.1	31.5	111.5	7.8	3.3	38.5	35.2	14.5	33.4	3.9
April	127.0	9.1	19.6	4.4	32.2	116.7	8.7	3.7	40.9	37.5	16.0	34.0	5.2
May	130.1	9.7	20.9	5.5	34.0	118.4	9.3	4.2	43.3	39.8	16.9	36.5	5.8
June	139.1	10.0	22.8	5.8	36.0	122.8	9.7	4.6	44.4	40.8	18.3	38.9	6.4
July	146.5	10.2	(6)	(6)	(6)	126.5	(6)	(6)	(6)	(6)	(6)	39.3	(6)
August	151.3	10.3	(6)	(6)	(6)	128.5	(6)	(6)	(6)	(6)	(6)	41.0	(6)
September	153.0	10.4	(6)	(6)	(6)	128.4	(6)	(6)	(6)	(6)	(6)	40.5	(6)
October	154.4	10.2	(6)	(6)	(6)	125.6	(6)	(6)	(6)	(6)	(6)	40.3	(6)
November	152.3	10.0	(6)	(6)	(6)	123.5	(6)	(6)	(6)	(6)	(6)	38.0	(6)
December	143.4	9.6	(6)	(6)	(6)	122.6	(6)	(6)	(6)	(6)	(6)	36.3	(6)

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[1] Estimates include all full- and part-time wage and salary workers in manufacturing industries who worked or received pay during the pay period ending nearest the 15th of the month. Proprietors, self-employed persons, domestic servants, and personnel of the armed forces are excluded.

[2] Covers all employees of firms whose major activity is construction. The estimates are based on employment reports of these firms and include all off-site employees (regardless of whether or not they are engaged in work relevant to construction activities) as well as employees at the site of construction projects. They do not cover self-employed persons, working proprietors, and employees of nonconstruction organizations (including force-account workers of public bodies and private firms) actively engaged in construction activities.

[3] Estimates have been adjusted to levels indicated by Federal Security Agency data. Because of varying bench mark periods the State estimates do not necessarily add to the National total.

[4] New series based on 1945 Standard Industrial Classification.

[5] At the date of publication, estimates for this State had not been completed.

[6] The preparation of separate estimates for this State was discontinued after June 1947.

[7] Not available.

Manufacturing Employment and Pay Rolls

Estimates of employment in major manufacturing groups, made by the Bureau of Labor Statistics, are presented in table A–3. In addition to production and related workers (shown in table A–4) the estimates in table A–3 include workers engaged in the following activities: Executive, purchasing, finance, accounting, legal, personnel (includes cafeterias, medical, etc.), professional and technical activities, sales, sales-delivery, advertising, credit, collection, and in installation and servicing of own products, routine office functions, factory supervision (above the working foreman level). They also include employees engaged in new construction and major additions or alterations to the plant who are utilized as a separate work force to perform nonmaintenance construction (force-account construction workers). They exclude proprietors and firm members and the self-employed. As in the table by major industry division (table A–1), the classification is that of 1939 and the changes in employment shown do not reflect for the most part the shift of establishments from one major activity to another during the World War II period. Government-operated establishments manufacturing products for war—such as Government navy yards, arsenals, and ordnance factories—are excluded. The estimates have been adjusted to Federal Security Agency data for all years through 1946.

For a description of the method by which the estimates are made, see page 3.

The estimated number of production workers only for each major industry group in the manufacturing division together with separate totals for male and female workers are shown in table A–4. Table A–5 supplements these Bureau of Labor Statistics employment figures by indexes of production worker weekly pay rolls by major manufacturing groups. Both the current employment and pay-roll estimates are obtained from the same employer reports.

Production workers include working foremen and all nonsupervisory workers engaged in fabricating, processing, assembling, inspection, receiving, storage, handling, packing, warehousing, shipping, maintenance, repair, janitorial, watchman services, product development, auxiliary production for plant's own use (e. g., power plant), and record-keeping and other services closely associated with the above production operations. Excluded are supervisory employees (above the working foreman level) and their clerical staffs, routemen, salesmen, and certain other groups of employees. Prior to 1945, production workers were identified as wage earners.

The pay-roll figures are restricted to production workers in manufacturing industries and to nonsupervisory employees in nonmanufacturing industries. If employers report the wages and salaries of the selected group of employees for a pay-roll period that exceeds 1 week, the data are reduced or converted to a 1-week basis. The statistics include pay for sick leave, holidays, and vacations taken during the pay period reported, and also overtime pay and shift differentials. Bonuses are excluded unless earned and paid regularly in the pay period, as is also retroactive pay not earned during the pay period reported. Deductions are not made for pay-roll taxes.

As the sample reports collected by the Bureau of Labor Statistics cover only one pay period of each month and the Federal Security Agency reports cover all of the wages and salaries paid to all employees during the quarter, the former series cannot be adjusted directly to the latter. Instead, the pay-roll adjustment is made by applying the same ratios to the pay-roll series as are applied to the employment series (described on page 3).

TABLE A-3: Estimated number of wage and salary workers in major manufacturing groups, 1939-47[1]

[In thousands]

Period	All manufacturing	Durable goods—total	Iron and steel and their products	Electrical machinery	Machinery except electrical	Transportation equipment, except automobiles	Automobiles	Nonferrous metals and their products	Lumber and timber basic products	Furniture and finished lumber products	Stone, clay and glass products
1939 average	10,078	4,357	1,171	355	690	193	466	283	465	385	349
1940 average	10,780	4,975	1,331	410	802	321	532	324	488	402	366
1941 average	12,974	6,485	1,647	568	1,065	675	654	407	586	454	430
1942 average	15,051	8,179	1,837	703	1,335	1,753	604	458	615	443	432
1943 average	17,381	10,297	2,034	914	1,585	2,951	845	525	589	429	422
1944 average	17,111	10,200	2,015	967	1,553	2,899	877	513	569	413	395
1945 average	15,302	8,477	1,833	837	1,422	1,841	741	462	539	410	389
1946 average	14,515	7,180	1,670	678	1,372	628	797	445	633	484	474
1947 average	15,901	8,055	1,880	762	1,555	580	942	483	783	552	517
1945: January	16,753	9,842	2,013	936	1,533	2,651	856	492	559	413	389
February	16,801	9,869	2,037	941	1,545	2,620	859	501	560	418	388
March	16,728	9,806	2,041	945	1,542	2,549	856	503	557	418	390
April	16,528	9,652	2,025	936	1,527	2,455	852	509	547	414	387
May	16,292	9,453	2,012	930	1,511	2,309	825	510	553	415	388
June	16,061	9,189	1,964	920	1,502	2,139	800	499	553	419	393
July	15,693	8,883	1,896	892	1,475	2,023	769	476	549	414	389
August	15,343	8,548	1,819	870	1,439	1,886	718	468	547	411	390
September	13,414	6,729	1,527	642	1,251	1,052	582	385	527	381	382
October	13,307	6,617	1,529	673	1,241	894	618	386	498	386	392
November	13,367	6,641	1,544	683	1,248	783	691	401	505	403	383
December	13,331	6,492	1,584	678	1,254	732	507	406	517	422	392
1946: January	13.524	6,615	1.608	665	1,291	706	548	412	538	437	410
February	12,798	5,758	1,140	482	1,165	635	552	355	547	448	434
March	13,510	6,370	1,567	518	1,217	620	592	389	564	456	447
April	14,147	6,962	1,659	616	1,296	656	809	414	591	465	456
May	14,235	7,057	1,648	672	1,341	642	789	424	613	466	462
June	14,493	7,230	1,678	694	1,375	629	822	443	636	480	473
July	14,681	7,383	1,722	703	1,399	624	863	462	648	485	477
August	15,062	7,580	1,772	722	1,428	613	894	477	677	500	497
September	15,245	7,698	1,800	743	1,453	598	939	482	679	503	501
October	15,303	7,751	1,788	762	1,479	597	925	489	693	511	507
November	15,541	7,865	1,832	775	1,504	602	920	495	707	522	508
December	15,642	7,887	1,820	785	1,516	611	905	500	705	533	512
1947: January	15,677	7,949	1,856	785	1,532	614	899	502	707	542	512
February	15,783	8,030	1,865	791	1,540	611	938	506	715	552	512
March	15,826	8,071	1,875	789	1,552	608	942	504	731	554	516
April	15,750	8,068	1,875	745	1,565	612	957	498	750	546	520
May	15,569	7,962	1,861	731	1,561	598	8[illegible]9	486	780	537	509
June	15,672	8,050	1,871	759	1,558	594	939	475	798	541	515
July	15,580	7,874	1,854	742	1,519	527	941	462	793	534	502
August	15,962	7,987	1,884	745	1,552	530	926	463	821	549	517
September	16,175	8,070	1,892	752	1,560	540	960	468	821	557	520
October	16,209	8,126	1,896	763	1,565	552	964	472	827	565	522
November	16,256	8,194	1,908	772	1,569	578	961	479	828	573	526
December	16,354	8,274	1,922	773	1,589	591	983	482	829	578	527

See footnotes at end of table.

TABLE A-3: Estimated number of wage and salary workers in major manufacturing groups, 1939–47[1]—Continued

[In thousands]

Period	Non-durable goods total	Textile-mill products and other fiber manufactures	Apparel and other finished textile products	Leather and leather products	Food	Tobacco manufactures	Paper and allied products	Printing, publishing, and allied industries	Chemicals and allied products	Products of petroleum and coal	Rubber products	Miscellaneous industries
1939 average	5,720	1,235	894	383	1,192	105	320	561	421	147	150	311
1940 average	5,805	1,215	901	371	1,207	104	333	562	463	154	157	337
1941 average	6,488	1,376	1,020	412	1,293	106	372	572	574	164	188	410
1942 average	6,873	1,379	1,059	410	1,386	107	376	557	770	170	187	471
1943 average	7,084	1,330	1,080	378	1,418	103	389	549	873	170	231	563
1944 average	6,912	1,228	1,055	356	1,455	96	388	551	810	183	247	543
1945 average	6,825	1,170	1,037	355	1,458	95	391	569	796	195	242	519
1946 average	7,335	1,309	1,126	408	1,547	99	447	659	710	218	266	547
1947 average	7,846	1,362	1,213	429	1,724	100	473	709	762	233	263	578
1945: January	6,911	1,209	1,056	356	1,426	95	388	552	847	188	254	540
February	6,932	1,200	1,062	356	1,419	95	390	555	864	190	254	547
March	6,922	1,192	1,066	355	1,404	95	389	555	869	192	254	551
April	6,876	1,170	1,053	352	1,404	95	385	553	869	193	250	552
May	6,839	1,160	1,038	351	1,406	93	384	556	860	193	246	552
June	6,872	1,166	1,033	355	1,428	93	389	562	854	195	243	554
July	6,810	1,146	982	352	1,485	91	386	563	828	197	240	540
August	6,795	1,142	1,009	353	1,496	92	386	568	784	198	236	531
September	6,685	1,143	1,017	343	1,567	96	387	571	707	193	208	453
October	6,690	1,147	1,036	353	1,504	99	397	587	690	192	229	456
November	6,726	1,154	1,040	360	1,479	96	402	600	690	202	237	466
December	6,839	1,207	1,049	370	1,478	94	412	609	690	202	247	481
1946: January	6,909	1,224	1,063	380	1,469	93	420	617	692	207	253	491
February	7,040	1,258	1,099	393	1,477	94	427	631	695	204	256	506
March	7,140	1,280	1,119	401	1,477	94	433	640	703	212	261	520
April	7,185	1,290	1,119	405	1,475	98	440	647	705	214	262	530
May	7,178	1,295	1,109	408	1,470	98	444	648	694	216	262	534
June	7,263	1,312	1,127	412	1,480	99	449	656	695	219	265	549
July	7,298	1,299	1,091	411	1,570	98	446	662	692	223	256	550
August	7,482	1,315	1,136	412	1,647	99	452	667	702	226	264	562
September	7,547	1,332	1,153	416	1,640	100	454	671	718	225	270	568
October	7,552	1,348	1,166	415	1,570	102	460	682	729	225	277	578
November	7,676	1,369	1,159	420	1,635	104	468	690	744	225	281	581
December	7,755	1,384	1,174	428	1,648	105	472	700	749	224	282	589
1947: January	7,728	1,388	1,187	429	1,612	104	473	696	756	225	280	578
February	7,753	1,395	1,217	430	1,585	103	475	700	761	225	279	583
March	7,755	1,388	1,220	430	1,588	100	475	699	765	227	277	586
April	7,682	1,368	1,167	424	1,609	95	473	702	764	227	274	579
May	7,607	1,342	1,137	411	1,622	96	470	703	761	232	262	571
June	7,622	1,325	1,141	414	1,666	97	470	705	748	235	257	564
July	7,706	1,305	1,141	417	1,785	97	462	706	752	237	250	554
August	7,975	1,320	1,222	429	1,922	99	469	710	750	238	252	564
September	8,105	1,341	1,251	435	1,964	100	470	713	763	238	252	578
October	8,083	1,368	1,287	438	1,833	103	476	720	773	237	257	591
November	8,062	1,391	1,277	442	1,769	104	479	726	777	239	259	599
December	8,080	1,409	1,305	446	1,735	102	484	732	778	238	261	590

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[1] Estimates include all full- and part-time wage and salary workers in manufacturing industries who worked or received pay during the pay period ending nearest the 15th of the month. These estimates have been adjusted to levels indicated by Federal Security Agency data through 1946. In addition to production and related workers the estimates include workers engaged in the following activities: Executive, purchasing, finance, accounting, legal, personnel (includes cafeterias, medical, etc.), professional and technical activities, sales, sales-delivery, advertising, credit, collection, and in installation and servicing of own products, routine office functions, factory supervision (above the working foreman level). They also include employees engaged in new construction and major additions or alterations to the plant who are utilized as a separate work force (force-account construction workers).

TABLE A-4: Estimated number of production workers in major manufacturing industry groups, by sex, selected periods 1939–47[1]

[In thousands]

Period	All manufacturing			Durable goods			Nondurable goods			Iron and steel and their products			Electrical machinery		
	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women
1939: October[2]	8,854	6,586	2,268	3,967	3,627	340	4,887	2,959	1,928	1,109	1,040.2	68.8	296	195.7	100.3
1940: October	9,404	7,134	2,270	4,525	4,144	381	4,879	2,990	1,889	1,218	1,136.4	81.6	334	226.4	107.6
1941: April	10,310	7,885	2,425	5,243	4,798	445	5,067	3,087	1,980	1,370	1,276.8	93.2	411	279.8	131.2
October	11,616	8,872	2,744	6,035	5,517	518	5,581	3,355	2,226	1,504	1,397.2	106.8	493	334.4	158.6
1942: April	12,044	9,276	2,768	6,523	5,944	579	5,521	3,332	2,189	1,565	1,441.4	123.6	521	346.5	174.5
October	13.411	10,003	3,408	7,612	6,614	998	5,799	3,389	2,410	1,626	1,442.3	183.7	619	396.2	222.8
1943 average	14,560	10,094	4,466	8,727	6,846	1,881	5,834	3,249	2,585	1,761	1,434.9	325.8	741	399.6	341.4
1944 average	14,126	9,540	4,586	8,506	6,448	2,058	5,621	3,093	2,528	1,734	1,358.9	375.2	765	390.5	374.2
1945 average	12,437	8,523	3,914	6,951	5,457	1,494	5,485	3,065	2,420	1,565	1,270.5	294.1	638	348.5	289.5
1946 average	11,745	8,590	3,155	5,866	5,085	781	5,879	3,505	2,374	1,409	1,269.3	139.6	515	314.5	200.1
1947 average	12,890	....	....	6,637	....	....	6,253	....	....	1,597	....	....	587	....	....
1943: January	13,935	10,045	3,890	8,156	6,729	1,427	5,779	3,316	2,463	1,718	1,472.3	245.7	678	397.3	280.7
February	14,132	10,075	4,057	8,323	6,777	1,546	5,809	3,298	2,511	1,738	1,468.6	269.4	698	397.9	300.1
March	14,306	10,122	4,184	8,482	6,843	1,639	5,824	3,279	2,545	1,758	1,471.4	286.6	720	400.3	319.7
April	14,372	10,070	4,302	8,576	6,841	1,735	5,796	3,229	2,567	1,764	1,464.1	299.9	726	398.6	327.4
May	14,401	10,016	4,385	8,635	6,817	1,818	5,766	3,199	2,567	1,758	1,446.8	311.2	730	394.2	335.8
June	14,609	10,109	4,500	8,775	6,870	1,905	5,834	3,239	2,595	1,762	1,436.0	326.0	740	398.9	341.1
July	14,759	10,180	4,579	8,865	6,898	1,967	5,894	3,282	2,612	1,761	1,421.1	339.9	751	401.0	350.0
August	14,861	10,175	4,686	8,901	6,891	2,010	5,960	3,284	2,676	1,765	1,415.5	349.5	753	400.6	352.4
September	14,813	10,089	4,724	8,911	6,843	2,068	5,902	3,246	2,656	1,764	1,405.9	358.1	761	401.0	360.0
October	14,860	10,097	4,763	9,001	6,875	2,126	5,859	3,222	2,637	1,774	1,406.8	367.2	772	401.4	370.6
November	14,904	10,104	4,800	9,073	6,897	2,176	5,831	3,207	2,624	1,787	1,406.4	380.6	781	402.2	378.8
December	14,769	10,048	4,721	9,020	6,871	2,149	5,749	3,177	2,572	1,779	1,403.6	375.4	781	401.4	379.6
1944: January	14,609	9,988	4,621	8,931	6,829	2,102	5,678	3,159	2,519	1,769	1,402.8	366.2	780	404.0	376.0
February	14,585	9,966	4,619	8,894	6,810	2,084	5,691	3,156	2,535	1,768	1,402.0	366.0	788	404.2	383.8
March	14,433	9,833	4,600	8,793	6,713	2,080	5,640	3,120	2,520	1,750	1,384.2	365.8	786	404.0	382.0
April	14,234	9,679	4,555	8,669	6,606	2,063	5,565	3,073	2,492	1,729	1,367.6	361.4	778	397.6	380.4
May	14,113	9,559	4,554	8,592	6,522	2,070	5,521	3,037	2,484	1,724	1,355.1	368.9	772	394.5	377.5
June	14,110	9,515	4,595	8,550	6,461	2,089	5,560	3,054	2,506	1,734	1,356.0	378.0	774	390.9	383.1
July	14,078	9,480	4,598	8,468	6,386	2,082	5,610	3,094	2,516	1,736	1,354.1	381.9	766	387.6	378.4
August	14,093	9,462	4,631	8,427	6,352	2,075	5,666	3,110	2,556	1,740	1,353.7	386.3	761	386.6	374.4
September	13,936	9,325	4.611	8,286	6,232	2,054	5,650	3,093	2,557	1,723	1,337.0	386.0	756	383.3	372.7
October	13,801	9,225	4,576	8,181	6,159	2,022	5,620	3,066	2,554	1,711	1,329.4	381.6	746	379.7	366.3
November	13,735	9,196	4,539	8,125	6,129	1,996	5,610	3,067	2,543	1,704	1,325.7	378.3	737	375.9	361.1
December	13,789	9,262	4,527	8,154	6,169	1,985	5,635	3,093	2,542	1,721	1,338.9	382.1	733	378.2	354.8
1945: January	13,783	9,323	4,460	8,194	6,226	1,968	5,589	3,097	2,492	1,739	1,356.4	382.6	733	383.4	349.6
February	13,819	9,351	4,468	8,219	6,249	1,970	5,600	3,102	2,498	1,761	1,371.8	389.2	736	384.2	351.8
March	13,739	9,278	4,461	8,150	6,198	1,952	5,589	3,080	2,509	1,762	1,377.9	384.1	738	387.4	350.6
April	13,537	9,133	4,404	8,001	6,082	1,919	5,536	3,051	2,485	1,745	1,366.3	378.7	731	383.8	347.2
May	13,310	8,983	4,327	7,816	5,955	1,861	5,494	3,028	2,466	1,730	1,358.0	372.0	723	380.3	342.7
June	13,105	8,859	4,246	7,582	5,816	1,766	5,523	3,043	2,480	1,685	1,336.2	348.8	713	373.6	339.4
July	12,743	8,678	4,065	7,279	5,638	1,641	5,464	3,040	2,424	1,616	1,297.6	318.4	683	362.7	320.3
August	12,431	8,488	3,943	6,983	5,461	1,522	5,448	3,027	2,421	1,547	1,260.8	286.2	663	357.4	305.6
September	10,718	7,475	3,243	5,362	4,469	893	5,356	3,006	2,350	1,278	1,081.2	196.8	460	274.6	185.4
October	10,639	7,476	3,163	5,281	4,446	835	5,358	3,030	2,328	1,279	1,119.1	159.9	483	289.3	193.7
November	10,692	7,586	3,106	5,310	4,492	818	5,382	3,094	2,288	1,296	1,139.2	156.8	496	302.6	193.4
December	10,725	7,645	3,080	5,239	4,459	780	5,486	3,186	2,300	1,337	1,181.9	155.1	502	308.2	193.8
1946: January	10,884	7,860	3,024	5,354	4,597	757	5,530	3,263	2,267	1,360	1,210.4	149.6	494	307.3	186.7
February	10,185	7,227	2,958	4,545	3,897	648	5,640	3,330	2,310	880	766.5	113.5	354	208.9	145.1
March	10,877	7,851	3,026	5,154	4,460	694	5,723	3,391	2,332	1,319	1,184.5	134.5	382	228.1	153.9
April	11,428	8,331	3,097	5,679	4,915	764	5,749	3,416	2,333	1,404	1,263.6	140.4	463	280.6	182.4
May	11,480	8,393	3,087	5,748	4,978	770	5,732	3,415	2,317	1,390	1,252.4	137.6	507	314.3	192.7
June	11,716	8,593	3,123	5,909	5,134	775	5,807	3,459	2,348	1,416	1,278.6	137.4	526	326.6	199.4
July	11,884	8,778	3,106	6,042	5,267	775	5,842	3,511	2,331	1,461	1,322.2	138.8	532	329.3	202.7
August	12,242	9,030	3,212	6,233	5,435	798	6,009	3,595	2,414	1,508	1,366.2	141.8	552	340.6	211.4
September	12,406	9,121	3,285	6,334	5,507	827	6,072	3,614	2,458	1,535	1,389.2	145.8	570	349.4	220.6
October	12,439	9,152	3,287	6,383	5,540	843	6,056	3,612	2,444	1,523	1,379.8	143.2	587	357.5	229.5
November	12,656	9,338	3,318	6,491	5,634	857	6,165	3,704	2,461	1,562	1,415.2	146.8	599	363.0	236.0
December	12,742	9,411	3,331	6,517	5,659	858	6,225	3,752	2,473	1,549	1,403.4	145.6	608	367.8	240.2
1947: January	12,749	9,460	3,289	6,566	5,714	852	6,183	3,746	2,437	1,580	1,434.6	145.4	608	370.3	237.7
February	12,832	9,534	3,298	6,642	5,789	853	6,190	3,745	2,445	1,590	1,443.7	146.3	612	374.5	237.5
March	12,859	9,561	3,298	6,677	5,820	857	6,182	3,741	2,441	1,597	1,450.1	146.9	610	374.5	235.5
April	12,772	9,535	3,237	6,669	5,829	840	6,103	3,706	2,397	1,595	1,449.9	145.1	577	356.6	220.4
May	12,597	9,438	3,159	6,572	5,760	812	6,025	3,678	2,347	1,582	1,441.2	140.8	564	351.9	212.1
June	12,672	....	....	6,639	....	....	6,033	....	....	1,588	....	....	584	....	....
July	12,562	....	....	6,452	....	....	6,110	....	....	1,569	....	....	567	....	....
August	12,928	....	....	6,555	....	....	6,373	....	....	1,597	....	....	569	....	....
September	13,125	....	....	6,630	....	....	6,495	....	....	1,604	....	....	578	....	....
October	13,143	....	....	6,681	....	....	6,462	....	....	1,609	....	....	588	....	....
November	13,176	....	....	6,746	....	....	6,430	....	....	1,619	....	....	595	....	....
December	13,263	....	....	6,816	....	....	6,447	....	....	1,633	....	....	596	....	....

See footnotes at end of table.

TABLE A-4: Estimated number of production workers in major manufacturing industry groups, by sex, selected periods 1939–47[1]—Continued

[In thousands]

Period	Machinery, except electrical			Transportation equipment, except automobiles			Automobiles			Nonferrous metals and their products			Lumber and timber basic products			Furniture and finished lumber products		
	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women
1939: October[2]	546	517.6	28.4	180	178.2	1.8	447	417.5	29.5	255	220.1	34.9	458	453.9	4.1	358	321.1	36.9
1940: October	645	613.4	31.6	331	328.4	2.6	534	503.6	30.4	296	248.3	47.7	476	469.8	6.2	364	333.1	30.9
1941: April	827	784.0	43.0	480	475.7	4.3	586	554.4	31.6	334	278.6	55.4	503	495.0	8.0	376	344.4	31.6
October	940	887.5	52.5	758	750.0	8.0	583	554.7	28.3	365	303.3	61.7	588	578.0	10.0	408	370.9	37.1
1942: April	1,053	990.9	62.1	1,264	1,229.9	34.1	429	408.4	20.6	374	316.8	57.2	554	542.4	11.6	387	347.1	39.9
October	1,165	1,056.7	108.3	1,921	1,719.4	201.6	576	506.3	69.7	405	337.8	67.2	560	530.9	29.1	373	319.3	53.7
1943 average	1,293	1,050.2	242.6	2,508	2,019.1	488.9	714	559.6	154.4	449	354.5	94.7	535	480.0	55.0	366	276.7	89.7
1944 average	1,246	990.8	255.5	2,393	1,869.2	523.8	732	551.2	180.8	436	329.8	105.9	516	458.2	57.9	352	256.1	95.9
1945 average	1,109	916.4	192.9	1,489	1,202.3	287.1	605	493.9	111.3	387	295.6	91.6	488	434.9	53.5	344	255.6	88.6
1946 average	1,055	950.9	104.0	485	454.1	30.8	637	581.1	56.3	380	310.5	69.9	574	537.6	35.9	405	339.7	65.6
1947 average	1,208	....	....	453	....	....	757	....	....	415	....	....	711	....	....	464	....	....
1943: January	1,235	1,047.3	187.7	2,207	1,851.7	355.3	640	542.7	97.3	426	348.9	77.1	520	486.2	33.8	368	296.6	71.4
February	1,255	1,047.9	207.1	2,298	1,909.6	388.4	654	548.1	105.9	432	349.9	82.1	517	480.8	36.2	370	293.4	76.6
March	1,274	1,057.4	216.6	2,378	1,964.2	413.8	664	553.8	110.2	432	347.8	84.2	525	480.9	44.1	370	290.1	79.9
April	1,284	1,056.7	227.3	2,436	1,990.2	445.8	670	548.7	121.3	435	346.7	88.3	532	476.7	55.3	367	282.6	84.4
May	1,295	1,058.0	237.0	2,475	2,004.7	470.3	680	544.0	136.0	437	344.8	92.2	538	479.4	58.6	363	273.7	89.3
June	1,307	1,056.1	250.9	2,546	2,041.9	504.1	698	551.4	146.6	446	351.9	94.1	549	488.6	60.4	364	272.6	91.4
July	1,308	1,055.6	252.4	2,590	2,069.4	520.6	717	555.0	162.0	452	354.4	97.6	557	495.7	61.3	367	273.4	93.6
August	1,308	1,052.9	255.1	2,596	2,069.0	527.0	736	557.9	178.1	457	357.8	99.2	555	493.4	61.6	369	273.1	95.9
September	1,305	1,044.0	261.0	2,605	2,063.2	541.8	758	564.7	193.3	461	359.1	101.9	538	474.5	63.5	363	266.1	96.9
October	1,312	1,041.7	270.3	2,644	2,086.1	557.9	776	576.6	199.4	470	364.2	105.8	534	469.9	64.1	365	265.7	99.3
November	1,318	1,043.9	274.1	2,670	2,095.9	574.1	788	584.7	203.3	474	366.4	107.6	533	470.1	62.9	367	266.8	100.2
December	1,313	1,041.2	271.8	2,651	2,083.7	567.3	787	587.9	199.1	468	362.2	105.8	522	463.5	58.5	364	266.8	97.2
1944: January	1,307	1,040.4	266.6	2,611	2,049.6	561.4	781	590.4	190.6	466	361.6	104.4	508	454.7	53.3	362	268.6	93.4
February	1,298	1,034.5	263.5	2,592	2,045.1	546.9	771	586.0	185.0	463	359.3	103.7	510	457.0	53.0	360	267.5	92.5
March	1,283	1,022.6	260.4	2,551	2,007.6	543.4	759	571.5	187.5	455	352.2	102.8	512	456.7	55.3	357	263.8	93.2
April	1,263	1,005.3	257.7	2,513	1,975.2	537.8	746	561.0	185.0	444	342.3	101.7	509	452.0	57.0	351	258.0	93.0
May	1,251	993.3	257.7	2,479	1,941.1	537.9	734	551.2	182.8	440	336.2	103.8	513	456.1	56.9	348	253.3	94.7
June	1,254	993.2	260.8	2,418	1,886.0	532.0	728	544.5	183.5	438	332.0	106.0	520	461.2	58.8	352	255.2	96.8
July	1,241	984.1	256.9	2,363	1,836.1	526.9	718	533.5	184.5	432	326.2	105.8	529	469.2	59.8	353	255.2	97.8
August	1,231	978.6	252.4	2,323	1,802.6	520.4	725	540.8	184.2	430	321.6	108.4	533	472.2	60.8	355	256.3	98.7
September	1,215	963.5	251.5	2,264	1,756.9	507.1	718	536.3	181.7	421	312.8	108.2	520	458.6	61.4	346	249.5	96.5
October	1,206	958.0	248.0	2,225	1,726.6	498.4	701	530.0	171.0	414	305.1	108.9	513	452.0	61.0	345	247.0	98.0
November	1,198	953.0	245.0	2,194	1,704.7	489.3	697	531.1	165.9	412	303.6	108.4	515	454.7	60.3	346	247.7	98.3
December	1,209	963.2	245.8	2,188	1,704.5	483.5	706	538.7	167.3	413	304.8	108.2	511	454.3	56.7	349	251.6	97.4
1945: January	1,221	978.0	243.0	2,185	1,708.7	476.3	716	547.7	168.3	417	310.7	106.3	508	450.1	57.9	351	254.1	96.9
February	1,232	989.3	242.7	2,157	1,688.9	468.1	719	555.8	163.2	426	316.5	109.5	509	448.4	60.6	355	258.1	96.9
March	1,226	983.3	242.7	2,094	1,639.6	454.4	711	549.6	161.4	432	321.0	111.0	506	445.3	60.7	355	257.4	97.6
April	1,210	970.4	239.6	2,007	1,571.5	435.5	706	547.9	158.1	432	319.7	112.3	496	436.5	59.5	351	252.4	98.6
May	1,194	957.6	236.4	1,879	1,475.0	404.0	683	538.2	144.8	432	320.1	111.9	501	439.9	61.1	351	252.0	99.0
June	1,180	951.1	228.9	1,735	1,379.3	355.7	662	529.6	132.4	422	314.4	107.6	502	439.8	62.2	354	254.5	99.5
July	1,148	934.5	213.5	1,637	1,311.2	325.8	624	505.4	118.6	399	300.0	99.0	498	437.7	60.3	348	251.6	96.4
August	1,116	916.2	199.8	1,522	1,225.2	296.8	577	475.4	101.6	392	296.7	95.3	496	439.0	57.0	344	251.8	92.2
September	944	817.5	126.5	816	736.0	80.0	441	395.1	45.9	312	252.1	59.9	477	431.2	45.8	316	242.7	73.3
October	940	820.6	119.4	691	630.9	60.1	477	427.4	49.6	316	255.6	60.4	447	406.8	40.2	320	247.7	72.3
November	941	827.1	113.9	594	547.1	46.9	544	488.5	55.5	330	267.3	62.7	454	414.5	39.5	334	262.9	71.1
December	959	850.6	108.4	556	514.3	41.7	402	366.2	35.8	336	273.2	62.8	467	430.1	36.9	351	281.9	69.1
1946: January	992	884.9	107.1	538	499.8	38.2	432	395.3	36.7	343	280.6	62.4	485	449.6	35.4	364	297.8	66.2
February	864	775.9	88.1	486	452.5	33.5	431	396.1	34.9	295	237.2	57.8	494	460.9	33.1	373	308.1	64.9
March	914	820.8	93.2	478	446.9	31.1	466	426.4	39.6	325	261.0	64.0	509	474.4	34.6	381	315.8	65.2
April	989	886.1	102.9	507	475.6	31.4	650	588.2	61.8	353	285.2	67.8	534	499.8	34.2	389	323.3	65.7
May	1,033	926.6	106.4	494	464.4	29.6	622	562.3	59.7	362	293.2	68.8	555	520.0	35.0	390	325.3	64.7
June	1,059	956.3	102.7	483	455.0	28.0	661	600.2	60.8	381	310.5	70.5	575	539.9	35.1	402	337.3	64.7
July	1,077	974.7	102.3	481	452.6	28.4	692	633.2	58.8	396	325.9	70.1	587	551.8	35.2	405	341.8	63.2
August	1,105	1,002.2	102.8	473	445.1	27.9	722	662.1	59.9	411	337.4	73.6	615	578.7	36.3	420	354.9	65.1
September	1,127	1,021.1	105.9	461	431.5	29.5	755	688.6	66.4	416	340.7	75.3	617	579.4	37.6	422	356.6	65.4
October	1,148	1,036.6	111.4	464	433.8	30.2	742	676.0	66.0	423	347.3	75.7	629	590.6	38.4	430	363.8	66.2
November	1,169	1,055.6	113.4	472	440.8	31.2	741	674.3	66.7	428	351.4	76.6	642	604.1	37.9	440	372.2	67.8
December	1,182	1,069.7	112.3	482	451.6	30.4	734	670.1	63.9	432	355.5	76.5	640	601.6	38.4	449	379.9	69.1
1947: January	1,195	1,082.7	112.3	482	452.1	29.9	727	662.3	64.7	435	358.4	76.6	640	602.9	37.1	456	388.5	67.5
February	1,203	1,091.1	111.9	481	452.1	28.9	761	693.3	67.7	439	363.1	75.9	648	611.1	36.9	466	398.4	67.6
March	1,212	1,098.1	113.9	480	451.7	28.3	766	694.8	71.2	437	361.4	75.6	664	627.5	36.5	466	398.4	67.6
April	1,220	1,105.3	114.7	486	457.3	28.7	774	700.5	73.5	430	356.5	73.5	682	645.2	36.8	458	391.6	66.4
May	1,216	1,102.9	113.1	475	447.0	28.0	720	656.6	63.4	418	345.7	72.3	710	671.7	38.3	450	383.8	66.2
June	1,208	....	....	472	....	....	758	....	....	408	....	....	727	....	....	452	....	....
July	1,171	....	....	403	....	....	753	....	....	393	....	....	721	....	....	445	....	....
August	1,198	....	....	405	....	....	741	....	....	398	....	....	745	....	....	460	....	....
September	1,209	....	....	414	....	....	767	....	....	400	....	....	745	....	....	466	....	....
October	1,214	....	....	427	....	....	764	....	....	404	....	....	751	....	....	475	....	....
November	1,218	....	....	452	....	....	766	....	....	410	....	....	751	....	....	483	....	....
December	1,235	....	....	463	....	....	785	....	....	413	....	....	750	....	....	487	....	....

See footnotes at end of table.

TABLE A-4: Estimated number of production workers in major manufacturing industry groups, by sex, selected periods 1939–47[1]—Continued

[In thousands]

Period	Stone, clay, and glass products			Textile-mill products and other fiber manufactures			Apparel and other finished textile products			Leather and leather products			Food			Tobacco manufactures		
	Tota	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women
1939: October[3]	318	282.7	35.3	1,216	688.3	527.7	846	220.0	626.0	349	209.4	139.6	929	665.2	263.8	97	32.1	64.9
1940: October	327	285.1	41.9	1,166	664.6	501.4	836	207.3	628.7	340	209.4	130.6	947	702.7	244.3	96	31.8	64.2
1941: April	356	309.4	46.6	1,264	709.1	554.9	904	216.1	687.9	373	223.1	149.9	833	655.6	177.4	92	30.8	61.2
October	396	341.6	54.4	1,307	722.9	584.1	950	229.1	720.9	380	228.2	151.8	1,053	754.1	298.9	97	31.0	66.0
1942: April	376	321.1	54.9	1,300	713.7	586.3	967	226.3	740.7	385	224.5	160.5	910	694.3	215.7	93	31.0	62.0
October	367	305.0	62.0	1,268	669.5	598.5	958	222.3	735.7	355	198.4	156.6	1,132	795.8	336.2	99	33.1	65.9
1943 average	360	271.3	88.2	1,237	618.0	619.0	958	209.5	748.8	340	179.9	160.5	1,056	754.7	300.9	91	29.8	60.9
1944 average	332	242.1	89.4	1,130	553.7	576.6	934	205.0	728.5	319	162.4	156.5	1,090	763.7	326.3	84	27.6	56.2
1945 average	325	239.4	85.4	1,072	527.3	544.2	914	200.6	713.8	318	161.1	156.7	1,080	758.9	321.5	82	27.2	54.3
1946 average	406	327.7	78.2	1,202	634.1	567.8	991	224.9	766.1	368	199.8	168.3	1,133	842.0	290.6	86	32.7	53.2
1947 average	444	......	......	1,244	......	......	1,061	......	......	385	......	......	1,254	......	......	86	......	......
1943: January	364	286.1	77.9	1,275	656.6	618.4	955	213.9	741.1	364	198.7	165.3	1,003	745.2	257.8	96	31.9	64.1
February	361	280.5	80.5	1,279	652.3	626.7	979	217.3	761.7	362	195.1	166.9	980	727.2	252.8	94	30.8	63.2
March	361	276.9	84.1	1,276	646.9	629.1	994	219.7	774.3	359	191.3	167.7	970	714.9	255.1	93	30.3	62.7
April	362	276.6	85.4	1,262	631.0	631.0	990	214.8	775.2	342	179.9	162.1	964	703.7	260.3	93	30.0	63.0
May	359	271.0	88.0	1,239	615.8	623.2	969	207.4	761.6	345	181.1	163.9	975	708.8	266.2	90	29.2	60.8
June	363	273.0	90.0	1,247	619.8	627.2	963	208.0	755.0	342	180.2	161.8	1,023	741.7	281.3	89	29.0	60.0
July	362	272.6	89.4	1,234	614.5	619.5	951	209.2	741.8	340	179.2	160.8	1,098	791.7	306.3	89	29.4	59.6
August	362	270.4	91.6	1,219	607.1	611.9	952	210.4	741.6	335	175.9	159.1	1,183	809.2	373.8	88	29.3	58.7
September	356	264.9	91.1	1,200	592.8	607.2	937	205.2	731.8	325	170.9	154.1	1,187	806.0	381.0	88	29.0	59.0
October	354	262.3	91.7	1,203	593.1	609.9	941	205.1	735.9	324	168.2	155.8	1,125	780.7	344.3	89	29.5	59.5
November	355	260.2	94.8	1,206	593.4	612.6	939	202.8	736.2	325	170.3	154.7	1,092	768.8	323.2	90	29.3	60.7
December	355	260.9	94.1	1,204	592.4	611.6	929	199.7	729.3	322	168.4	153.6	1,067	758.6	308.4	90	30.0	60.0
1944: January	347	257.1	89.9	1,179	582.4	596.6	930	205.5	724.5	320	166.4	153.6	1,036	750.1	285.9	88	29.7	58.3
February	344	254.9	89.1	1,181	584.6	596.4	942	205.4	736.6	322	167.1	154.9	1,030	741.6	288.4	87	29.3	57.7
March	340	250.6	89.4	1,170	575.6	594.4	948	207.6	740.4	323	166.7	156.3	1,020	733.4	286.6	83	27.3	55.7
April	336	246.6	89.4	1,147	562.7	584.3	929	205.3	723.7	321	165.0	156.0	1,023	727.4	295.6	83	27.8	55.2
May	331	241.3	89.7	1,131	551.9	579.1	918	195.5	722.5	318	162.2	155.8	1,029	730.6	298.4	82	27.3	54.7
June	332	242.0	90.0	1,125	547.9	577.1	934	202.7	731.3	320	162.2	157.8	1,063	752.6	310.4	83	27.7	55.3
July	330	240.2	89.8	1,111	543.3	567.7	912	202.5	709.5	319	161.1	157.9	1,148	800.2	347.8	83	27.6	55.4
August	329	239.5	89.5	1,105	543.7	561.3	932	209.7	722.3	318	160.6	157.4	1,193	808.9	384.1	82	27.1	54.9
September	323	234.5	88.5	1,098	539.1	558.9	930	205.5	724.5	315	159.4	155.6	1,201	810.7	390.3	82	26.6	55.4
October	320	231.7	88.3	1,095	532.2	562.8	942	207.2	734.8	315	158.4	156.6	1,145	783.2	361.8	83	26.4	56.6
November	322	232.2	89.8	1,105	537.0	568.0	941	208.9	732.1	317	159.5	157.5	1,106	765.4	340.6	84	26.8	57.2
December	324	234.9	89.1	1,117	544.0	573.0	944	203.9	740.1	319	160.5	158.5	1,086	760.2	325.8	85	27.6	57.4
1945: January	324	236.5	87.5	1,109	545.6	563.4	934	209.2	724.8	319	160.8	158.2	1,050	740.2	309.8	82	26.9	55.1
February	324	236.2	87.8	1,101	541.7	559.3	940	211.5	728.5	319	159.5	159.5	1,038	731.8	306.2	82	26.5	55.5
March	326	236.3	89.7	1,093	535.6	557.4	944	208.6	735.4	318	160.0	158.0	1,024	717.8	306.2	82	26.7	55.3
April	323	233.2	89.8	1,072	523.1	548.9	930	206.5	723.5	315	158.8	156.2	1,025	718.5	306.5	81	26.2	54.8
May	323	233.5	89.5	1,062	518.3	543.7	915	196.7	718.3	314	157.9	156.1	1,021	717.8	303.2	80	26.0	54.0
June	329	237.9	91.1	1,068	520.1	547.9	912	190.6	721.4	319	159.5	159.5	1,046	736.4	309.6	80	26.0	54.0
July	326	237.0	89.0	1,047	514.1	532.9	865	186.8	678.2	315	158.1	156.9	1,110	772.6	337.4	78	25.5	52.5
August	326	239.0	87.0	1,045	515.2	529.8	888	194.5	693.5	316	158.0	158.0	1,121	771.2	349.8	79	26.2	52.8
September	318	238.8	79.2	1,046	513.6	532.4	896	198.0	698.0	307	156.3	150.7	1,201	816.7	384.3	83	27.9	55.1
October	328	248.3	79.7	1,051	517.1	533.9	912	198.8	713.2	316	161.5	154.5	1,133	794.2	338.8	86	29.4	56.6
November	321	243.3	77.7	1,057	526.4	530.6	914	202.9	711.1	323	167.3	155.7	1,101	790.5	310.5	83	29.8	53.2
December	329	252.3	76.7	1,107	556.8	550.2	923	203.1	719.9	333	175.8	157.2	1,095	799.3	295.7	82	29.8	52.2
1946: January	346	270.9	75.1	1,123	577.2	545.8	936	213.4	722.6	342	183.0	159.0	1,073	800.5	272.5	81	30.4	50.6
February	368	291.1	76.9	1,155	598.3	556.7	969	216.1	752.9	355	191.3	163.7	1.072	805.1	266.9	81	30.9	50.1
March	380	302.5	77.5	1,176	611.5	564.5	987	225.0	762.0	363	195.7	167.3	1,067	801.3	265.7	82	31.5	50.5
April	390	313.2	76.8	1,185	620.9	564.1	985	222.6	762.4	366	197.6	168.4	1,061	796.8	264.2	85	32.2	52.8
May	395	319.6	75.4	1,189	624.2	564.8	976	220.6	755.4	368	199.8	168.2	1,052	794.3	257.7	85	32.2	52.8
June	406	330.1	75.9	1,205	636.2	568.8	991	217.0	774.0	372	202.4	169.6	1,066	804.8	261.2	86	32.8	53.2
July	411	335.4	75.6	1,191	634.8	556.2	957	220.1	736.9	370	200.9	169.1	1,162	863.4	298.6	85	33.1	51.9
August	427	347.6	79.4	1,207	644.5	562.5	1,000	232.0	768.0	371	202.6	168.4	1,235	897.8	337.2	86	33.3	52.7
September	431	350.4	80.6	1,224	653.6	570.4	1,014	233.2	780.8	375	203.6	171.4	1,232	879.6	352.4	87	33.6	53.4
October	437	354.8	82.2	1,239	660.4	578.6	1,026	237.0	789.0	373	203.3	169.7	1,150	842.9	307.1	89	33.4	55.6
November	438	357.0	81.0	1,257	668.7	588.3	1,019	230.3	788.7	377	205.8	171.2	1,208	903.6	304.4	91	34.2	56.8
December	441	359.4	81.6	1,271	678.7	592.3	1,031	230.9	800.1	385	211.0	174.0	1,213	913.4	299.6	92	34.3	57.7
1947: January	443	361.9	81.1	1,273	682.3	590.7	1,041	240.5	800.5	385	211.7	173.3	1,170	892.7	277.3	90	33.8	56.2
February	442	362.0	80.0	1,278	686.3	591.7	1,069	246.9	822.1	387	211.3	175.7	1,130	867.8	262.2	89	33.3	55.7
March	445	363.6	81.4	1,272	683.1	588.9	1,070	248.2	821.8	387	211.3	175.7	1,127	865.5	261.5	86	32.3	53.7
April	447	365.6	81.4	1,253	675.4	577.6	1,018	229.0	789.0	381	209.5	171.5	1,142	869.1	272.9	82	31.2	50.8
May	437	359.0	78.0	1,226	663.3	562.7	990	216.8	773.2	368	203.1	164.9	1,152	880.1	271.9	83	32.0	51.0
June	442	......	......	1,208	......	......	993	......	......	370	......	......	1,192	......	......	84	......	......
July	430	......	......	1,187	......	......	992	......	......	373	......	......	1,311	......	......	84	......	......
August	444	......	......	1,202	......	......	1,071	......	......	385	......	......	1,442	......	......	85	......	......
September	447	......	......	1,223	......	......	1,096	......	......	390	......	......	1,483	......	......	86	......	......
October	449	......	......	1,249	......	......	1,127	......	......	393	......	......	1,353	......	......	89	......	......
November	452	......	......	1,271	......	......	1,117	......	......	396	......	......	1,288	......	......	90	......	......
December	454	......	......	1,290	......	......	1,143	......	......	400	......	......	1,255	......	......	88	......	......

See footnotes at end of table.

TABLE A-4: Estimated number of production workers in major manufacturing industry groups, by sex, selected periods 1939–47[1]—Continued

[In thousands]

Period	Paper and allied products			Printing, publishing and allied industries			Chemicals and allied products			Products of petroleum and coal			Rubber products			Miscellaneous industries		
	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women
1939: October[2]	289	219.6	69.4	333	273.7	59.3	313	267.0	46.0	113	112.7	0.3	134	101.0	33.0	268	169.9	98.1
1940: October	283	216.2	66.8	333	267.1	65.9	345	291.9	53.1	116	115.4	.6	133	99.2	33.8	284	184.0	100.0
1941 April	300	228.6	71.4	336	266.4	69.6	395	335.7	59.3	115	114.5	.5	151	109.0	42.0	304	198.5	105.5
October	334	251.6	82.4	352	273.5	78.5	463	388.2	74.8	124	123.3	.7	163	117.6	45.4	358	235.2	122.8
1942: April	327	248.5	78.5	330	258.7	71.3	574	471.8	102.2	125	124.2	.8	141	101.4	39.6	369	237.4	131.6
October	304	225.3	78.7	329	251.0	78.0	669	519.8	149.2	126	125.0	1.0	168	107.2	60.8	391	241.8	149.2
1943 average	324	220.9	103.4	331	239.1	91.4	734	511.1	222.4	125	117.9	6.7	194	121.3	72.6	445	246.0	198.8
1944 average	319	215.4	103.8	326	232.5	93.3	660	457.3	203.0	131	120.9	9.8	204	129.6	74.1	424	225.4	199.0
1945 average	321	221.1	99.4	336	242.4	93.4	632	449.1	182.8	137	128.0	9.4	196	135.2	60.6	398	214.3	184.0
1946 average	370	275.7	94.1	400	301.9	97.8	540	427.9	112.5	153	149.2	3.9	216	164.0	52.4	421	253.0	167.6
1947 average	391	....	....	434	....	....	577	....	....	162	....	....	213	....	....	448	....	....
1943: January	316	222.8	93.2	334	247.5	86.5	715	517.7	197.3	123	120.2	2.8	184	117.6	66.4	414	243.8	170.2
February	319	221.7	97.3	336	246.6	89.4	727	525.6	201.4	122	118.3	3.7	186	118.7	67.3	425	244.8	180.2
March	320	220.8	99.2	331	242.3	88.7	736	528.4	207.6	122	117.2	4.8	188	119.2	68.8	435	248.4	186.6
April	321	221.5	99.5	326	239.0	87.0	746	525.9	220.1	122	116.1	5.9	188	119.0	69.0	442	248.0	194.0
May	323	220.6	102.4	325	237.2	87.8	739	515.8	223.2	124	117.6	6.4	189	119.1	69.9	448	247.3	200.7
June	327	222.0	105.0	328	237.5	90.5	745	512.6	232.4	125	118.1	6.9	192	120.0	72.0	453	249.6	203.4
July	328	223.0	105.0	332	238.0	94.0	745	506.6	238.4	126	118.4	7.6	196	122.1	73.9	455	249.3	205.7
August	329	222.7	106.3	331	237.0	94.0	743	504.5	238.5	127	119.3	7.7	198	122.2	75.8	455	247.1	207.9
September	324	218.1	105.9	325	233.7	91.3	740	506.2	233.8	126	117.7	8.3	199	122.6	76.4	451	243.1	207.9
October	326	217.8	108.2	329	235.2	93.8	743	506.7	236.3	126	117.8	8.2	199	123.2	75.8	454	244.7	209.3
November	329	219.1	109.9	334	237.1	96.9	731	501.5	229.5	126	117.2	8.8	203	125.3	77.7	456	243.0	213.0
December	329	220.4	108.6	335	238.5	96.5	692	481.6	210.4	126	117.2	8.8	205	126.9	78.1	450	243.0	207.0
1944: January	327	220.7	106.3	331	235.0	96.0	690	481.6	208.4	125	116.1	8.9	207	129.4	77.6	445	241.6	203.4
February	326	220.7	105.3	331	234.3	96.7	698	487.9	210.1	127	117.9	9.1	208	130.4	77.6	439	236.6	202.4
March	324	218.7	105.3	329	234.6	94.4	673	472.4	200.6	127	118.1	8.9	208	130.4	77.6	435	234.9	200.1
April	320	216.0	104.0	325	232.0	93.0	656	460.5	195.5	128	118.5	9.5	203	127.9	75.1	430	230.5	199.5
May	318	214.0	104.0	322	230.2	91.8	646	450.3	195.7	130	120.1	9.9	202	126.7	75.3	425	228.6	196.4
June	318	214.3	103.7	324	233.3	90.7	637	440.2	196.8	132	121.8	10.2	201	126.0	75.0	423	225.0	198.0
July	319	214.7	104.3	326	233.1	92.9	637	439.5	197.5	134	123.5	10.5	201	127.0	74.0	420	220.9	199.1
August	317	214.6	102.4	324	232.3	91.7	642	440.4	201.6	135	124.7	10.3	202	129.3	72.7	416	219.2	196.8
September	312	210.9	101.1	319	229.4	89.6	647	442.5	204.5	133	123.0	10.0	201	129.4	71.6	412	215.9	196.1
October	313	210.3	102.7	324	230.7	93.3	656	448.7	207.3	132	122.2	9.8	201	130.4	70.6	414	215.7	198.3
November	316	213.0	103.0	326	231.8	94.2	663	454.8	208.2	132	122.0	10.0	204	132.4	71.6	416	216.3	199.7
December	321	217.0	104.0	328	232.9	95.1	678	468.5	209.5	133	122.9	10.1	206	135.8	70.2	418	219.4	198.6
1945: January	319	216.9	102.1	325	233.3	91.7	688	476.8	211.2	134	124.2	9.8	209	140.7	68.3	420	223.0	197.0
February	321	218.9	102.1	326	234.4	91.6	703	486.5	216.5	135	125.1	9.9	209	140.2	68.8	426	225.4	200.6
March	320	217.3	102.7	327	235.4	91.6	706	486.4	219.6	136	126.1	9.9	209	140.0	69.0	430	226.6	203.4
April	315	214.2	100.8	325	234.6	90.4	704	481.5	222.5	136	125.8	10.2	204	136.1	67.9	429	226.5	202.5
May	314	213.5	100.5	327	236.4	90.6	695	475.4	219.6	137	126.7	10.3	200	134.2	65.8	429	225.2	203.8
June	319	217.6	101.4	329	236.6	92.4	686	468.5	217.5	138	127.8	10.2	198	133.8	64.2	428	225.6	202.4
July	314	215.7	98.3	328	234.8	93.2	661	454.1	206.9	139	128.9	10.1	193	130.7	62.3	414	219.0	195.0
August	315	216.4	98.6	333	238.8	94.2	616	432.4	183.6	139	129.0	10.0	189	129.3	59.7	407	215.7	191.3
September	316	219.6	96.4	335	242.5	92.5	537	405.4	131.6	134	124.9	9.1	163	114.1	48.9	338	187.3	150.7
October	325	226.5	98.5	348	250.2	97.8	527	403.2	123.8	134	126.0	8.0	184	133.4	50.6	342	189.8	152.2
November	330	233.0	97.0	359	261.7	97.3	529	407.3	121.7	143	135.3	7.7	191	141.0	50.0	352	198.2	153.8
December	339	244.1	94.9	367	270.1	96.9	531	412.1	118.9	144	136.9	7.1	201	149.3	51.7	364	209.3	154.7
1946: January	346	253.3	92.7	372	276.0	96.0	534	417.6	116.4	146	139.9	6.1	205	153.7	51.3	372	218.0	154.0
February	353	260.2	92.8	382	284.6	97.4	537	422.1	114.9	142	137.5	4.5	209	157.4	51.6	385	226.8	158.2
March	358	265.3	92.7	388	292.9	95.1	542	427.6	114.4	149	144.5	4.5	213	160.8	52.2	398	234.8	163.2
April	363	270.1	92.9	391	296.4	94.6	542	428.7	113.3	151	146.8	4.2	213	161.0	52.0	407	242.6	164.4
May	366	273.4	92.6	392	297.5	94.5	531	419.5	111.5	150	146.1	3.9	213	161.2	51.8	410	246.0	164.0
June	371	278.2	92.8	397	301.7	95.3	527	416.9	110.1	154	150.5	3.5	216	163.5	52.5	422	254.5	167.5
July	368	276.4	91.6	401	303.6	97.4	521	411.1	109.9	157	153.7	3.3	208	157.7	50.3	422	256.2	165.8
August	373	279.7	93.3	403	305.9	97.1	527	417.9	109.1	158	154.7	3.3	215	163.2	51.8	434	263.9	170.1
September	376	281.2	94.8	406	309.4	96.6	541	430.6	110.4	158	154.8	3.2	220	167.6	52.4	439	266.5	172.5
October	381	284.6	96.4	416	314.5	101.5	551	438.0	113.0	157	153.9	3.1	226	172.0	54.0	448	271.9	176.1
November	389	291.0	98.0	422	317.8	104.2	563	449.3	113.7	157	153.7	3.3	229	174.7	54.3	453	275.0	178.0
December	393	295.1	97.9	427	322.8	104.2	569	455.8	113.2	157	153.7	3.3	230	175.7	54.3	457	280.1	176.9
1947: January	393	296.7	96.3	425	323.0	102.0	575	462.3	112.7	156	152.9	3.1	228	174.2	53.8	447	276.2	170.8
February	394	298.7	95.3	428	326.1	101.9	579	468.4	110.6	157	154.2	2.8	227	173.0	54.0	452	278.9	173.1
March	394	298.7	95.3	428	327.4	100.6	581	472.4	108.6	157	154.0	3.0	225	170.8	54.2	455	277.5	177.5
April	391	296.8	94.2	429	328.6	100.4	579	470.1	108.9	157	154.0	3.0	222	168.7	53.3	449	273.9	175.1
May	388	296.0	92.0	430	330.2	99.8	575	467.5	107.5	161	157.9	3.1	211	161.4	49.6	441	269.9	171.1
June	388	....	....	431	....	....	561	....	....	163	....	....	207	....	....	436	....	....
July	380	....	....	430	....	....	562	....	....	165	....	....	200	....	....	426	....	....
August	387	....	....	434	....	....	563	....	....	166	....	....	203	....	....	435	....	....
September	388	....	....	437	....	....	576	....	....	166	....	....	203	....	....	447	....	....
October	392	....	....	441	....	....	586	....	....	165	....	....	208	....	....	459	....	....
November	394	....	....	444	....	....	589	....	....	165	....	....	210	....	....	466	....	....
December	398	....	....	445	....	....	592	....	....	165	....	....	212	....	....	459	....	....

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[1] Data have been adjusted to levels indicated by Federal Security Agency data through 1946. Production workers include working foremen and all nonsupervisory workers engaged in fabricating, processing, assembling, inspection, receiving, storage, handling, packing, warehousing, shipping, maintenance, repair, janitorial, watchman services, product development, auxiliary production for plant's own use (e.g., power plant), and record-keeping and other services closely associated with the above production operations. Supervisory employees above the working foreman level and their clerical staffs, route-men, salesmen, and certain other groups of employees are excluded. Prior to 1945 the production worker group was identified as "wage earner" group.

[2] Figures are derived from 1939 Census of Manufactures, Persons Employed in Manufacturing Establishments, by Sex, Washington, August 1941.

TABLE A-5: Indexes of production-worker weekly pay rolls in major manufacturing industry groups, 1939–47[1]

[1939 = 100]

Period	All manufacturing[2]	Durable goods	Nondurable goods	Iron and steel and their products	Electrical machinery	Machinery, except electrical	Transportation equipment, except automobiles	Automobiles	Nonferrous metals and products	Lumber and timber basic products	Furniture and finished lumber products
1939 average	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1940 average	114.5	125.1	104.1	121.3	127.9	130.6	188.8	126.4	125.8	109.7	108.7
1941 average	167.5	202.3	133.5	183.3	224.6	219.8	526.0	180.0	189.5	150.4	144.2
1942 average	245.2	325.6	166.6	243.5	338.9	341.1	1746.8	206.4	266.4	186.7	162.2
1943 average	334.4	469.5	202.3	311.4	488.0	443.7	3080.3	321.2	354.5	215.1	183.9
1944 average	345.7	482.5	211.9	324.4	529.9	443.0	3133.9	335.3	357.8	224.6	193.7
1945 average	293.4	374.7	214.0	285.4	437.6	378.8	1909.5	253.8	313.7	209.5	193.0
1946 average	269.6	293.3	246.4	245.4	345.8	345.2	554.5	265.5	302.5	263.4	245.4
1947 average	332.1	371.9	293.1	314.9	440.4	439.9	551.6	363.5	356.6	389.0	316.9
1945: January	347.0	476.9	220.0	331.7	530.3	442.9	2993.6	335.4	354.2	217.8	200.7
February	347.5	476.7	221.1	335.8	534.0	448.8	2912.7	337.5	362.1	222.0	205.3
March	345.7	472.1	222.2	339.2	537.2	446.0	2812.8	330.8	369.9	221.5	205.1
April	338.5	460.6	219.1	336.3	529.0	435.8	2671.9	324.4	367.7	222.1	202.9
May	324.9	438.1	214.1	327.6	514.0	415.8	2460.6	300.2	356.6	222.8	200.3
June	321.8	426.4	219.6	318.8	505.8	420.4	2295.4	290.8	348.8	230.1	203.4
July	306.6	400.4	214.9	301.1	478.0	399.2	2145.9	262.7	324.9	211.8	196.5
August	273.6	346.0	202.8	264.0	413.8	351.7	1805.8	190.2	302.8	207.6	179.1
September	228.7	252.5	205.5	212.5	278.0	294.4	873.9	156.6	230.4	202.3	170.7
October	227.7	250.5	205.4	213.4	299.3	294.3	738.8	177.9	238.1	186.8	175.8
November	227.7	248.4	207.4	216.8	312.6	293.1	604.4	199.1	251.1	182.7	180.4
December	231.4	247.4	215.7	227.5	319.5	303.5	598.0	140.4	257.3	186.9	196.0
1946: January	234.5	250.2	219.0	224.1	313.9	308.9	580.2	159.3	262.8	194.1	202.0
February	215.0	204.9	224.8	133.1	214.8	264.8	511.0	148.0	227.5	206.4	210.9
March	239.5	246.2	233.0	226.2	233.3	288.6	527.9	173.8	253.1	221.6	221.0
April	256.5	277.9	235.7	243.6	298.3	314.8	582.2	252.1	277.6	236.0	228.0
May	255.6	277.9	233.9	234.1	325.3	324.9	562.5	243.1	283.2	250.3	226.7
June	265.5	292.7	238.9	242.6	350.8	345.1	562.6	262.2	300.9	270.8	239.8
July	270.4	300.5	241.0	250.2	354.4	349.9	564.6	295.7	306.7	262.0	239.4
August	288.5	321.3	256.3	269.2	383.1	366.6	559.8	322.7	327.5	298.9	259.2
September	294.9	329.2	261.3	277.4	402.2	381.3	531.2	334.6	335.6	299.8	265.0
October	297.9	334.8	261.8	277.9	413.8	393.9	550.4	328.9	343.1	308.9	276.4
November	303.9	338.5	270.1	285.6	422.4	396.6	539.9	330.8	350.1	302.8	282.2
December	312.6	345.5	280.5	281.3	437.5	407.2	581.6	334.5	361.8	309.7	294.7
1947: January	314.2	348.3	280.7	292.6	432.8	414.1	572.9	326.7	360.3	312.9	298.8
February	317.6	353.2	282.7	292.3	430.2	417.2	568.6	343.3	365.7	334.1	308.7
March	320.9	358.9	283.7	298.8	437.1	424 5	567.3	353.9	364.8	336.7	309.0
April	317 6	359.0	277.2	301.5	403.6	431.0	576.0	349.5	359.8	352.0	303.7
May	319.3	363.0	276.6	310.2	414.4	437.7	572.1	335.0	354.8	383.3	302.1
June	327.2	375.5	280.0	319 2	440.5	443.0	571.1	363.6	352.0	409.8	308.0
July	321.8	359.4	285.1	307.2	430.0	427.4	492.5	355.3	332.1	394 2	298.6
August	331.5	366.8	297.0	316.8	428.1	434.5	492.4	345.1	335.3	429.7	311.6
September	345.3	382.2	309.2	327.7	450.5	451.4	509.8	380.6	349.5	427.4	324.3
October	350.1	389.9	311.2	331.6	464.6	458.0	541.5	385.8	359.3	427.2	338.8
November	353.4	395.0	312.8	335.1	471.9	459.6	555.1	395.6	367.3	429.1	343.0
December	365.7	411.0	321.4	345.8	481.2	479.9	600.2	427.7	377.8	431.8	355.7

See footnotes at end of table.

TABLE A-5: Indexes of production-worker weekly pay rolls in major manufacturing industry groups, 1939–47[1]—Continued

[1939 = 100]

Period	Stone, clay, and glass products	Textile-mill products and other fiber manufactures	Apparel and other finished textile products	Leather and leather products	Food	Tobacco manufactures	Paper and allied products	Printing, publishing, and allied industries	Chemicals and allied products	Products of petroleum and coal	Rubber products	Miscellaneous industries
1939 average	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1940 average	108.6	100.8	103.1	96.3	102.9	104.5	107.7	102.4	117.2	106.9	105.4	110.9
1941 average	147.3	136.2	132.9	130.3	120.7	115.9	138.4	111.3	174.4	126.3	150.1	156.0
1942 average	167.6	163.0	153.9	150.2	150.1	136.2	155.6	113.8	307.7	152.1	176.2	224.1
1943 average	189.1	178.9	185.2	154.2	180.9	151.0	184.8	124.7	422.5	184.3	263.9	322.7
1944 average	187.7	174.7	203.4	159.4	203.9	158.8	195.3	134.8	398.1	213.9	301.0	330.8
1945 average	188.0	173.6	209.0	168.6	209.4	164.7	204.3	148.2	383.1	227.6	289.4	308.6
1946 average	249.3	225.2	255.6	208.8	237.3	187.1	252.8	196.7	326.9	245.6	323.6	322.4
1947 average	310.1	265.0	291.9	238.4	300.4	201.8	306.8	241.3	393.6	288.4	353.6	374.2
1945: January	186.8	178.0	217.7	166.9	203.0	167.0	201.4	140.5	421.4	222.9	337.9	341.6
February	188.3	177.3	227.3	169.1	197.0	165.6	202.6	139.5	429.5	225.5	338.8	346.5
March	192.7	177.3	232.8	172.9	196.0	166.0	203.3	141.5	436.0	227.2	314.5	351.0
April	193.7	172.6	219.2	170.2	197.0	160.8	201.6	140.9	434.7	233.7	314.6	349.2
May	189.2	167.9	203.9	164.6	196.4	157.2	196.6	142.2	433.9	232.1	298.3	341.5
June	194.2	176.8	207.0	174.4	205.9	164.5	204.7	143.7	427.2	235.8	302.5	343.4
July	190.8	172.1	190.5	169.3	216.7	151.9	201.2	142.5	408.4	240.8	296.6	321.3
August	184.6	161.5	178.8	161.1	209.1	149.3	191.9	144.7	366.5	235.8	263.2	298.2
September	180.3	168.9	205.0	161.3	230.1	176.0	203.2	152.8	316.3	217.5	228.6	241.8
October	188.0	170.4	210.0	166.2	219.2	181.7	209.4	155.9	308.9	203.1	251.1	245.7
November	180.5	173.9	204.6	166.5	218.2	172.2	213.6	164.0	306.0	228.6	254.5	253.6
December	186.6	187.0	211.4	180.5	223.8	164.1	221.6	169.6	308.3	228.0	271.7	269.3
1946: January	191.0	190.0	223.3	187.5	219.5	166.7	224.6	172.4	311.2	227.0	284.8	274.1
February	211.5	203.3	234.3	197.9	217.1	165.2	228.7	177.9	311.6	227.6	285.3	281.5
March	225.4	212.6	256.2	206.7	213.1	171.3	236.3	184.6	318.4	238.0	294.4	297.2
April	233.5	216.1	255.1	209.6	213.0	174.6	239.9	186.7	320.7	240.0	314.3	306.1
May	234.2	215.5	249.5	209.9	210.6	181.1	241.6	187.7	313.5	235.7	315.3	305.5
June	246.4	219.7	252.8	211.3	214.9	184.1	249.0	193.0	315.9	244.2	323.0	321.5
July	248.0	216.2	234.1	205.9	243.9	178.3	248.8	195.3	318.9	253.0	311.9	317.7
August	267.3	233.0	264.4	208.0	265.2	186.2	259.3	200.4	324.0	255.5	325.5	333.5
September	275.3	239.6	273.5	214.3	258.4	196.0	263.0	205.7	333.7	260.1	350.0	344.2
October	280.7	245.8	273.1	209.9	244.7	207.4	272.1	211.5	340.5	255.7	346.0	356.4
November	285.3	251.2	271.6	213.1	266.9	212.7	280.8	217.4	350.9	255.9	359.8	360.3
December	293.3	259.6	279.6	232.0	280.2	222.0	289.1	227.8	363.6	254.5	372.3	370.4
1947: January	291.9	260.5	292.9	234.6	273.2	209.4	289.1	223.6	370.0	257.9	365.7	363.9
February	289.8	268.2	306.0	237.1	257.8	201.0	293.0	225.6	379.1	260.7	364.5	367.4
March	298.0	271.4	303.4	236.7	255.5	193.1	296.0	231.7	384.1	266.0	353.3	375.4
April	301.4	261.6	267.2	228.8	259.8	181.6	296.0	234.9	385.2	269.7	363.1	368.8
May	299.5	254.5	259.8	220.9	270.4	182.8	296.3	238.6	389.1	280.6	347.5	364.6
June	311.5	248.6	262.3	225.9	286.7	194.8	303.4	240.3	384.1	291.4	342.3	363.5
July	298.8	243.7	266.2	229.0	317.1	200.0	304.2	238.0	387.7	300.5	331.2	349.2
August	315.5	246.2	288.4	235.8	349.3	203.0	307.2	240.0	390.2	302.1	337.6	355.9
September	320.2	262.9	303.8	248.1	356.1	205.3	315.5	249.7	403.1	307.5	348.3	378.2
October	328.2	271.8	320.5	251.8	332.8	214.5	320.5	252.8	409.6	301.8	354.4	394.1
November	331.2	288.2	304.8	252.5	323.5	216.3	325.9	257.2	416.4	309.5	361.4	403.9
December	335.7	302.0	327.3	259.6	321.9	219.8	334.0	263.1	424.1	313.3	373.6	405.1

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[1] See footnote 1, table A-4. The indexes of production worker pay rolls are based upon reports covering the wages paid to production workers during the week ending nearest the 15th of each month. They include pay for sick leave, holidays, and vacations taken during the pay period reported and also include overtime pay and shift differentials. They exclude bonuses unless earned and paid regularly in the pay period. They also exclude retroactive pay not earned during the pay period reported. When adjustments are made in the employment series similar adjustment is made in the accompanying pay-roll series, since no data exist to which the pay-roll series may be directly adjusted.

[2] Pay-roll indexes for manufacturing industries in 1909*, 1914*, and 1919–38 (1939 = 100) follow:

Year	Index	Year	Index
1909*	33.9	1928	109.8
1914*	40.1	1929	117.1
1919	103.9	1930	94.8
1920	124.2	1931	71.8
1921	80.2	1932	49.5
1922	86.0	1933	53.1
1923	109.1	1934	68.3
1924	101.8	1935	78.6
1925	107.3	1936	91.1
1926	110.5	1937	108.9
1927	108.5	1938	84.7

*Based on data from the U. S. Bureau of the Census.

Nonmanufacturing Employment and Pay Rolls

The estimated number of employees and the indexes of weekly pay rolls in table A–6 covering selected nonmanufacturing industries were derived in the same manner as the manufacturing series in tables A–3 and A–5. An exception is that of class I steam railroads.

The figures of employment and weekly pay rolls for class I steam railroads are derived from data published by the United States Interstate Commerce Commission. Employment and pay-roll data as used herein are limited to employees classified and reported on an hourly basis (excluding most of the executive, professional, and supervisory employees). The Interstate Commerce Commission up to 1932 reported only the number of employees on the pay rolls at the middle of the month and thereafter also the number on the pay rolls during the month. The average of the substantially constant ratios from 1933 to 1937 was used to estimate the number on the pay rolls during the month from 1921 to 1932. The Commission's data as published for 1921 and 1922 include class I switching and terminal companies. Detailed figures by class of employees include switching and terminal companies to 1927 and exclude these companies thereafter. Beginning in 1923, however, employment and pay rolls of all workers and of workers on an hourly basis were published, both including and excluding switching and terminal companies. On the basis of the almost constant ratios after 1922, switching and terminal companies (accounting for hardly more than 1 percent of total employment and pay rolls) were excluded for the years 1921 and 1922.

TABLE A-6: Estimated number of employees and indexes of weekly pay rolls in selected nonmanufacturing industries, 1939–47

[1939 = 100]

Period	Mining[1]																	
	Coal				Metal												Quarrying and non-metallic		Crude petroleum and natural gas production [3]	
	Anthracite		Bituminous		Total: Metal		Iron		Copper		Lead and zinc		Gold and silver		Miscellaneous					
	Employment (thousands)	Pay-roll index	Employment (thousands)	Pay-roll index	Employment (thousands)	Pay-roll index	Employment (thousands)	Pay-roll index	Employment (thousands)	Pay-roll index	Employment (thousands)	Pay-roll index	Employment (thousands)	Pay-roll index	Employment (thousands)	Pay-roll index	Employment (thousands)	Pay-roll index	Employment (thousands)	Pay-roll index
1939 average	83.6	100.0	372	100.0	92.6	100.0	21.1	100.0	25.0	100.0	16.3	100.0	26.0	100.0	4.2	100.0	68.5	100.0	114.4	100.0
1940 average	86.4	103.4	416	116.6	103.9	117.7	23.8	123.1	29.4	123.8	18.7	124.0	27.0	102.6	5.2	139.1	72.5	109.1	112.5	98.3
1941 average	86.8	111.4	413	144.7	115.7	144.9	28.3	133.8	32.8	151.8	19.5	146.5	27.5	107.7	7.6	220.3	84.6	189.1	112.6	105.4
1942 average	83.6	132.8	454	182.4	119.4	174.7	33.7	227.0	34.0	192.9	20.5	194.1	19.5	83.3	11.7	394.3	90.2	199.6	110.0	114.6
1943 average	78.4	146.1	419	203.3	112.7	184.9	35.3	257.9	33.3	214.6	21.6	226.7	7.7	37.2	14.8	560.7	80.9	199.6	103.2	128.0
1944 average	75.9	169.1	401	241.2	95.3	161.8	31.6	237.4	27.4	179.7	18.7	208.9	6.2	30.9	11.4	451.3	71.5	191.0	106.1	146.6
1945 average	68.2	155.1	367	222.7	78.6	137.3	26.5	212.5	21.8	143.6	15.5	179.6	5.9	29.4	8.9	349.7	67.1	187.1	110.7	155.8
1946 average	76.9	204.4	355	235.4	78.1	139.4	25.9	203.5	20.5	143.6	16.1	191.3	7.6	41.9	8.0	308.6	80.4	245.4	125.0	173.0
1947 average	76.5	222.8	390	298.6	90.1	186.8	31.4	290.6	25.7	212.8	17.0	228.0	8.2	51.3	7.8	323.6	85.8	292.6	126.7	196.7
1945: January	74.2	154.7	384	243.4	83.2	142.7	27.1	197.7	23.6	158.1	16.8	194.9	5.8	30.3	9.9	399.2	64.0	167.2	107.2	150.9
February	74.4	168.6	383	241.7	82.3	146.5	26.8	220.2	23.5	156.7	16.6	193.4	5.9	30.1	9.4	386.5	63.6	169.0	107.8	153.0
March	74.2	168.2	381	232.3	82.5	147.4	27.1	230.1	23.4	154.7	16.4	191.0	5.9	29.8	9.6	382.4	64.5	175.5	108.2	152.3
April	72.7	151.7	343	173.3	81.5	147.0	27.4	228.2	22.9	157.0	16.1	187.8	5.8	30.1	9.3	378.9	65.3	185.8	108.5	151.2
May	8.0	14.2	376	234.8	80.8	143.8	27.4	228.7	22.7	152.7	15.9	181.3	5.6	27.5	9.2	368.6	65.8	185.1	108.8	152.3
June	74.3	163.8	377	259.4	79.2	143.3	26.8	227.4	22.1	152.5	15.5	179.9	5.6	27.3	9.2	373.0	67.5	194.5	110.2	156.8
July	73.0	160.7	369	217.6	77.6	135.1	26.5	211.0	21.4	143.1	15.0	169.1	5.5	26.2	9.2	374.1	67.9	197.7	110.5	156.6
August	72.9	166.9	369	214.5	75.8	127.0	26.2	208.6	20.5	121.9	14.6	164.7	5.6	26.4	9.0	346.0	68.1	189.9	111.2	160.8
September	73.1	168.9	371	228.1	74.6	128.7	25.7	203.5	19.9	128.7	14.5	166.6	5.9	28.8	8.6	343.5	68.6	193.8	110.6	159.4
October	73.6	192.5	296	135.2	74.0	129.4	25.6	210.9	19.9	130.2	14.6	168.9	6.1	29.8	7.8	291.8	69.8	200.0	112.0	154.2
November	73.7	162.9	371	240.0	74.9	127.9	25.7	197.9	20.1	130.9	15.1	175.5	6.4	31.9	7.6	279.3	70.8	198.6	114.5	161.7
December	74.5	188.6	378	251.6	76.6	128.4	25.7	185.2	20.8	136.7	15.7	181.8	6.9	34.7	7.5	273.0	69.7	188.5	119.0	160.0
1946: January	74.8	168.5	382	236.9	77.9	128.7	24.9	176.5	21.7	138.4	16.4	189.3	7.1	36.1	7.8	276.0	69.3	183.5	121.1	163.7
February	76.5	201.2	385	251.5	68.9	102.1	19.5	73.4	18.9	122.4	16.2	191.3	7.5	38.8	6.7	250.4	70.1	191.0	122.4	167.1
March	77.1	201.5	386	255.8	67.7	112.8	17.3	115.3	18.9	121.8	16.0	190.3	7.6	40.1	7.8	290.2	73.8	209.5	122.2	169.8
April	76.8	186.3	68	23.4	65.3	113.1	17.9	138.0	16.2	100.8	15.9	193.6	7.6	41.5	7.7	293.8	78.5	235.6	123.5	169.4
May	76.4	203.7	282	110.4	70.0	118.0	22.0	149.6	16.5	111.6	16.2	189.3	7.5	40.1	7.8	306.8	80.1	233.8	124.8	171.0
June	74.6	206.4	387	283.6	76.5	139.2	29.0	246.7	15.6	107.9	16.3	190.3	7.5	41.9	8.0	318.5	82.8	254.1	126.7	173.1
July	76.9	176.8	394	235.4	80.2	144.8	29.8	256.3	21.6	155.3	12.8	135.5	7.5	38.8	8.6	323.0	84.7	261.5	128.4	178.2
August	77.4	218.2	399	285.6	84.8	158.9	30.6	263.2	22.4	165.7	15.4	181.6	7.6	43.8	8.8	344.2	86.3	275.4	128.6	179.6
September	77.6	219.1	398	278.4	85.5	160.4	30.3	263.1	22.7	164.7	16.5	198.6	7.6	42.9	8.3	326.3	85.7	278.7	126.4	176.1
October	78.5	225.7	397	281.0	85.9	161.8	30.5	262.4	23.0	168.7	16.6	199.4	7.6	43.4	8.1	332.0	85.1	278.3	125.7	176.8
November	78.2	205.7	396	276.3	87.2	160.6	30.0	248.2	23.9	171.7	17.2	203.4	7.8	44.9	8.4	332.0	84.7	272.1	125.1	177.7
December	78.3	239.7	387	306.1	88.0	172.7	29.2	249.6	24.7	194.0	17.9	233.2	8.0	50.2	8.2	310.5	83.5	271.5	124.7	173.3
1947: January	78.7	228.1	399	314.5	88.5	169.6	28.9	238.9	25.4	195.5	18.4	235.0	8.2	48.7	7.6	285.7	81.1	250.7	124.0	181.1
February	78.2	208.5	398	294.7	89.1	174.9	29.0	250.2	25.6	199.9	18.5	240.0	8.3	51.5	7.6	284.0	81.3	251.6	123.5	180.1
March	77.2	232.8	395	291.0	90.2	176.1	29.8	256.8	25.6	198.7	18.4	235.8	8.4	51.1	7.8	307.6	82.6	261.4	123.9	180.7
April	75.6	175.5	367	225.8	91.1	178.3	31.1	264.6	25.6	199.2	18.1	238.4	8.4	50.9	7.9	308.2	86.3	285.1	124.7	190.8
May	76.4	210.2	389	290.3	90.8	186.3	31.7	296.4	25.3	203.8	17.8	236.9	8.2	49.7	7.8	319.1	87.2	295.5	125.6	192.2
June	75.7	219.4	392	300.6	91.9	196.7	32.4	322.1	25.7	216.2	17.8	241.9	8.0	49.9	7.9	332.0	88.3	307.1	128.5	206.0
July	74.2	200.3	363	229.7	90.6	186.1	32.6	307.5	25.7	211.6	16.3	210.5	8.1	47.2	7.9	327.6	88.6	307.0	130.8	204.9
August	76.7	244.0	390	314.7	91.0	193.3	32.7	313.0	25.7	219.0	16.5	220.5	8.3	52.1	7.9	345.0	88.9	317.2	131.0	204.0
September	76.0	237.9	394	321.6	89.6	193.6	32.4	311.0	25.7	225.3	15.5	216.0	8.2	52.1	7.7	339.6	88.1	315.9	128.7	206.5
October	76.2	252.7	397	327.5	88.7	192.7	32.4	315.5	25.8	222.9	14.9	209.7	8.0	51.7	7.6	338.1	87.3	319.2	127.1	199.9
November	76.2	224.4	399	327.4	89.4	194.8	32.0	310.2	26.1	224.7	15.4	220.6	8.1	53.7	7.8	346.7	86.4	305.7	126.4	211.0
December	76.5	239.4	402	345.8	89.8	198.8	31.3	301.1	26.6	236.5	15.6	231.6	8.5	56.5	7.9	349.2	83.9	295.3	126.3	203.2

See footnotes at end of table.

TABLE A–6: Estimated number of employees and indexes of weekly pay rolls in selected nonmanufacturing industries, 1939–47—Continued

[1939 = 100]

Period	Public utilities						Street railways[4] and busses		Service						Class I steam railroads[7]	
	Telephone		Telegraph[3]		Electric light and power				Hotels (year round)[5]		Power laundries[6]		Cleaning and dyeing[6]			
	Employment (thousands)	Pay-roll index	Employment (thousands)	Pay-roll index	Employment (thousands)	Pay-roll index	Employment (thousands)	Pay-roll index	Employment (thousands)	Pay-roll index	Employment (thousands)	Pay-roll index	Employment (thousands)	Pay-roll index	Employment (thousands)	Pay-roll index
1939 average	318	100.0	37.6	100.0	244	100.0	194	100.0	323	100.0	196	100.0	58.2	100.0	1,006	100.0
1940 average	327	104.7	37.9	103.6	250	104.4	192	101.3	323	101.5	209	108.6	61.2	108.0	1,043	105.7
1941 average	363	118.0	41.1	117.6	255	110.8	194	108.4	333	109.1	235	126.6	68.4	127.1	1,164	128.0
1942 average	390	131.5	43.0	132.5	237	112.1	207	129.8	332	119.8	252	148.3	73.1	149.4	1,313	162.8
1943 average	402	144.9	46.9	159.3	211	109.2	227	155.7	344	138.7	252	167.0	78.0	185.4	1,406	197.2
1944 average	407	155.0	46.2	175.0	203	113.9	230	168.3	353	157.8	241	179.6	79.1	207.1	1,464	215.7
1945 average	419	177.4	45.4	176.7	205	120.1	230	177.8	359	174.8	235	186.7	85.2	236.2	1,475	216.1
1946 average	543	253.4	42.9	180.0	243	148.2	248	200.4	385	207.0	245	212.2	96.1	290.1	1,414	232.2
1947 average	582	275.4	38.0	211.4	262	174.7	252	221.7	380	222.5	243	230.9	94.6	298.3	1,392	242.1
1945: January	401	157.8	45.2	172.3	200	115.2	227	175.1	355	166.8	235	182.1	76.7	206.4	1,444	217.9
February	403	159.0	44.9	171.4	201	117.3	229	178.9	353	167.9	233	179.8	77.8	208.8	1,452	222.3
March	404	162.4	44.8	170.8	201	116.8	230	175.7	352	166.7	233	183.0	81.7	230.1	1,471	220.4
April	404	163.2	44.4	169.9	200	117.4	229	174.2	348	165.6	231	183.4	83.9	233.9	1,469	218.4
May	406	166.1	44.2	174.0	200	117.5	228	176.2	350	167.9	232	182.7	84.7	232.6	1,483	219.4
June	411	172.6	44.4	175.3	202	119.2	227	178.2	353	171.5	237	187.8	86.9	244.8	1,503	224.3
July	419	177.7	44.9	175.0	204	119.6	226	177.1	353	171.2	239	191.6	87.0	244.1	1,509	221.9
August	423	195.7	45.0	200.4	205	120.7	227	178.7	354	172.0	235	181.2	84.8	223.8	1,515	220.1
September	424	181.7	45.6	177.2	206	120.6	229	177.1	362	177.2	236	189.9	89.1	249.7	1,465	207.3
October	431	189.0	46.4	177.6	209	120.9	231	178.1	371	184.6	237	191.0	91.5	262.1	1,455	207.7
November	443	200.3	47.0	177.9	215	126.7	236	179.1	376	190.6	236	190.8	89.1	246.0	1,460	207.5
December	454	203.5	47.6	178.8	222	129.8	238	184.0	379	196.1	238	197.0	89.2	251.9	1,467	206.3
1946: January	465	205.2	42.3	155.3	227	133.7	240	181.4	378	196.4	242	202.0	90.0	259.5	1,462	204.2
February	488	230.7	46.9	176.9	231	138.3	243	187.2	383	199.8	241	200.1	91.4	257.6	1,429	202.0
March	504	237.0	46.4	177.1	236	140.4	244	187.2	385	201.1	243	205.0	93.9	277.4	1,416	196.2
April	519	246.1	45.1	179.5	239	142.5	246	191.4	383	201.1	243	207.3	98.9	301.7	1,411	216.9
May	532	254.0	42.7	175.6	241	144.2	247	195.2	387	204.6	245	210.6	98.8	297.7	1,375	205.5
June	545	259.9	42.2	174.9	244	148.4	249	199.5	387	205.0	249	216.0	100.7	311.4	1,392	228.7
July	565	268.8	42.3	178.6	247	150.2	250	206.7	384	204.9	252	218.8	99.8	305.5	1,410	235.2
August	575	267.6	42.1	178.5	249	152.4	252	211.2	385	208.9	247	213.3	95.9	287.3	1,425	241.1
September	575	265.0	42.2	177.3	249	153.3	252	207.9	385	209.5	244	213.6	97.0	299.6	1,415	233.8
October	577	269.2	41.5	201.7	249	155.3	252	212.6	389	214.5	244	214.9	97.6	300.4	1,422	241.3
November	583	273.0	40.9	194.2	250	157.6	253	210.9	388	218.5	244	216.9	95.4	289.6	1,416	235.1
December	586	264.5	40.4	190.5	252	161.6	252	213.6	384	218.8	246	227.7	94.0	293.6	1,393	226.7
1947: January	588	267.5	39.4	189.1	250	159.5	254	216.1	378	215.1	246	228.6	92.2	286.7	1,363	230.4
February	594	269.4	38.3	201.5	252	163.7	254	219.5	380	216.6	243	222.2	91.4	275.2	1,352	234.6
March	599	267.2	37.9	198.0	254	160.8	254	218.6	378	216.8	241	223.2	93.1	289.3	1,365	229.7
April	404	136.1	39.3	239.3	256	166.5	254	218.8	379	219.4	242	227.3	95.4	299.4	1,386	231.6
May	506	202.9	38.7	226.9	258	168.2	253	220.0	382	221.1	245	231.0	97.4	313.5	1,408	225.0
June	605	292.5	38.5	218.8	263	177.5	253	222.1	385	226.4	249	239.3	100.8	328.4	1,429	237.1
July	614	302.2	38.2	215.2	267	178.4	254	222.1	382	222.0	250	238.5	97.7	310.5	1,438	236.1
August	616	306.2	37.8	213.5	269	182.9	253	225.2	379	221.0	245	231.3	93.1	285.0	1,431	237.1
September	613	312.3	37.6	211.8	268	183.1	251	224.1	379	222.4	243	236.2	94.3	301.7	1,408	259.4
October	609	314.2	36.9	208.1	267	182.8	249	223.2	380	226.9	241	232.3	95.6	303.8	1,391	261.1
November	614	321.5	36.6	206.8	268	187.6	249	223.6	378	228.6	238	226.8	92.7	293.7	1,371	257.0
December	620	313.0	36.7	207.8	269	185.7	249	226.7	381	233.2	237	233.6	91.0	292.8	1,366	258.6

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[1] Data are for production and related workers only and are adjusted to levels indicated by Federal Security Agency data through 1946.

[2] Does not include well drilling or rig building.

[3] Includes all land-line employees except those compensated on a commission basis. Excludes general and divisional headquarters personnel, trainees in school, and messengers.

[4] Includes private and municipal street-railway companies and affiliated, subsidiary, or successor trolley-bus and motor-bus companies.

[5] Money payments only; additional value of board, room, uniforms, and tips, not included.

[6] Data are for production and related workers only.

[7] From United States Interstate Commerce Commission, Wage Statistics of Class I Steam Railroads in the United States (currently published on a monthly and annual basis in Statement No. M-300). Limited to employees classified and reported to the Interstate Commerce Commission on an hourly basis (excluding most of the executive, professional, and supervisory employees). The number of employees is the number on the pay rolls during the month, averaged for the annual series.

Similar figures, available for class I steam railroads for the period from 1921 to 1938, are given below. (Minor adjustments were made in the published Interstate Commerce Commission's figures for 1921 to 1932 for comparability with later figures.)

Period	Employment (in thousands)	Weekly pay-roll index (1939 average = 100)
1921 (July–Dec.)	1,745	....
1922	1,691	144.6
1923	1,945	166.2
1924	1,829	154.6
1925	1,819	156.7
1926	1,858	161.7
1927	1,808	159.0
1928	1,719	152.9
1929	1,726	157.7
1930	1,535	136.9
1931	1,290	110.8
1932	1,052	78.8
1933	998	73.9
1934	1,031	80.5
1935	1,017	87.3
1936	1,104	99.1
1937	1,143	107.0
1938	955	92.7

Federal Personnel

Estimates of Federal employment and pay rolls and military personnel and pay (including allowances) are published regularly by the Bureau of Labor Statistics. Agencies in the executive branch supply data through the United States Civil Service Commission. The legislative and judicial branches and Government corporations supply their data directly to the Bureau of Labor Statistics. Statistics covering the military are furnished by the War Department (Army), the Navy Department (for the Marine Corps as well as the Navy), and the Treasury Department for the Coast Guard. (In wartime, the Coast Guard is a part of the Navy and figures for it are reported by the Navy Department.) Persons outside the United States and in continental United States are covered by the totals shown below.

The employment in the executive branch of the Federal Government, in table A–7 for 1914–47, is shown separately for Washington, D. C., for other areas, and as a total.

In table A–8, the total number of Federal employees is shown by branches for 1939–47. (Data on pay rolls were under revision when the Handbook was sent to press.) In addition to separate totals for the executive, legislative, and judicial branches and Government corporations, total employment is given separately for defense agencies, the Post Office Department, and all other agencies of the executive branch.

Personnel and pay in the military branch of the Federal Government are shown in table A–9. The information on the number of persons in the armed forces covers 1914–47. For the various elements of pay the time coverage varies; the pay-roll totals are given beginning with 1934, and mustering out pay, family allowance, and leave payments are given from the date of authorization.

TABLE A–7: Average number of employees in the executive branch of the Federal Government, inside and outside Washington, D.C., 1914–47[1] (continental United States and elsewhere)

Period	Average number employed		
	Total[2]	Wash., D.C.[3]	Other areas
1914	501,039	35,500	465,539
1915	494,624	36,459	458,165
1916	498,597	37,509	461,088
1917	581,276	43,447	537,829
1918	1,014,975	138,626	876,349
1919	931,677	127,240	804,437
1920	669,243	91,012	578,231
1921	578,546	79,137	499,409
1922	544,080	70,229	473,851
1923	534,203	66,525	467,678
1924	541,344	64,374	476,970
1925	551,028	64,018	487,010
1926	547,313	61,080	486,233
1927	545,518	60,068	485,450
1928	554,783	61,662	493,121
1929	575,343	63,637	511,706
1930	590,075	68,009	522,066
1931	603,531	71,626	531,905
1932	599,486	68,673	530,813
1933	604,387	69,618	534,769
1934	690,904	88,809	602,095
1935	790,335	104,010	686,825
1936	862,907	115,437	747,470
1937	867,896	113,427	754,469
1938	868,032	115,976	752,056
1939	935,493	123,773	811,720
1940	1,042,898	136,672	906,226
1941	1,393,783	178,540	1,215,243
1942	2,252,359	258,284	1,994,075
1943	3,138,838	278,363	2,860,475
1944	3,292,607	263,787	3,028,820
1945	3,525,638	249,948	3,275,690
1946	2,660,879	232,333	2,428,546
1947	2,107,945	207,800	1,900,145

[1] Data are from monthly reports of the Civil Service Commission beginning in 1929. Data for prior years were secured by taking employment as of June 30 as reported in Annual Reports of the Civil Service Commission, and making any necessary adjustments to make the data conform in coverage and definition with data reported later. For adjustments to data of individual agencies, see footnotes 1 and 4, table A-8.

[2] Emergency relief workers are excluded; ordinarily they are considered as unemployed. For the number of persons on such projects and their pay, see table J-1.

[3] Beginning with 1942, data cover, in addition to the District of Columbia, the areas in Maryland and Virginia which are included by the Bureau of the Census in its definition of the Washington, D.C., metropolitan area.

TABLE A-8: Number of Federal employees, by branch and agency group, 1939–47[1] (continental United States and elsewhere)

Period	Number employed (as of first of month)							
	All branches	Executive[2]				Legislative	Judicial	Government corporations[5]
		Total	Defense agencies[3]	Post Office Department[4]	All other agencies			
1939 average	968,596	935,493	207,979	319,474	408,040	5,373	2,260	25,470
1940 average	1,077,690	1,042,898	288,505	329,105	425,288	5,879	2,441	26,472
1941 average	1,431,961	1,393,783	588,489	342,104	463,190	6,081	2,544	29,553
1942 average	2,293,517	2,252,359	1,389,888	355,605	506,866	6,401	2,633	32,124
1943 average	3,183,235	3,138,838	2,304,752	364,092	469,994	6,171	2,636	35,590
1944 average	3,337,318	3,292,607	2,436,352	382,230	474,025	6,189	2,660	35,862
1945 average	3,569,092	3,525,638	2,598,407	408,796	518,435	6,376	2,753	34,325
1946 average	2,703,814	2,660,879	1,568,278	439,252	653,349	6,636	3,058	33,241
1947 average	2,149,155	2,107,945	989,659	450,987	667,299	7,126	3,218	30,866
1939: January	920,092	887,846	190,768	311,167	386,011	5,145	2,271	24,730
February	917,428	885,021	187,431	313,419	384,171	5,234	2,228	24,945
March	926,267	893,714	188,262	310,062	395,390	5,284	2,210	25,059
April	928,910	896,128	190,107	307,315	398,706	5,292	2,317	25,173
May	936,273	903,549	194,782	309,076	399,691	5,315	2,123	25,286
June	953,111	920,053	202,753	307,276	410,024	5,336	2,322	25,400
July	978,631	945,467	209,224	313,703	422,540	5,353	2,292	25,519
August	990,268	956,997	212,260	319,104	425,633	5,432	2,192	25,647
September	996,869	963,398	218,966	318,237	426,195	5,532	2,162	25,777
October	1,002,546	968.808	229,917	318,508	420,383	5,551	2,282	25,905
November	998,474	964,665	233,860	314,121	416,684	5,418	2,357	26,034
December	1,074,271	1,040,166	237,416	391,705	411,045	5,583	2,359	26,163
1940: January	1,002,676	968,585	242,492	315,909	410,184	5,535	2,268	26,288
February	1,003,321	968,768	241,249	317,160	410,359	5,889	2,360	26,304
March	1,003,917	969,335	240,933	318,405	409,997	5,883	2,379	26,320
April	1,014,453	979,877	246,861	318,730	414,286	5,860	2,379	26,337
May	1,025,159	990,444	250,926	317,167	422,351	5,882	2,480	26,353
June	1,046,468	1,011,751	261,027	320,383	430,341	5,851	2,499	26,367
July	1,079,976	1,045,235	280,102	324,691	440,442	5,886	2,468	26,387
August	1,093,073	1,058,075	295,161	326,230	436,684	5,985	2,535	26,478
September	1,107,236	1,072,173	310,229	327,627	434,317	6,011	2,482	26,570
October	1,128,196	1,093,078	328,860	329,101	435,117	5,938	2,518	26,662
November	1,158,780	1,123,605	373,587	321,747	428,271	5,892	2,529	26,754
December	1,269,023	1,233,853	390,629	412,111	431,113	5,932	2,391	26,847
1941: January	1,197,453	1,162,081	404,806	327,022	430,253	5,921	2,514	26,937
February	1,225,709	1,189,629	426,814	329,601	433,214	5,985	2,507	27,588
March	1,247,549	1,210,884	447,228	327,820	435,836	5,921	2,505	28,239
April	1,291,748	1,254,315	483,025	328,715	442,575	6,033	2,509	28,891
May	1,340,500	1,302,437	522,662	328,852	450,923	6,015	2,505	29,543
June	1,404,757	1,365,992	571,735	332,101	462,156	6,055	2,517	30,193
July	1,475,360	1,435,859	616,983	338,615	480,261	6,132	2,526	30,843
August	1,500,246	1,460,745	635,721	341,587	483,437	6,142	2,637	30,722
September	1,558,275	1,519,048	684,901	342,979	491,168	6,048	2,578	30.601
October	1,598,248	1,558,917	724,527	343,730	490,660	6,279	2,571	30,481
November	1,614,228	1,575,058	754,452	336,750	483,856	6,242	2,569	30,359
December	1,729,455	1,690,434	789,019	427,475	473,940	6,202	2,582	30,237
1942: January	1,684,570	1,645,575	827,924	346,158	471,493	6,290	2,593	30,112
February	1,798,541	1,759,081	916,692	346,741	495,468	6,354	2,584	30,522
March	1,871,702	1,831,822	991,313	343,112	497,397	6,343	2,601	30,936
April	1,994,538	1,954,243	1,105,301	344,604	504,338	6,339	2,606	31,350
May	2,125,221	2,084,351	1,229,480	340,721	514,150	6,457	2,650	31,763
June	2,208,691	2,167,399	1,298,874	343,972	524,553	6,464	2,653	32,175
July	2,338,852	2,297,082	1,419,375	345,585	532,122	6,539	2,645	32,586
August	2,457,551	2,415,756	1,550,824	346,061	518,871	6,526	2,653	32,616
September	2,576,887	2,534,796	1,675,608	345,764	513,424	6,517	2,662	32,912
October	2,663,841	2,621,655	1,767,642	345,291	508,722	6,314	2,664	33,208
November	2,797,292	2,754,803	1,910,113	342,675	502,015	6,319	2,666	33,504
December	3,004,513	2,961,743	1,985,512	476,406	499,825	6,353	2,617	33,800
1943: January	2,954,073	2,910,947	2,094,253	355,648	461,046	6,391	2,636	34,099
February	3,011,167	2,967,806	2,153,931	354,636	459,239	6,284	2,597	34,480
March	3,102,857	3,059,245	2,250,989	350,092	458,164	6,154	2,597	34,861
April	3,160,847	3,116,903	2,308,939	350,282	457,682	6,119	2,583	35,242
May	3,197,298	3,152,837	2,342,295	340,318	470,224	6,116	2,722	35,623
June	3,234,846	3,190,073	2,378,658	338,796	472,619	6,146	2,622	36,005
July	3,308,400	3,263,227	2,441,480	337,962	483,785	6,163	2,624	36,386
August	3,293,093	3,248,716	2,428,444	336,037	484,235	6,091	2,651	35,635
September	3,183,928	3,139,151	2,320,230	341,023	477,898	6,221	2,651	35,905
October	3,166,298	3,121,338	2,304,237	341,378	475,723	6,135	2,651	36,174
November	3,177,499	3,132,461	2,311,468	350,625	470,368	6,110	2,647	36,281
December	3,407,941	3,362,780	2,321,528	572,310	468,942	6,116	2,655	36,390
1944: January	3,182,138	3,136,845	2,318,464	351,081	467,300	6,133	2,665	36,495
February	3,205,609	3,160,486	2,344,097	349,837	466,552	6,115	2,668	36,340
March	3,229,115	3,184,013	2,364,794	351,060	468,359	6,152	2,672	36,278
April	3,256,599	3,211,583	2,392,236	349,203	470,144	6,147	2,675	36,194
May	3,278,502	3,233,367	2,410,186	352,429	470,752	6,123	2,676	36,336
June	3,294,281	3,248,966	2,427,708	348,136	473,122	6,154	2,679	36,482
July	3,351,949	3,306,366	2,476,229	352,773	477,364	6,258	2,663	36,662
August	3,387,321	3,343,841	2,499,373	361,477	482,991	6,212	2,653	34,615
September	3,373,373	3,329,273	2,481,972	365,438	481,863	6,272	2,641	35,187
October	3,365,025	3,320,430	2,476,449	367,023	476,958	6,240	2,633	35,722
November	3,397,478	3,353,412	2,504,962	370,164	478,286	6.253	2,646	35,167
December	3,726,427	3,682,707	2,539,755	668,140	474,812	6.203	2 646	34,871

See footnotes at end of table.

TABLE A-8: Number of Federal employees, by branch and agency group, 1939–47[1] (continental United States and elsewhere)—Continued

Period	Number employed (as of first of month)							
	All branches	Executive[2]				Legislative	Judicial	Government corporations[5]
		Total	Defense agencies[3]	Post Office Department[4]	All other agencies			
1945: January	3,449,802	3,406,672	2,561,118	373,538	472,016	6,160	2,638	34,332
February	3,516,640	3,473,254	2,625,509	373,403	474,342	6,561	2,643	34,182
March	3,574,833	3,531,808	2,661,320	375,133	495,355	6,281	2,632	34,112
April	3,613,169	3,570,080	2,689,936	376,127	504,017	6,346	2,626	34,117
May	3,672,565	3,629,494	2,736,968	379,010	513,516	6,361	2,617	34,093
June	3,719,188	3,676,100	2,781,364	377,596	517,140	6,349	2,613	34,126
July	3,827,370	3,783,467	2,848,905	399,709	534,853	6,453	2,706	34,744
August	3,783,325	3,739,480	2,814,394	405,207	519,879	6,410	2,866	34,569
September	3,650,746	3,606,927	2,672,492	408,284	526,151	6,452	2,883	34,484
October	3,374,599	3,330,936	2,379,387	403,572	547,977	6,376	2,878	34,409
November	3,244,860	3,201,141	2,247,140	400,059	553,942	6,381	2,942	34,396
December	3,402,004	3,358,296	2,162,351	633,912	562,033	6,378	2,991	34,339
1946: January	2,950,928	2,907,549	1,945,206	393,213	569,130	6,391	3,012	33,976
February	2,899,787	2,856,363	1,863,334	395,409	597,620	6,452	3,023	33,949
March	2,869,424	2,826,259	1,805,823	402,602	617,834	6,402	3,053	33,710
April	2,829,185	2,786,241	1,760,505	407,871	617,865	6,442	3,070	33,432
May	2,840,323	2,797,438	1,738,093	417,199	642,146	6,518	3,086	33,281
June	2,774,522	2,731,642	1,650,995	418,280	662,367	6,561	3,081	33,238
July	2,689,926	2,646,708	1,547,896	420,709	678,103	6,697	3,063	33,458
August	2,625,082	2,581,932	1,470,579	424,321	687,032	6,736	3,036	33,378
September	2,518,070	2,475,188	1,358,632	424,734	691,822	6,825	3,075	32,982
October	2,434,057	2,391,478	1,271,976	425,093	694,409	6,902	3,061	32,616
November	2,400,321	2,357,755	1,229,705	426,177	701,873	6,896	3,079	32,591
December	2,614,144	2,572,000	1,176,596	715,421	679,983	6,806	3,061	32,277
1947: January	2,279,055	2,237,128	1,129,710	426,818	680,600	6,864	3,066	31,997
February	2,256,834	2,214,638	1,104,137	425,754	684,747	7,080	3,069	32,047
March	2,247,289	2,205,082	1,091,197	426,978	686,907	7,039	3,061	32,107
April	2,215,389	2,173,262	1,058,678	429,507	685,077	7,174	3,072	31,881
May	2,193,091	2,151,264	1,028,043	435,423	687,798	7,246	3,071	31,510
June	2,168,896	2,127,715	996,238	437,303	694,174	7,215	3,061	30,905
July	2,103,246	2,062,275	936,533	439,617	686,125	7,254	3,074	30,643
August	2,067,228	2,026,071	923,080	442,289	660,702	7,230	3,404	30,523
September	2,020,873	1,980,084	906,989	425,449	647,646	7,184	3,406	30,199
October	2,002,385	1,962,042	901,197	425,005	635,840	7,118	3,430	29,795
November	2,006,412	1,966,339	905,251	429,789	631,299	7,068	3,453	29,552
December	2,229,164	2,189,436	894,855	667,912	626,669	7,046	3,450	29,232

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[1] Data for the executive branch are reported through the Civil Service Commission; data for the legislative and judicial branches and Government corporations are reported directly to the Bureau of Labor Statistics. Through June 1943, employment reported for the executive branch included that outside continental United States. Beginning July 1943, employment outside continental United States was excluded from the figures reported monthly and was reported separately only in January, April, July, and October. Employment for months between the reporting periods was estimated and added to the continental United States totals.

[2] Data for Federal force-account construction are included; for definition, see page 3.

[3] Covers the War Department, the Navy Department, Maritime Commission, National Advisory Committee for Aeronautics, the Panama Canal, and, until their abolition or amalgamation with the peacetime agencies, the agencies created specifically to meet World War II and reconversion emergencies.

[4] Prior to December 1943, employment data were adjusted upwards to convert the temporary substitute employees from a full-time equivalent to a name-count basis in order to be consistent with data reported subsequently. Prior to July 1945, clerks at third-class post offices were hired on a contract basis and, therefore, because of being private employees, are excluded here. They are included beginning July 1945, however, when they were placed on the regular Federal pay roll by congressional action. Substitute rural mail carriers, who have been included in data published by the Civil Service Commission since September 1945, are excluded here. Employment figures include fourth-class postmasters in all months. Additional employment necessitated by the swollen Christmas business is included in December of each year; it is excluded from published figures of the Civil Service Commission beginning December 1942.

[5] Current data cover the following corporations: Federal Reserve banks, banks of the Farm Credit Administration, and the Panama Railroad Co. Data for earlier years include at various times the following additional corporations: Inland Waterways Corp., Spruce Production Corp., and certain employees of the Federal Deposit Insurance Corp. and of the Office of the Comptroller of the Currency, Treasury Department.

TABLE A-9: Personnel and pay in the military branch of the Federal Government, 1914–47[1] (continental United States and elsewhere)

Period	Personnel (in thousands) average for year or as of first of month[1]			Total pay for year or for month (in thousands)				
					Type of pay			
	Total	Army	Navy	Total	Pay rolls[2]	Mustering-out pay[3]	Family allowances[4]	Leave payments[5]
1914	161	84	77	...	...	...	...	...
1915	169	88	81	...	...	...	...	...
1916	202	105	97	...	...	...	...	...
1917	790	477	313	...	...	...	...	...
1918	2,910	2,432	478	...	...	...	...	...
1919	1,671	1,336	335	...	...	...	...	...
1920	365	222	143	...	...	...	...	...
1921	316	178	138	...	...	...	...	...
1922	272	148	124	...	...	...	...	...
1923	249	131	118	...	...	...	...	...
1924	252	131	121	...	...	...	...	...
1925	260	139	121	...	...	...	...	...
1926	256	136	120	...	...	...	...	...
1927	257	135	122	...	...	...	...	...
1928	260	136	124	...	...	...	...	...
1929	264	139	125	...	...	...	...	...
1930	265	140	125	...	...	...	...	...
1931	260	139	121	...	...	...	...	...
1932	254	135	119	...	...	...	...	...
1933	252	136	116	...	...	...	...	...
1934	257	138	119	$229,968	$229,968	...	...	...
1935	267	145	122	251,875	251,875	...	...	...
1936	298	167	131	272,473	272,473	...	...	...
1937	318	178	140	290,592	290,592	...	...	...
1938	331	185	146	304,895	304,895	...	...	...
1939	345	191	154	331,523	331,523	...	...	...
1940	532	324	208	431,030	431,030	...	...	...
1941	1,644	1,291	353	1,262,927	1,262,927	...	...	...
1942	3,968	3,071	897	4,696,264	4,553,362	...	$142,902	...
1943	8,944	6,733	2,211	11,173,186	10,140,852	...	1,032,334	...
1944	11,372	7,889	3,483	16,840,205	14,067,813	$229,213	2,543,179	...
1945	11,608	7,734	3,874	20,392,102	16,097,641	1,367,520	2,926,941	...
1946	3,751	2,291	1,460	10,093,750	6,463,180	2,177,308	736,949	$716,313
1947	1,670	1,059	611	1,561,897	1,095,330	43,209	89,644	333,714
1945: January	11,897	8,053	3,844	1,566,631	1,308,525	16,933	241,173	...
February	11,948	8,071	3,877	1,473,928	1,217,983	13,004	242,941	...
March	12,034	8,130	3,904	1,667,770	1,411,312	12,083	244,375	...
April	12,092	8,157	3,935	1,551,756	1,291,782	11,554	248,420	...
May	12,218	8,249	3,969	1,656,054	1,386,642	15,844	253,568	...
June	12,297	8,291	4,006	1,713,895	1,429,575	29,833	254,487	...
July	12,295	8,266	4,029	1,754,064	1,449,785	44,123	260,156	...
August	12,245	8,186	4,059	1,733,559	1,418,250	55,831	259,478	...
September	12,082	8,023	4,059	1,824,298	1,458,769	107,944	257,585	...
October	11,520	7,565	3,955	1,886,758	1,391,721	243,679	251,358	...
November	10,091	6,487	3,604	1,854,866	1,237,368	390,020	227,478	...
December	8,576	5,334	3,242	1,708,523	1,095,929	426,672	185,922	...
1946: January	7,048	4,229	2,819	1,679,589	1,031,103	502,993	145,493	...
February	5,956	3,469	2,487	1,308,987	823,286	374,450	111,251	...
March	4,966	2,786	2,180	1,126,349	732,731	308,715	84,903	...
April	4,347	2,431	1,916	876,747	598,261	211,571	66,915	...
May	3,858	2,168	1,690	693,000	473,083	164,125	55,792	...
June	3,446	2,009	1,437	657,446	465,830	143,984	47,632	...
July	3,050	1,890	1,160	606,935	448,569	115,689	42,677	...
August	2,745	1,815	930	542,920	397,382	104,937	40,583	18
September	2,474	1,731	743	500,562	370,413	90,570	37,572	2,007
October	2,477	1,738	739	606,717	377,628	64,343	35,650	129,096
November	2,441	1,717	724	736,851	349,749	50,617	35,316	301,169
December	2,204	1,511	693	757,647	395,145	45,314	33,165	284,023
1947: January	1,979	1,319	660	745,843	368,484	29,967	29,052	318,340
February	1,900	1,254	646	664,053	309,929	18,722	28,004	307,398
March	1,836	1,199	637	669,501	302,464	18,292	26,548	322,197
April	1,777	1,148	629	593,677	303,395	17,383	28,499	244,400
May	1,703	1,081	622	369,947	263,70	15,022	25,814	65,410
June	1,631	1,021	610	335,391	262,505	12,465	24,459	35,962
July	1,592	990	602	339,128	259,172	12,670	25,036	42,250
August	1,575	972	603	334,129	248,670	10,498	24,502	50,459
September	1,557	955	602	332,804	248,928	9,632	24,210	50,034
October	1,543	941	602	355,961	271,040	9,954	25,145	49,822
November	1,490	920	570	309,705	252,112	9,117	23,127	25,349
December	1,463	911	552	300,257	246,532	13,293	23,827	16,605

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[1] For years prior to 1918, totals are from the National Bureau of Economic Research, The National Income and Its Purchasing Power; the break-downs for Army and Navy are estimated. From 1918 through 1939 for the Army and from 1918 through 1933 for the Navy, data are from Annual Reports of the War and Navy Departments. Later data are from monthly reports received directly by the Bureau of Labor Statistics from the various military branches. The totals in this table vary somewhat from those included by the Bureau of the Census in the total labor force (see table A-12 because of differences in the time of month to which the series refer and differences in classification of personnel. The Census figures refer to the week containing the eighth of the month from January 1944 through September 1946; the Bureau of Labor Statistics figures are for the first day of the month. The Census series excludes persons on terminal leave; the Bureau of Labor Statistics totals include such persons.

[2] Data exclude the pay of retired personnel and inactive reserves. For the Navy proper and Coast Guard, data include cash payments for clothing allowances in January, April, July, and October. Pay rolls are not available prior to 1934. Except for Army data for 1943–April 1947, and Coast Guard data for all years which represent actual payments, pay rolls are computed from personnel records.

[3] Data represent the amount expended during the month.

[4] Covers Government's contribution only; the men's share is included in the pay rolls.

[5] Leave payments were authorized by Public Law 704 of the 79th Congress to enlisted personnel discharged prior to September 1, 1946, for accrued and unused leave and to officers and enlisted personnel then on active duty for leave accrued in excess of 60 days. Beginning September 1, 1946, payment of personnel while on terminal leave is included in the pay roll. Value of bonds (representing face value to which interest will be added at the time bonds are cashed) and cash payments are included.

Hired Farm Employment and Pay Rolls

First-of-the-month estimates of the number of hired farm workers in the United States and for nine geographic divisions are published by the Bureau of Agricultural Economics of the United States Department of Agriculture for the period from 1925 on.

Collection of monthly farm employment data through crop reporters was started in October 1923. In 1938, a National Research Project of the Work Projects Administration developed and published monthly farm employment estimates for 1925 to 1934 from the crop reporter data. Current monthly estimates have been made by the Bureau of Agricultural Economics from crop reporter data from 1939 to the present time, using the methods developed in the Work Projects Administration survey. When data from the 1940 Census became available, the series was adjusted to the census benchmark data and monthly estimates were made for January 1935 to 1939.

Each crop reporter gives for his own farm the number of hired workers doing 2 or more days' work, excluding housework, during the week of the inquiry. Seasonal variation in the number of hired farm workers is considerable. The months of January and July—which are generally the low and peak months of hired farm employment—have been selected for inclusion in table A–10, to illustrate the extent of seasonal variation. The data received from the crop reporters probably do not fully reflect the seasonal variation because (1) the sample of crop reporters' farms includes a disproportionate number of larger than average farms, (2) these farms carry on a more stable type of farm operation than is usual, and (3) some reporters may report only full-time workers and omit all or part of the seasonal workers. Adjustments, however, are made to allow for this understatement of seasonal variation.

From 17,000 to 21,000 farmers report each month. The Census of Agriculture reported 5,859,169 farm operators in the United States in 1945.

The average number of hired workers per farm for States are computed for the reporting farms. The averages are then adjusted by factors which are based on the last census level, labor requirements data, and the estimated seasonal pattern of employment based on the 1940 Census and studies in selected States. The adjusted averages are then multiplied by the estimated number of full-time farms in each State to obtain the estimated number of hired workers employed.

Employment data from crop reporters were not collected during most of the period 1910–24. The annual estimates given for those years are based on Census employment data and such factors as acreage and production of crops, number of livestock, and farm population changes. The annual employment figures for the years 1925–47 are averages of the first-of-the-month estimates.

The annual average of hired farm employment generally constitutes only about a fourth of total farm employment and is concentrated on a small portion of the Nation's farms, mainly large-scale commercial enterprises. The remaining three-fourths of total farm employment is composed of farm operators and unpaid family workers. The proportion of hired farm employment varies extensively by season and by region. For example, in 1935–39 the annual average of hired farm workers in the Nation as a whole comprised 25 percent of total agricultural employment; the range was from 14 percent in the East South Central region to 45 percent in the Pacific. In contrast, in January of the same period hired farm employment averaged 19 percent of the total; the range was from 12 percent in both the East and West North Central regions to 35 percent in the Pacific region.

Since data contained in the Handbook of Labor Statistics are primarily concerned with wage earners, the figures showing the number of farm family workers, including farm operators and unpaid family workers, have been excluded. The employment of this group is included in the tabulations of the crop reporters and is published monthly by the Bureau of Agricultural Economics with the data on the number of hired farm workers.

The estimated number of hired farm workers in the United States and for nine geographic divisions covering 1934–47 are given in table A–10.

Estimates of the total expenditures of farm operators for hired farm labor beginning in 1910 are also published annually by the Bureau of Agricultural Economics. The total farm wage bill is the sum of cash wages and the value of perquisites paid by farmers to hired farm labor. All three series are shown in table A–11, by years, 1910–47.

The annual estimates of the cash expenditures for hired labor for census years were taken from the Census of Agriculture. Estimates for intercensal years were based on changes in hired farm employment and average wage rates. The estimates of both wage rates and the number of hired farm workers were based on crop-reporter data (discussed on pp. 31 and 96).

The estimates of board and lodging furnished hired farm workers as perquisites in 1910 and 1920 were based on totals from the corresponding Censuses of Agriculture. Estimates for intervening and subsequent years were based on the percentage change in the product of the number of hired farm workers paid monthly and daily wage rates with board and the value of board and lodging. This value was estimated as the difference between wage rates with board and wage rates without board, as estimated from crop-reporter data.

The value of perquisites other than board and lodging for 1925 was derived from a special Bureau of Agricultural Economics study. Estimates of their value for other years were based on 1925 data and on the change in hired farm employment and changes in farm prices of the major perquisite items. The total perquisite estimates were adjusted to the levels shown by the May 1945 Survey of Wages and Wage Rates in Agriculture, made by the Bureau of Agricultural Economics.

The product of farm wage rates and employment may overstate the total cash wage bill. First, the wage rates used are probably not representative of wage rates paid all hired farm workers, as discussed in connection with table C–7. Second, the multiplication of wage rates by the number of hired farm workers employed 2 days or more during the week assumes full-time employment. These calculations have been made, however, merely to derive figures for intercensal years. The series as a whole is tied to Census enumerations which may underestimate to some extent the total cash wage bill. This possible downward bias is not believed to be serious and is probably uniform throughout the series.

TABLE A–10: Estimated number of hired farm workers, total and geographic divisions, 1934–47

Period[1]	Estimated number of hired workers (in thousands)									
	United States[2]	New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
1934	2,346	81	197	309	323	484	224	371	145	210
1935	2,429	84	196	344	347	519	224	362	143	210
1936	2,561	89	201	351	326	542	271	412	154	215
1937	2,631	93	207	341	323	532	291	453	152	239
1938	2,620	95	223	334	320	510	283	458	155	242
1939	2,595	92	216	318	313	508	288	465	146	248
1940	2,566	91	216	310	321	492	283	459	139	256
1941	2,532	88	211	294	325	467	283	448	149	266
1942	2,542	85	211	280	317	488	278	464	147	272
1943	2,406	82	203	266	286	463	261	430	142	273
1944	2,227	76	194	246	259	427	231	389	129	276
1945	2,118	77	200	226	229	402	203	372	128	281
1946	2,148	77	212	231	237	399	204	368	131	289
1947	2,227	79	215	232	253	409	207	393	139	300
1934: January	1,689	69	140	211	229	335	171	276	99	159
July	2,930	102	250	393	428	618	278	421	183	257
1935: January	1,615	62	129	227	190	368	156	249	81	153
July	2,972	99	246	408	436	620	233	512	186	232
1936: January	1,642	64	131	234	208	338	171	262	91	143
July	2,932	104	227	423	449	591	235	440	201	262
1937: January	1,753	74	143	239	188	369	221	272	91	156
July	3,155	99	256	405	440	595	321	588	192	259
1938: January	1,739	59	135	232	188	375	193	296	89	172
July	3,285	116	295	428	429	615	311	585	207	299
1939: January	1,626	62	140	217	182	327	197	258	82	161
July	3,348	119	301	395	402	600	362	679	186	304
1940: January	1,576	59	119	198	183	331	182	261	86	157
July	3,297	114	297	381	429	587	345	582	204	358
1941: January	1,621	57	128	204	196	340	168	319	75	134
July	3,208	120	288	399	455	514	322	542	200	368
1942: January	1,655	59	120	199	203	328	175	322	89	160
July	3,182	112	304	346	397	546	309	603	191	374
1943: January	1,556	52	114	186	183	324	163	301	80	153
July	2,986	111	275	332	358	541	279	549	185	356
1944: January	1,580	48	120	185	183	321	180	292	86	165
July	2,732	105	256	313	328	462	234	500	175	359
1945: January	1,434	50	124	160	164	302	159	217	84	174
February	1,494	48	122	173	161	315	143	277	76	179
March	1,520	56	127	168	148	318	152	277	95	179
April	1,660	59	147	183	177	358	160	295	93	188
May	1,864	69	177	220	199	404	173	303	108	211
June	2,357	86	218	250	245	493	226	423	153	263
July	2,544	102	273	269	278	444	215	438	161	364
August	2,642	125	305	308	327	404	184	394	178	417
September	2,813	102	269	281	358	502	250	351	199	501
October	2,494	102	219	228	235	497	291	442	144	336
November	2,569	70	235	247	249	460	276	533	158	341
December	2,028	60	184	220	208	328	201	510	93	224
1946: January	1,320	52	122	160	133	259	133	211	74	176
February	1,424	49	124	168	155	303	144	236	71	174
March	1,489	53	133	167	143	315	164	256	86	172
April	1,652	64	157	188	172	351	161	270	101	188
May	1,975	77	193	230	239	389	181	310	116	240
June	2,453	87	215	253	267	473	263	452	153	290
July	2,711	93	287	280	314	481	214	492	162	388
August	2,786	120	314	307	345	487	184	429	178	422
September	2,777	95	288	267	347	472	249	392	199	468
October	2,624	88	279	254	260	496	301	430	159	357
November	2,503	78	233	250	253	434	246	500	166	343
December	2,060	63	197	245	219	328	212	441	107	248
1947: January	1,525	52	144	172	177	286	152	270	84	188
February	1,587	53	138	169	171	331	178	277	80	190
March	1,545	50	138	171	150	318	155	286	76	201
April	1,671	62	162	186	178	349	150	276	108	200
May	1,999	77	204	238	240	409	174	295	126	236
June	2,481	90	218	257	284	487	229	440	163	313
July	2,685	112	287	276	295	462	207	446	182	418
August	2,839	120	308	310	387	491	172	435	184	432
September	2,873	97	284	276	395	484	249	427	208	453
October	2,804	91	263	252	314	490	331	489	187	387
November	2,618	76	245	252	262	461	273	544	166	339
December	2,104	68	189	224	182	338	216	526	112	249

Source: United States Department of Agriculture, Bureau of Agricultural Economics, Farm Wage Rates, Farm Employment and Related Data, Washington, D.C., 1943 (mimeographed) and current releases.

[1] Monthly figures are as of the first of the month.

[2] For earlier years the estimated numbers of hired farm workers (in thousands) follow:

1910—2,877
1911—2,870
1912—2,889
1913—2,905
1914—2,919
1915—2,934
1916—2,966
1917—2,933
1918—2,841
1919—2,784
1920—2,883
1921—2,901
1922—2,915
1923—2,894
1924—2,874
1925—2,871
1926—3,027
1927—2,950
1928—2,956
1929—2,984
1930—2,850
1931—2,690
1932—2,498
1933—2,433

TABLE A–11: Estimated total farm wages, 1910–47

[In millions]

Year	Total farm wages	Cash wages	Value of perquisites
1910..........	$757	$528	$229
1911..........	760	532	228
1912..........	792	555	237
1913..........	807	572	235
1914..........	805	566	239
1915..........	815	576	239
1916..........	904	641	263
1917..........	1,127	789	338
1918..........	1,335	960	375
1919..........	$1,515	$1,099	$416
1920..........	1,780	1,325	455
1921..........	1,159	841	318
1922..........	1,122	820	302
1923..........	1,219	902	317
1924..........	1,224	912	312
1925..........	1,243	924	319
1926..........	1,326	991	335
1927..........	1,280	955	325
1928..........	$1,268	$945	$323
1929..........	1,284	955	329
1930..........	1,134	838	296
1931..........	847	618	229
1932..........	584	420	164
1933..........	512	361	151
1934..........	601	436	165
1935..........	740	552	188
1936..........	880	674	206
1937..........	1,039	811	228
1938..........	$1,000	$794	$206
1939..........	982	782	200
1940..........	1,020	814	206
1941..........	1,238	1,008	230
1942..........	1,626	1,338	288
1943..........	2,009	1,677	332
1944..........	2,184	1,848	336
1945..........	2,299	1,948	351
1946..........	2,536	2,151	385
1947..........	2,776	2,385	391

Source: United States Department of Agriculture, Bureau of Agricultural Economics, Net Farm Income and Parity Report: 1943, Washington, July 1944 (mimeographed) and June issues of Farm Income Situation (processed).

Labor Force and Employment Status

The only official estimates of total labor force, employment, and unemployment are issued by the Bureau of the Census. Under the census definitions—

The labor force includes persons 14 years of age and over who are employed or unemployed during the census week (the week containing the 8th day of the month).

Employed persons are those who (1) work full or part time for pay or profit, (2) work without pay in a family enterprise (farm or business) at least 15 hours; or (3) have jobs, but do not work because of illness, vacation, labor-management dispute, bad weather, or layoff with definite instructions to return to work within 30 days.

Unemployed persons include those who are not employed, but are looking for work. Also included are persons who would be looking for work except that (1) they were temporarily ill, (2) they expected to return to jobs from which they had been laid off for an indefinite period, or (3) they believed no work was available for them in the community. Persons engaged on public emergency work projects were also included as unemployed during the period when such projects were in operation.

Estimates of labor force, employment, and unemployment beginning with 1940 are based on a sample survey of the population conducted each month by the Bureau of the Census. The sample included in 1947 approximately 25,000 private households living in 68 areas which include 125 counties and independent cities in 42 States and the District of Columbia. The households in the sample are visited each month by Census enumerators to obtain information on the labor force status and other population characteristics of members of the household.

The unemployment estimates of the Bureau of the Census are not directly comparable with the published totals of unemployment compensation claims and claims for veterans' readjustment allowances. For example, certain persons such as farm laborers and government workers are not covered by the unemployment compensation system. Also there are certain groups of persons who might file claims for unemployment compensation, but would not be counted as "unemployed" under the definition of the Bureau of the Census, e.g., persons with jobs but temporarily not working because of bad weather.

In addition, the employment data of the Census differ from employment estimates of the Bureau of Labor Statistics and the Bureau of Agricultural Economics based on reports from business establishments or farms. For example, the Census estimates of nonagricultural employment, unlike those of the Bureau of Labor Statistics, include self-employed, proprietors, domestic servants, and unpaid family workers. In addition, persons with jobs but not at work are included in the Census employment totals; in contrast, only part of this group is likely to be included in employment figures based on establishment pay-roll reports.

Of the annual average estimates of total labor force,[3] civilian labor force, employment, and unemployment shown in table A–12, those for the period 1929–39 were prepared by the Bureau of Labor Statistics to provide a historical series. These estimates are on a basis comparable in concept with that of the Bureau of the Census in its current monthly series.

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[3] For Bureau of Labor Statistics data on the number of persons in the armed forces, see table A–9.

TABLE A-12: Estimated total labor force classified by employment status, 1929–47

Period	Number (in thousands)			
	Total labor force[1]	Civilian labor force	Employment	Unemployment
1929 average	49,440	49,180	47,630	1,550
1930 average	50,080	49,820	45,480	4,340
1931 average	50,680	50,420	42,400	8,020
1932 average	51,250	51,000	38,940	12,060
1933 average	51,840	51,590	38,750	12,830
1934 average	52,490	52,230	40,890	11,340
1935 average	53,140	52,870	42,260	10,610
1936 average	53,740	53,440	44,410	9,030
1937 average	54,320	54,000	46,300	7,700
1938 average	54,950	54,610	44,220	10,390
1939 average	55,600	55,230	45,750	9,480
1940 average	56,030	55,640	47,520	8,120
1941 average	57,380	55,910	50,350	5,560
1942 average	60,230	56,410	53,750	2,660
1943 average	64,410	55,540	54,470	1,070
1944 average	65,890	54,630	53,960	670
1945 average	65,140	53,860	52,820	1,040
1946 average	60,820	57,520	55,250	2,270
1940: March[2]	54,740	54,460	46,100	8,360
April	55,140	54,870	45,640	8,230
May	55,880	55,590	47,600	7,990
June	57,640	57,330	49,020	8,310
July	58,310	58,000	48,850	9,150
August	58,010	57,670	48,930	8,740
September	56,780	56,330	49,480	6,850
October	56,350	55,830	48,590	7,240
November	55,570	54,960	47,700	7,260
December	55,150	54,460	47,550	5,910
1941: January	54,730	53,990	46,580	7,410
February	54,740	53,870	46,940	6,930
March	54,700	53,650	47,160	6,500
April	56,240	54,980	48,600	6,380
May	57,420	55,970	50,310	5,660
June	59,650	58,120	51,930	5,190
July	59,910	58,260	52,260	5,000
August	59,860	58,130	52,510	5,620
September	58,770	56,950	52,270	4,680
October	57,790	55,950	52,110	3,840
November	57,540	55,650	51,850	3,800
December	57,260	55,330	51,710	3,620
1942: January	56,510	54,540	50,220	4,320
February	57,140	54,880	50,840	4,040
March	57,820	55,260	51,680	3,580
April	58,740	55,880	52,830	3,050
May	59,670	56,500	53,910	2,590
June	61,820	58,340	55,450	2,890
July	62,180	58,400	55,570	2,830
August	62,110	57,900	55,710	2,190
September	61,110	56,500	54,820	1,580
October	61,820	56,800	55,190	1,610
November	61,900	56,240	54,610	1,630
	61,970	55,680	54,160	1,520
1943: January	61,630	54,700	53,220	1,480
February	61,990	54,560	53,140	1,420
March	62,170	54,340	53,220	1,120
April	63,160	54,860	53,850	1,010
May	64,680	56,080	55,130	950
June	66,410	57,580	56,280	1,300
July	66,850	57,680	56,290	1,390
August	66,690	57,160	56,110	1,050
September	65,730	56,030	55,160	870
October	64,980	55,110	54,330	780
November	64,600	54,550	53,840	710
December	54,000	53,770	53,080	690
1944: January	63,680	53,370	52,560	810
February	63,530	53,010	52,320	690
March	63,900	53,210	52,520	690
April	65,150	54,220	53,590	630
May	65,430	55,270	54,540	730
June	67,970	56,640	55,760	880
July	68,140	56,560	55,770	890
August	57,260	55,640	54,960	680
September	65,790	55,090	54,490	600
October	56,740	54,970	54,530	440
November	66,060	54,270	53,770	500
December	65,030	53,210	52,710	500
1945: January	64,600	52,770	52,140	630
February	65,240	53,340	52,700	640
March	65,790	53,820	53,230	590
April	66,250	54,180	53,650	530
May	66,500	54,370	53,840	530
June	67,590	55,460	54,570	890
July	67,450	55,350	54,400	950
August	66,470	54,460	53,630	830
September	64,770	53,050	51,400	1,650
October	63,770	53,170	51,510	1,560
November	62,410	53,190	51,450	1,740
December	60,920	53,130	51,160	1,970
1946: January	59,490	53,320	51,020	2,300
February	59,130	53,890	51,240	2,650
March	59,630	55,150	52,460	2,700
April	60,300	56,450	54,120	2,330
May	60,570	57,160	54,850	2,310
June	62,000	58,930	56,350	2,570
July	62,820	60,110	57,840	2,270
August	62,200	59,750	57,590	2,060
September	61,340	59,120	57,050	2,070
October	61,150	58,990	57,030	1,960
November	60,980	58,970	57,040	1,930
December	60,320	58,430	56,310	2,120
1947: January	59,510	57,790	55,390	2,400
February	59,630	58,010	55,520	2,490
March	59,960	58,390	56,060	2,330
April	60,550	59,120	56,700	2,420
May	61,750	60,290	58,330	1,960
June[3]	64,007	62,509	60,055	2,555
July[3]	64,035	62,564	60,079	2,584
August[3]	63,017	61,565	59,559	2,096
September[3]	62,130	60,784	58,872	1,912
October[3]	62,219	60,892	59,204	1,687
November[3]	61,501	60,215	58,595	1,621
December[3]	60,870	59,590	57,947	1,643

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[1] Total labor force consists of the civilian labor force and the armed forces. However, about 150,000 persons in the armed forces in April 1940 who were stationed outside continental U.S. and who were not enumerated in the 1940 Census of Population are excluded from the total labor force. Figures since 1940 have correspondingly been reduced by 150,000 for purposes of comparability. For explanation of differences between Census armed forces totals and those of the Bureau of Labor Statistics, see table A-9, footnote 1.

[2] Data for week ending March 30, 1940.

[3] Beginning in June 1947, the estimates are presented rounded to the nearest thousand. Because of rounding the individual figures do not necessarily add to the group totals.

Source: Bureau of Labor Statistics; and Bureau of the Census, Labor Force Bulletin, Series P-50, No. 2 and Monthly Report on the Labor Force.

Unemployment Claims

A continued claim under the State unemployment-insurance system is defined by the Bureau of Employment Security of the United States Social Security Administration as follows: "An application for waiting-period credits or benefits which certifies to the completion of a waiting-period week or a benefit period. There are two categories of continued claims: (1) waiting-period claims and (2) compensable claims. A waiting period is a 1- or 2-week period usually required only once during a benefit year, even though the worker may be out of work and entitled to benefits more than once during that time. Waiting-period claims do not result in benefit payments. A compensable claim is filed for each additional week of insured unemployment after a worker has completed his waiting period."

A continued claim under the system of veterans' readjustment allowances is "a claim for unemployment allowance for a completed week of unemployment filed under the veterans' unemployment allowance program."

The number of continued claims shown in table A–13 cover both the waiting-period claims and compensable claims under the State unemployment-compensation systems and the veterans' unemployment allowance claims under the GI Bill of Rights (Public Law 346, 78th Cong., 2d sess., approved June 22, 1944), for the period 1940–47.

The data on continued claims filed monthly or annually provide a measure of the volume of operations under the State unemployment compensation and veterans' unemployment allowance programs, but do not directly measure the number of separate claimants. For example, an individual worker may file as many as four or five continued claims during a calendar month.

NOTE: For information on social security operations including unemployment see Section J, p. 201.

TABLE A–13: Number of continued claims for State unemployment compensation and veterans' unemployment allowances, 1940-47

[In thousands]

Period	State unemployment compensation	Veterans' unemployment allowances
1940	66,677	....
1941	42,342	....
1942	33,762	....
1943	7,665	....
1944	5,480	215
1945	30,634	6,089
1946	67,333	73,554
1945: January	593	115
February	508	117
March	543	130
April	488	124
May	618	131
June	810	145
July	1,081	185
August	1,532	244
September	4,724	384
October	6,671	754
November	6,502	1,392
December	6,564	2,368
1946: January	8,258	4,549
February	7,327	5,800
March	7,464	7,300
April	6,649	7,628
May	6,486	7,634
June	5,395	6,928
July	5,504	7,760
August	4,604	7,081
September	3,895	6,065
October	4,141	4,834
November	3,492	3,688
December	4,119	4,287
1947: January	4,982	5,242
February	4,488	4,504
March	4,684	4,424
April	4,833	3,913
May	4,802	3,173
June	4,905	3,021
July	5,219	3,446
August	4,296	3,023
September	3,742	2,663
October	3,359	1,939
November	2,848	1,609
December	3,700	2,241

Nonagricultural Placements

Statistics of the number of nonagricultural placements by Federal and State employment offices, which were furnished by the United States Employment Service of the Department of Labor and are shown in table A–14 covering 1936–47, do not indicate the total volume of hiring at any given time. They represent the placements made from among such workers as apply at public employment offices for assistance in obtaining jobs. Moreover, certain placements are excluded as indicated in footnote 2, table A–14.

TABLE A-14: Number of nonagricultural placements by Federal and State employment offices, 1936–47[1]

Period	Number (in thousands)[2]	Period	Number (in thousands)[2]	Period	Number (in thousands)[2]	Period	Number (in thousands)[2]
1936	4,853	1945: January	1,087	1946: January	412	1947: January	366
1937	3,144	February	910	February	359	February	348
1938	2,657	March	973	March	421	March	391
1939	4,166	April	926	April	461	April	419
1940	3,661	May	952	May	457	May	442
1941	5,404	June	1,042	June	479	June	453
1942	6,920	July	1,014	July	530	July	454
1943	9,393	August	825	August	522	August	484
1944	11,446	September	614	September	532	September	546
1945	9,808	October	601	October	547	October	528
1946	5,519	November	484	November	440	November	451
		December	380	December	358	December	397

[1] Placements by Federal-State public employment offices.

[2] Excluded are placements in the forestry and fishing industries through 1939. Placements in Alaska and Hawaii are included through 1939.

Source: United States Employment Service.

Section B: Labor Turn-over

Labor turn-over rates published by the Bureau of Labor Statistics cover manufacturing (from January 1930), mining (from March 1943), and telephone and telegraph industries (from July 1943). As the fluctuations in employment in highly seasonal industries overshadow the turn-over characteristics of nonseasonal industries, such industries as fertilizer manufacturing in the chemical group and canning and preserving in the food group are excluded.

The turn-over series are based on reports furnished by 6,700 cooperating establishments which employ about 4.5 million workers. Separate series are issued showing turn-over rates for each type of personnel action—total separations, quits, discharges, lay-offs, miscellaneous (including military) separations, and accessions. For each specific type of turn-over, the rate is the number of persons involved during the calendar month per 100 persons on the pay roll in the week ending nearest the 15th of the month.

Beginning with the January 1943 rates, the labor turn-over data pertain to wage and salaried workers rather than to wage earners only as in previous years. From June 1943 through August 1945, total separation, quit, and accession rates were compiled for men and women in selected war industries. From September 1945 through July 1947, these rates for men and women have been computed for the major industry groups.

In October 1945, the number of employees who actually worked in, or were paid for, the pay period ending nearest the 15th of the month was adopted as the employment base. The midmonth base replaced the average employment base which had been used in computing monthly turn-over rates from January 1930. In a test using more than 5,000 reports for which both average and midmonth employment figures were available, the Bureau of Labor Statistics found that for industry as a whole the change in base had little effect on the rates.

To compute the turn-over rate, the number of separations or accessions which have occurred in a plant or group of plants during the course of a month is divided by the total number of employees who worked during, or received pay for, any part of the pay period ending nearest the 15th of that month. The result so obtained is multiplied by 100. For example, in an establishment 1,250 employees worked during, or received pay for, the week of January 12–18. From January 1 through January 31, 110 employees were separated for all causes. The total separation rate is:

$$\frac{110}{1250} \times 100 = 8.8.$$

NOTE: The "net turn-over rate" (discontinued in November 1934) is the accession rate, or the separation rate, whichever is lower in the month concerned. The same information may be obtained by comparison of the published accession and separation rates.

The annual rate (discontinued in 1941) is the sum of the 12 monthly rates for each type of turn-over. The annual rate should not be confused with the equivalent annual rate (discontinued in August 1931) which is an adjustment in the monthly rate to eliminate the fluctuation caused by differences in the length of the calendar month. The equivalent annual rate may be computed by dividing the rate for the calendar month by the number of days in the month and multiplying by the number of days in the year.

Monthly labor turn-over rates (per 100 employees) are shown in table B–1 for manufacturing industries as a group for 1930–47 and in table B–2 for selected groups and industries for 1940–47.

TABLE B-1: Monthly labor turn-over rates (per 100 employees) in manufacturing industries, by class of turn-over, 1930–47[1]

Period	Turn-over rates (per 100 employees)																							
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	Accession												Discharge											
1930	4.0	3.9	4.2	3.6	3.3	2.9	2.5	2.7	3.3	2.6	2.1	2.1	0.5	0.6	0.6	0.5	0.5	0.5	0.3	0.4	0.4	0.3	0.2	0.2
1931	3.0	2.8	3.7	3.1	2.8	2.4	3.0	2.6	3.6	2.8	3.6	3.3	.2	.2	.3	.3	.3	.2	.3	.2	.2	.2	.2	.2
1932	4.2	2.8	2.8	2.8	2.6	2.7	3.0	4.2	5.0	3.7	3.1	3.1	.2	.2	.2	.2	.2	.1	.1	.1	.1	.1	.2	.2
1933	3.5	2.6	2.2	4.9	7.2	10.2	9.5	8.6	5.5	4.0	3.7	3.4	.2	.1	.1	.2	.2	.3	.3	.3	.3	.2	.2	.2
1934	5.8	6.7	6.3	5.2	4.2	3.6	3.7	3.2	3.6	4.1	4.3	6.1	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2
1935	6.3	4.2	3.8	3.6	3.0	3.2	4.2	4.6	5.0	5.2	3.6	3.3	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2
1936	3.7	3.0	4.0	4.5	4.1	4.5	4.9	4.7	5.1	4.8	4.6	4.4	.2	.2	.2	.2	.2	.2	.2	.3	.3	.2	.2	.2
1937	4.6	4.7	4.7	4.0	3.6	3.7	3.4	3.4	3.8	2.8	1.8	2.1	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.1
1938	3.8	3.1	3.1	2.6	2.8	3.4	4.8	5.3	4.5	5.2	4.2	3.2	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1
1939	4.1	3.1	3.3	2.9	3.3	3.9	4.2	5.1	6.2	5.9	4.1	2.8	.1	.1	.1	.1	.1	.1	.1	.1	.1	.2	.2	.1
1940	3.7	3.0	2.9	3.1	3.4	4.8	4.8	6.6	6.2	5.5	4.7	4.1	.1	.2	.2	.1	.1	.1	.1	.2	.2	.2	.2	.2
1941	5.5	4.9	5.6	6.0	6.0	6.3	6.0	5.4	5.2	4.9	3.9	4.8	.2	.2	.2	.3	.2	.3	.3	.3	.3	.3	.2	.3
1942	6.9	6.0	7.0	7.1	7.3	8.3	8.3	7.9	9.2	8.7	8.1	6.9	.3	.3	.3	.4	.4	.4	.4	.4	.4	.5	.4	.5
1943	8.3	7.9	8.3	7.4	7.2	8.4	7.8	7.6	7.7	7.2	6.6	5.2	.5	.5	.6	.5	.6	.6	.7	.7	.6	.6	.6	.6
1944	6.5	5.5	5.8	5.5	6.4	7.6	6.3	6.3	6.1	6.0	6.1	5.1	.7	.6	.7	.6	.6	.7	.7	.7	.6	.6	.6	.6
1945	7.0	5.0	4.9	4.7	5.0	5.9	5.8	5.9	7.4	8.6	8.7	6.9	.7	.7	.7	.6	.6	.7	.6	.7	.6	.5	.5	.4
1946	8.5	6.8	7.1	6.7	6.1	6.7	7.4	7.0	7.1	6.8	5.7	4.3	.5	.5	.4	.4	.4	.3	.4	.4	.4	.4	.4	.4
1947	6.0	5.0	5.1	5.1	4.8	5.5	4.9	5.3	5.9	5.5	4.8	3.6	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4
	Total separation												Lay-off											
1930	5.1	4.7	5.4	5.2	5.2	5.3	5.8	5.8	5.0	4.5	3.9	3.8	2.7	2.5	2.8	2.6	2.7	3.0	4.2	4.0	3.1	2.9	2.8	2.7
1931	2.9	2.7	3.0	3.4	3.8	5.1	4.7	3.7	5.6	6.2	3.9	3.4	2.0	1.8	1.8	2.0	2.4	3.8	3.3	2.4	4.2	5.0	3.0	2.6
1932	3.4	3.3	4.4	5.7	5.1	5.6	5.2	3.9	4.5	3.5	3.4	4.1	2.5	2.4	3.3	4.6	4.3	4.8	4.5	3.0	3.6	2.7	2.7	3.4
1933	3.6	4.4	4.6	2.8	2.4	2.5	3.5	3.4	4.3	4.6	4.8	4.7	2.8	3.8	3.9	2.0	1.3	1.2	2.0	1.9	2.3	3.5	3.8	3.8
1934	3.4	2.9	3.2	3.4	4.9	4.6	3.9	4.5	5.1	5.3	4.6	3.5	2.4	1.9	2.1	2.0	3.7	3.5	3.0	3.6	3.4	4.4	3.8	2.7
1935	3.0	2.8	3.2	3.7	4.4	4.5	3.7	3.8	3.2	3.1	3.6	3.8	2.1	1.9	2.3	2.6	3.0	3.5	2.6	2.7	2.0	2.0	2.6	2.9
1936	3.6	3.1	2.9	3.3	3.3	3.3	3.2	4.7	3.3	3.3	3.0	3.4	2.7	2.2	1.8	1.9	2.1	1.9	1.8	3.2	1.5	1.7	1.7	2.1
1937	3.4	2.9	3.2	3.1	3.4	4.0	3.5	4.0	4.6	5.7	6.9	8.5	1.9	1.4	1.5	1.5	1.8	1.9	2.1	2.6	2.8	4.5	6.0	7.8
1938	6.1	4.4	4.5	4.5	4.6	4.4	3.8	3.1	3.6	3.3	3.1	3.9	5.5	3.8	3.7	3.9	3.8	3.7	3.1	2.3	2.6	2.4	2.4	3.2
1939	3.2	2.6	3.1	3.5	3.5	3.3	3.3	3.0	2.8	2.9	3.0	3.5	2.2	1.9	2.2	2.6	2.7	2.5	2.5	2.1	1.6	1.8	2.0	2.7
1940	3.4	3.6	3.5	3.6	3.8	3.3	3.4	3.0	3.3	3.2	3.1	3.3	2.6	2.7	2.5	2.7	2.8	2.3	2.3	1.6	1.5	1.5	1.6	1.9
1941	3.4	3.1	3.4	4.0	3.8	3.8	4.3	4.2	4.6	4.1	3.5	4.8	1.6	1.2	1.1	1.2	1.1	1.0	1.4	1.1	1.2	1.4	1.4	2.2
1942	5.2	4.9	5.3	6.2	6.6	6.5	6.7	7.0	8.1	8.0	7.2	6.4	1.6	1.4	1.2	1.3	1.4	1.2	1.1	.9	.7	.8	.7	.7
1943	7.1	7.1	7.7	7.5	6.7	7.1	7.6	8.3	8.1	7.0	6.4	6.6	.7	.5	.5	.6	.5	.5	.5	.5	.5	.5	.7	1.0
1944	6.7	6.6	7.4	6.8	7.1	7.1	6.6	7.8	7.6	6.4	6.0	5.7	.8	.8	.9	.6	.5	.5	.5	.5	.6	.5	.5	.5
1945	6.2	6.0	6.8	6.6	7.0	7.9	7.7	17.9	12.0	8.6	7.1	5.9	.6	.7	.7	.8	1.2	1.7	1.5	10.7	4.5	2.3	1.7	1.3
1946	6.8	6.3	6.6	6.3	6.3	5.7	5.8	6.6	6.9	6.3	4.9	4.5	1.8	1.7	1.8	1.4	1.5	1.2	.6	.7	1.0	1.0	.7	1.0
1947	4.9	4.5	4.9	5.2	5.4	4.7	4.6	5.3	5.9	5.0	4.0	3.7	.9	.8	.9	1.0	1.4	1.1	1.0	.8	.9	.9	.8	.9
	Quit[2]												Miscellaneous separations including military[2]											
1930	1.9	1.6	1.9	2.1	2.0	1.9	1.4	1.4	1.5	1.3	0.9	0.8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1931	.7	.7	.9	1.1	1.1	1.0	1.1	1.1	1.2	1.0	.7	.7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1932	.7	.7	.9	.9	.7	.7	.6	.7	.8	.7	.5	.6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1933	.7	.5	.5	.6	.8	1.0	1.3	1.2	1.7	.9	.8	.7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1934	.9	.9	.9	1.1	1.0	.9	.7	.8	1.6	.7	.6	.6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1935	.8	.7	.8	.9	1.2	.8	.9	.9	1.1	.9	.8	.7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1936	.7	.7	.9	1.2	1.1	1.1	1.2	1.2	1.6	1.3	1.1	1.1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1937	1.3	1.2	1.4	1.4	1.4	1.9	1.3	1.2	1.6	1.1	.7	.6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1938	.5	.5	.6	.6	.6	.6	.6	.7	.8	.8	.6	.6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1939	.9	.6	.8	.8	.7	.7	.7	.8	1.1	.9	.8	.7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1940	.6	.6	.7	.7	.8	.8	.9	1.1	1.4	1.3	1.1	1.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2
1941	1.3	1.3	1.7	2.1	2.2	2.1	2.3	2.5	2.8	2.1	1.6	1.8	.3	.4	.4	.4	.3	.4	.3	.3	.3	.3	.3	.5
1942	2.4	2.4	3.0	3.6	3.8	3.9	4.0	4.3	5.2	4.7	4.2	3.7	.9	.8	.8	.9	1.0	1.0	1.2	1.4	1.8	2.0	1.9	1.5
1943	4.5	4.7	5.4	5.4	4.8	5.2	5.6	6.3	6.3	5.2	4.5	4.4	1.4	1.4	1.2	1.0	.8	.8	.8	.8	.7	.7	.6	.6
1944	4.6	4.6	5.0	4.9	5.3	5.4	5.0	6.2	6.1	5.0	4.6	4.3	.6	.6	.8	.7	.7	.5	.4	.4	.3	.3	.3	.3
1945	4.6	4.3	5.0	4.8	4.8	5.1	5.2	5.2	6.7	5.6	4.7	4.0	.3	.3	.4	.4	.4	.4	.4	.3	.2	.2	.2	.2
1946	4.3	3.9	4.2	4.3	4.2	4.0	4.6	5.3	5.3	4.7	3.7	3.0	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.1	.1
1947	3.5	3.2	3.5	3.7	3.5	3.1	3.1	4.0	4.5	3.6	2.7	2.3	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1

[1] Turn-over rates for certain seasonal industries such as canning and preserving are not included. From April 1943, the printing and publishing industries have been excluded. Beginning in January 1943, labor turn-over data cover wage and salaried workers; for previous periods, they refer to factory workers only. From January 1943 also, manufacturing firms reporting labor turn-over have been assigned industry codes on the basis of products currently made.

[2] Prior to 1940, miscellaneous separations were included with quits. From September 1940, military separations have been included with miscellaneous separations.

TABLE B–2: Monthly labor turn-over rates (per 100 employees) in selected groups and industries, 1940–47[1]

MANUFACTURING

Period	Accession	Separation					Accession	Separation					Accession	Separation				
		Total	Quit	Discharge	Lay-off	Misc. including military		Total	Quit	Discharge	Lay-off	Misc. including military		Total	Quit	Discharge	Lay-off	Misc. including military
	DURABLE GOODS GROUP						NONDURABLE GOODS GROUP						Iron and steel and their products					
1940: April	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
October	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
1941: April	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
October	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
1942: April	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
October	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
1943: April	......	......	......	......	......	......	......	......	......	......	......	......	5.3	5.6	3.8	0.3	0.3	1.2
October	......	......	......	......	......	......	......	......	......	......	......	......	4.9	5.1	3.6	.4	.3	.8
1944: April	......	......	......	......	......	......	......	......	......	......	......	......	3.9	5.0	3.5	.4	.4	.7
October	......	......	......	......	......	......	......	......	......	......	......	......	4.2	4.9	3.7	.4	.5	.3
1945: April	......	......	......	......	......	......	......	......	......	......	......	......	3.6	4.4	3.3	.4	.3	.4
October	8.5	9.3	5.3	0.6	3.2	0.2	8.7	7.9	6.0	0.5	1.2	0.2	7.8	6.2	4.6	.4	1.0	.2
1946: April	7.4	6.5	4.2	.4	1.7	.2	5.9	6.1	4.4	.3	1.2	.2	6.4	5.1	3.6	.3	.9	.3
October	6.9	6.6	4.7	.5	1.2	.2	6.7	5.7	4.6	.4	.6	.1	5.7	5.3	4.1	.4	.6	.2
1947: April	5.4	5.5	3.9	.5	1.0	.1	4.8	5.0	3.6	.4	.9	.1	4.9	4.7	3.6	.4	.5	.2
October	5.3	5.2	3.6	.5	1.0	.1	5.8	4.9	3.7	.4	.7	.1	4.4	4.6	3.3	.4	.7	.2
	Blast furnaces, steel works, and rolling mills						Gray-iron castings						Malleable-iron castings					
1940: April	1.1	2.6	0.4	0.1	1.9	0.2	......	......	......	......	......	......	......	......	......	......	......	......
October	2.7	1.4	.7	.1	.4	.2	......	......	......	......	......	......	......	......	......	......	......	......
1941: April	3.9	1.8	1.0	.1	.2	.5	......	......	......	......	......	......	......	......	......	......	......	......
October	2.0	2.6	1.4	.2	.5	.5	......	......	......	......	......	......	......	......	......	......	......	......
1942: April	4.3	3.8	2.3	.2	.3	1.0	......	......	......	......	......	......	......	......	......	......	......	......
October	5.4	6.2	3.3	.2	.6	2.1	......	......	......	......	......	......	......	......	......	......	......	......
1943: April	[2]3.9	[2]4.2	[2]2.6	[2].2	[2].1	[2]1.3	7.7	8.5	6.4	0.7	0.5	0.9	7.3	7.3	6.0	0.4	(3)	0.9
October	3.1	3.8	2.6	.2	.2	.8	7.6	8.0	5.9	.7	.7	.7	5.6	5.3	4.1	.4	0.1	.7
1944: April	2.7	3.4	2.4	.2	.2	.6	7.8	8.4	6.3	.8	.6	.7	3.7	5.7	4.7	.4	(3)	.6
October	2.7	3.3	2.7	.2	.2	.2	8.4	7.6	6.3	.7	.3	.3	5.5	5.4	4.5	.5	.2	.2
1945: April	2.6	2.9	2.3	.2	.1	.3	5.4	6.9	5.5	.7	.3	.4	4.2	5.7	4.7	.5	.1	.4
October	6.2	5.1	4.1	.2	.6	.2	12.3	7.6	6.0	1.0	.4	.2	9.9	7.1	6.2	.4	.1	.4
1946: April	4.3	3.7	2.5	.2	.7	.3	9.6	7.8	6.3	.8	.3	.4	10.9	8.1	6.9	.6	.2	.4
Octooer	4.0	3.7	3.1	.2	.2	.2	9.6	9.3	7.5	.9	.6	.3	8.9	7.9	6.9	.5	.2	.3
1947: April	3.6	3.0	2.6	.2	.1	.1	8.6	8.7	6.8	1.0	.6	.3	7.9	8.1	6.7	.6	.2	.6
October	3.0	3.4	2.7	.2	.3	.2	7.2	7.7	5.7	1.1	.8	.1	6.9	7.1	5.1	.9	.9	.2
	Steel castings						Cast-iron pipe and fittings						Tin cans and other tinware					
1940: April	......	......	......	......	......	......	1.5	1.2	0.3	0.3	0.5	0.1	......	......	......	......	......	......
October	......	......	......	......	......	......	3.6	1.3	.7	.1	.4	.1	......	......	......	......	......	......
1941: April	......	......	......	......	......	......	3.8	1.6	1.0	.2	.1	.3	......	......	......	......	......	......
October	......	......	......	......	......	......	3.6	2.5	1.5	.4	.3	.3	......	......	......	......	......	......
1942: April	......	......	......	......	......	......	2.8	2.9	1.6	.3	.6	.4	......	......	......	......	......	......
October	......	......	......	......	......	......	5.3	3.8	1.5	.3	.6	1.4	......	......	......	......	......	......
1943: April	8.6	8.0	6.2	0.7	0.1	1.0	5.3	6.2	3.8	.5	.8	1.1	15.0	11.0	9.0	0.8	0.3	0.9
October	6.8	7.2	5.2	.8	.3	.9	4.8	7.2	3.9	.5	1.8	1.0	11.1	12.5	9.8	1.3	.8	.6
1944: April	5.4	7.2	5.5	.7	.2	.8	4.8	5.5	3.2	.3	.9	1.1	11.7	10.7	8.8	.9	.3	.7
October	5.8	6.5	5.1	.7	.3	.4	5.3	5.2	4.0	.3	.4	.5	10.9	13.1	9.7	1.9	1.2	.3
1945: April	5.2	6.4	5.1	.8	.1	.4	6.3	8.3	5.9	1.6	.4	.4	11.0	10.1	7.3	2.2	.2	.4
October	5.9	9.4	5.8	.7	2.7	.2	9.5	7.2	5.4	.4	.8	.6	14.9	15.1	9.6	1.9	3.2	.4
1946: April	4.9	6.2	3.5	.6	1.9	.2	8.3	6.1	5.4	.2	.2	.3	11.0	9.3	6.3	1.4	1.4	.2
October	5.8	5.5	4.0	.5	.8	.2	7.2	6.8	5.6	.4	.5	.3	7.4	9.7	6.4	1.5	1.7	.1
1947: April	5.1	4.8	3.4	.6	.7	.1	6.1	4.5	3.7	.3	.5	(3)	5.8	5.8	3.4	.7	1.5	.2
October	4.5	4.8	3.2	.5	1.0	.1	6.4	4.8	4.0	.5	.2	.1	6.5	7.7	4.3	1.4	1.9	.1
	Wire products						Cutlery and edge tools						Tools (except edge tools, machine tools, files, and saws)					
1940: April	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
October	......	......	......	......	......	......	......	......	......	......	......	......	6.3	1.8	1.1	0.2	0.3	0.2
1941: April	......	......	......	......	......	......	......	......	......	......	......	......	5.8	4.1	2.8	.3	.6	.4
October	......	......	......	......	......	......	......	......	......	......	......	......	4.2	3.1	2.3	.1	.4	.3
1942: April	......	......	......	......	......	......	......	......	......	......	......	......	6.8	6.3	4.8	.6	.3	.6
October	......	......	......	......	......	......	......	......	......	......	......	......	8.1	7.0	4.6	.5	.1	1.8
1943: April	3.8	4.9	3.3	0.2	0.5	0.9	7.9	8.2	5.5	0.9	0.8	1.0	7.1	7.3	5.8	.5	.1	.9
October	2.7	2.8	1.8	.2	.2	.6	8.7	8.1	5.9	.7	1.0	.5	7.4	5.4	4.3	.4	.1	.6
1944: April	3.2	2.9	1.9	.3	.1	.6	8.1	5.9	4.7	.4	.2	.6	4.7	6.4	4.8	.6	.3	.7
October	3.8	4.3	2.7	.4	.9	.3	10.7	7.2	6.7	.2	.1	.2	6.1	5.2	3.8	.8	.2	.4
1945: April	2.6	2.9	2.1	.2	.1	.5	6.8	6.9	5.7	.9	(3)	.3	3.4	4.8	3.9	.4	.1	.4
October	7.3	5.2	3.6	.2	1.1	.3	11.2	7.2	5.5	.9	.7	.1	7.7	5.8	4.3	.7	.6	.2
1946: April	5.8	4.0	2.7	.2	.8	.3	8.1	5.6	4.6	.8	.1	.1	7.3	5.2	4.4	.5	.1	.2
October	5.1	5.1	3.6	.3	1.0	.2	10.6	6.2	4.7	1.3	.1	.1	7.0	5.2	4.2	.7	.1	.2
1947: April	3.0	3.9	2.6	.4	.7	.2	4.8	4.3	3.2	.7	.4	(3)	3.9	5.6	4.1	.5	.9	.1
October	3.8	3.6	2.5	.4	.4	.3	5.4	5.6	3.1	.5	1.9	.1	3.9	3.6	2.7	.3	.5	.1

See footnotes at end of table.

TABLE B-2: Monthly labor turn-over rates (per 100 employees) in selected groups and industries, 1940–47[1]—Continued

MANUFACTURING—Continued

Period	Accession	Separation					Accession	Separation					Accession	Separation				
		Total	Quit	Discharge	Lay-off	Misc. including military		Total	Quit	Discharge	Lay-off	Misc. including military		Total	Quit	Discharge	Lay-off	Misc. including military
	Hardware						Stoves, oil burners, and heating equipment						Steam and hot-water heating apparatus and steam fittings					
1940: April	1.4	2.5	0.8	0.1	1.5	0.1	......	......	......	......	......	......	1.5	1.6	0.5	0.1	0.9	0.1
October	7.5	2.8	2.1	.3	.3	.1	......	......	......	......	......	......	8.5	2.1	1.4	.3	.3	.1
1941: April	5.9	4.9	3.9	.3	.2	.5	......	......	......	......	......	......	4.8	4.1	2.6	.3	.7	.5
October	5.4	5.4	3.5	.4	1.2	.3	3.9	5.9	3.1	0.3	2.2	0.3	3.6	3.8	2.4	.3	.7	.4
1942: April	5.3	8.8	5.7	.5	1.8	.8	6.5	10.3	4.9	.2	4.5	.7	6.3	6.8	4.0	.5	1.0	1.3
October	8.8	7.9	5.7	.5	.2	1.5	16.8	10.8	6.1	.7	2.3	1.7	8.8	7.0	4.1	.3	.4	2.2
1943: April	5.9	6.6	4.7	.3	.6	1.0	8.7	10.9	6.7	.7	2.6	.9	6.5	7.4	5.1	.4	1.1	.8
October	5.6	5.6	4.2	.6	.2	.6	9.6	8.1	5.7	1.1	.6	.7	5.6	5.5	4.1	.6	.2	.6
1944: April	3.8	4.8	3.7	.4	.3	.4	9.0	9.3	7.3	.6	.8	.6	5.1	5.2	3.8	.6	.1	.7
October	4.2	4.2	3.5	.3	.1	.3	9.7	7.5	5.9	1.1	.2	.3	3.7	4.6	3.2	.6	.4	.4
1945: April	4.0	4.0	3.3	.3	.1	.3	6.2	7.4	5.2	.8	.8	.6	4.9	5.9	4.9	.4	.2	.4
October	10.1	6.6	5.4	.5	.5	.2	14.9	8.3	6.2	.8	1.0	.3	8.1	6.7	4.8	.4	1.2	.3
1946: April	9.1	8.1	6.7	.9	.2	.3	9.8	7.6	5.1	.5	1.6	.4	8.6	7.7	5.1	.5	1.9	.2
October	7.7	7.5	5.7	.5	1.1	.2	9.8	7.2	5.6	.7	.7	.2	8.0	6.4	5.3	.5	.4	.2
1947: April	6.5	6.4	5.3	.6	.4	.1	5.8	6.7	4.7	.7	1.2	.1	5.2	6.9	4.6	.6	1.6	.1
October	7.3	5.9	4.5	.7	.6	.1	7.7	5.9	4.0	.7	1.1	.1	5.7	7.6	4.3	.5	2.7	.1
	Stamped and enameled ware and galvanizing						Fabricated and structural metal products						Bolts, nuts, washers, and rivets					
1940: April	......	......	......	......	......	......	5.2	5.0	0.4	(3)	4.5	0.1	......	......	......	......	......	......
October	......	......	......	......	......	......	7.6	4.3	1.6	0.1	2.5	.1	......	......	......	......	......	......
1941: April	......	......	......	......	......	......	5.3	4.8	1.9	.2	2.1	.6	......	......	......	......	......	......
October	8.0	9.0	4.3	0.6	3.5	0.6	2.7	3.7	1.9	.2	1.1	.5	......	......	......	......	......	......
1942: April	9.4	9.9	5.2	.6	2.7	1.4	8.3	7.4	4.4	.7	1.4	.9	......	......	......	......	......	......
October	10.4	11.6	7.2	.6	1.6	2.2	10.6	11.2	6.2	.7	2.0	2.3	......	......	......	......	......	......
1943: April	8.0	8.9	6.7	.5	.5	1.2	10.0	9.3	6.4	.8	.9	1.2	7.1	6.1	4.7	0.5	0.1	0.8
October	9.1	8.9	6.5	.9	.9	.6	8.3	7.8	5.1	1.1	.6	1.0	5.7	4.9	3.7	.6	.1	.5
1944: April	7.2	8.5	6.9	.8	.3	.5	6.9	7.7	5.2	1.1	.3	1.1	4.5	5.4	4.0	.4	.4	.6
October	8.0	8.0	6.5	.7	.5	.3	6.6	9.1	6.0	1.1	1.7	.3	3.5	5.2	3.3	.5	1.2	.2
1945: April	6.8	6.5	4.9	.7	.3	.6	4.3	8.7	5.3	.8	2.0	.6	3.0	4.5	3.5	.5	.2	.3
October	13.0	8.4	5.8	.7	1.6	.3	9.5	9.3	5.3	.7	3.0	.3	6.3	5.3	3.2	.5	1.3	.3
1946: April	11.8	7.3	5.5	.4	.9	.5	8.5	5.1	3.1	.4	1.3	.3	5.1	6.4	2.8	.2	3.1	.3
October	8.4	9.5	6.5	.6	2.0	.4	8.2	6.8	5.0	.6	1.0	.2	4.5	4.4	3.7	.2	.2	.3
1947: April	7.4	6.7	4.8	.7	1.0	.2	6.3	6.4	3.8	.6	1.9	.1	4.4	4.3	3.1	.4	.6	.2
October	6.0	6.7	4.4	.6	1.6	.1	6.1	6.4	3.7	.6	2.0	.1	4.1	3.1	1.9	.3	.8	.1
	Forgings, iron and steel						Electrical machinery						Electrical equipment for industrial use					
1940: April	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
October	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
1941: April	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
October	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
1942: April	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
October	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
1943: April	7.1	6.3	4.6	0.5	0.2	1.0	5.9	5.2	3.7	0.4	0.2	0.9	5.3	4.5	3.0	0.3	0.3	0.9
October	6.4	6.0	4.1	.6	.5	.8	6.3	5.1	4.0	.5	.1	.5	4.6	4.4	3.3	.3	.2	.6
1944: April	3.5	5.2	3.7	.4	.1	1.0	4.6	5.1	3.7	.6	.3	.5	3.5	4.5	2.9	.5	.6	.5
October	3.7	4.4	3.3	.4	.4	.3	4.2	5.2	3.9	.6	.4	.3	3.2	4.3	3.2	.4	.4	.3
1945: April	3.0	4.9	3.4	.5	.6	.4	3.6	4.3	3.2	.5	.3	.3	2.8	3.5	2.6	.4	.2	.3
October	7.0	5.2	3.4	.3	1.3	.2	6.8	7.3	4.1	.4	2.5	.3	4.4	8.5	4.4	.3	3.3	.5
1946: April	7.3	4.2	2.8	.3	.7	.4	7.0	6.1	3.8	.4	1.7	.2	6.5	6.5	3.9	.3	2.1	.2
October	4.8	4.4	3.5	.2	.5	.2	6.7	5.3	4.0	.4	.7	.2	4.6	3.8	2.7	.2	.6	.3
1947: April	4.7	4.4	3.4	.5	.4	.1	4.0	5.3	3.1	.5	1.6	.1	2.7	3.3	2.1	.3	.8	.1
October	4.1	4.5	2.8	.3	1.3	.1	5.0	4.3	3.0	.5	.7	.1	2.8	2.7	1.9	.2	.5	.1
	Radios, radio equipment, and phonographs						Communication equipment, except radios						Machinery, except electrical					
1940: April	4.3	3.5	1.1	0.1	2.3	(3)	......	......	......	......	......	......	......	......	......	......	......	......
October	4.9	5.0	2.4	.2	2.2	0.2	......	......	......	......	......	......	......	......	......	......	......	......
1941: April	9.1	3.4	2.3	.3	.6	.2	......	......	......	......	......	......	......	......	......	......	......	......
October	4.6	4.3	2.9	.3	.9	.2	......	......	......	......	......	......	......	......	......	......	......	......
1942: April	8.2	8.4	3.5	.4	3.8	.7	......	......	......	......	......	......	......	......	......	......	......	......
October	12.4	8.1	5.6	.6	.2	1.7	......	......	......	......	......	......	......	......	......	......	......	......
1943: April	7.7	7.0	5.5	.6	.2	.7	4.2	3.6	2.7	0.2	(3)	0.7	5.9	6.0	4.1	0.6	0.2	1.1
October	8.8	6.3	4.9	.8	.1	.5	6.4	4.6	3.9	.3	(3)	.4	4.9	5.6	3.7	.7	.4	.8
1944: April	5.0	5.2	4.0	.6	.2	.4	5.1	5.2	3.6	.6	0.2	.8	4.2	5.5	3.5	.6	.5	.9
October	4.4	5.2	3.9	.7	.3	.3	6.6	6.4	4.5	.9	.6	.4	3.9	4.6	3.3	.6	.4	.3
1945: April	3.9	4.6	3.5	.6	.2	.3	4.3	4.5	3.5	.7	(3)	.3	3.3	4.6	3.2	.6	.3	.5
October	7.4	5.7	3.3	.4	1.9	.1	6.5	8.1	3.8	.6	3.5	.2	6.9	5.7	3.8	.5	1.2	.2
1946: April	7.3	7.7	4.3	.5	2.7	.2	6.4	2.9	2.0	.2	.6	.1	6.2	4.8	3.2	.4	1.0	.2
October	8.3	6.2	4.9	.8	.4	.1	4.9	3.4	2.8	.2	.2	.2	5.3	4.4	3.4	.5	.4	.1
1947: April	5.1	7.9	3.9	.9	3.0	.1	2.7	4.1	3.0	.2	.8	.1	4.4	4.5	3.1	.5	.8	.1
October	7.4	6.1	3.9	1.0	1.1	.1	4.1	2.7	2.3	.2	.1	.1	4.1	4.2	2.8	.4	.9	.1

See footnotes at end of table.

TABLE B–2: Monthly labor turn-over rates (per 100 employees) in selected groups and industries, 1940–47[1]—Continued

MANUFACTURING—Continued

Period	Accession	Separation					Accession	Separation					Accession	Separation				
		Total	Quit	Discharge	Lay-off	Misc. including military-		Total	Quit	Discharge	Lay-off	Misc. including military		Total	Quit	Discharge	Lay-off	Misc. including military
	Engines and turbines						Agricultural machinery and tractors						Machine tools					
1940: April	......	......	......	......	......	......	2.2	3.1	0.6	0.1	2.3	0.1	4.5	1.9	1.1	0.4	0.3	0.1
October	......	......	......	......	......	......	3.8	2.3	.8	.1	1.2	.2	6.6	2.2	1.5	.4	.1	.2
1941: April	......	......	......	......	......	......	3.1	3.1	1.7	.2	.6	.6	5.9	3.2	2.2	.5	.2	.3
October	......	......	......	......	......	......	4.5	4.0	1.9	.2	1.6	.3	4.4	2.7	1.9	.4	.2	.2
1942: April	......	......	......	......	......	......	4.7	4.6	2.4	.3	.6	1.3	7.5	4.8	3.5	.5	.1	.7
October	......	......	......	......	......	......	7.6	6.5	2.9	.4	1.1	2.1	7.7	6.6	3.6	.6	.1	2.3
1943: April	7.5	6.1	4.4	0.5	0.1	1.1	5.7	5.2	3.6	.5	.2	.9	[2]4.4	[2]5.6	[2]3.6	[2].6	[2].2	[2]1.2
October	5.8	5.1	3.3	.9	.3	.6	6.7	5.2	3.8	.4	.1	.9	2.1	5.6	2.8	.6	1.0	1.2
1944: April	5.1	5.2	3.3	.6	.3	1.0	6.5	7.0	4.8	.5	.7	1.0	2.4	4.0	2.3	.4	.4	.9
October	4.0	5.9	3.7	.7	1.2	.3	4.4	4.5	3.6	.4	.1	.4	2.8	3.2	2.1	.5	.4	.2
1945: April	3.4	5.0	3.2	.7	.6	.5	3.2	4.6	3.7	.3	.1	.5	2.3	3.6	2.2	.6	.4	.4
October	5.9	8.0	4.4	.6	2.7	.3	6.8	4.6	3.7	.3	.3	.3	4.2	4.6	2.8	.3	1.4	.1
1946: April	9.4	5.3	3.6	.3	1.3	.1	(4)	(4)	(4)	(4)	(4)	(4)	4.2	3.8	2.1	.2	1.3	.2
October	5.9	4.4	2.9	.6	.7	.2	4.8	4.7	3.8	.5	.2	.2	3.2	3.0	2.3	.2	.4	.1
1947: April	4.1	5.1	3.1	.5	1.4	.1	5.2	4.7	3.8	.4	.2	.3	2.4	3.8	2.0	.3	1.3	.2
October	3.6	4.5	2.3	.6	1.5	.1	4.5	4.6	3.8	.4	.2	.2	2.1	3.8	1.9	.3	1.4	.2
	Machine-tool accessories						Metalworking machinery and equipment, not elsewhere classified						General industrial machinery, except pumps					
1940: April	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
October	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
1941: April	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
October	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
1942: April	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
October	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
1943: April	5.6	6.1	4.3	0.8	0.2	0.8	4.2	4.9	3.4	0.4	0.1	1.0	7.4	6.6	4.7	0.7	0.1	1.1
October	3.8	5.2	3.2	.8	.5	.7	3.2	5.2	3.4	.6	.5	.7	6.0	6.3	4.5	.7	.3	.8
1944: April	3.4	5.8	3.3	.6	.8	1.1	3.0	4.0	2.7	.4	.1	.8	3.9	5.7	3.8	.6	.5	.8
October	3.5	3.9	2.5	.6	.6	.2	3.9	3.6	2.6	.6	.1	.3	3.9	4.8	3.5	.6	.4	.3
1945: April	3.1	3.6	2.3	.7	.3	.3	3.5	3.9	2.8	.5	.2	.4	3.5	5.0	3.5	.6	.4	.5
October	4.9	8.6	3.5	.5	4.4	.2	6.4	5.0	3.8	.6	.4	.2	6.9	5.9	4.0	.6	1.1	.2
1946: April	4.9	5.1	2.6	.4	1.9	.2	5.5	4.0	3.1	.4	.4	.1	6.2	5.0	3.5	.4	.9	.2
October	5.2	4.5	3.3	.6	.5	.1	5.1	4.3	3.8	.3	.1	.1	5.1	4.5	3.6	.5	.3	.1
1947: April	2.8	5.2	2.3	.4	2.4	.1	3.2	4.4	3.4	.3	.6	.1	3.6	4.5	2.9	.5	1.0	.1
October	3.4	4.3	2.0	.3	1.9	.1	4.1	3.6	2.7	.6	.2	.1	3.5	4.2	2.6	.4	1.1	.1
	Pumps and pumping equipment						Transportation equipment, except automobiles						Aircraft					
1940: April	......	......	......	......	......	......	......	......	......	......	......	......	10.1	2.7	2.0	0.4	0.3	(3)
October	......	......	......	......	......	......	......	......	......	......	......	......	11.8	4.6	2.3	.4	1.7	0.2
1941: April	......	......	......	......	......	......	......	......	......	......	......	......	9.8	3.7	2.5	.4	.4	.4
October	......	......	......	......	......	......	......	......	......	......	......	......	10.6	4.1	2.7	.6	.5	.3
1942: April	......	......	......	......	......	......	......	......	......	......	......	......	10.3	5.2	3.8	.4	.1	.9
October	......	......	......	......	......	......	......	......	......	......	......	......	11.7	8.0	4.4	.5	.1	3.0
1943: April	5.3	7.7	5.4	0.5	0.8	1.0	9.5	7.7	5.1	0.9	0.5	1.2	[2]7.3	[2]6.2	[2]4.6	[2].5	[2].2	[2].9
October	5.1	5.9	3.7	.7	.6	.9	8.0	7.8	5.2	1.1	.6	.9	7.6	6.5	4.9	.6	.3	.7
1944: April	3.7	5.5	4.0	.6	.1	.8	5.6	7.3	4.7	1.1	.6	.9	3.7	6.2	4.3	.5	.4	1.0
October	4.4	4.4	3.4	.6	.1	.3	6.2	7.7	5.3	1.2	.9	.3	4.8	6.2	4.8	.6	.5	.3
1945: April	4.9	5.5	4.1	.8	(3)	.6	3.9	9.0	4.9	1.1	2.5	.5	3.2	7.3	4.6	.7	1.4	.6
October	8.9	5.0	3.3	.5	1.0	.2	8.2	19.2	7.2	1.1	10.7	.2	6.5	14.7	5.3	.8	8.4	.2
1946: April	6.0	4.5	3.3	.4	.6	.2	7.8	12.3	3.5	.5	8.1	.2	7.4	5.8	2.9	.3	2.5	.1
October	5.3	4.4	3.3	.9	.1	.1	8.0	9.1	3.6	.5	4.9	.1	7.5	6.8	3.9	.4	2.4	.1
1947: April	4.0	4.4	3.4	.5	.5	(3)	7.8	8.1	4.1	.6	3.3	.1	6.4	5.8	3.9	.3	1.5	.1
October	4.1	5.2	3.1	.5	1.5	.1	7.6	6.9	3.5	.6	2.7	.1	7.4	5.9	3.6	.3	1.9	.1
	Aircraft parts, including engines						Shipbuilding and repairs						Automobiles					
1940: April	......	......	......	......	......	......	6.2	8.1	1.2	0.3	6.5	0.1	......	......	......	......	......	......
October	......	......	......	......	......	......	7.9	4.5	1.4	.4	2.5	.2	......	......	......	......	......	......
1941: April	......	......	......	......	......	......	14.3	7.9	2.5	.5	4.3	.6	......	......	......	......	......	......
October	......	......	......	......	......	......	14.6	6.0	2.7	.5	2.4	.4	......	......	......	......	......	......
1942: April	......	......	......	......	......	......	16.4	7.2	4.3	.7	1.3	.9	......	......	......	......	......	......
October	......	......	......	......	......	......	12.6	10.8	5.4	1.1	1.1	3.2	......	......	......	......	......	......
1943: April	7.3	4.7	3.0	0.5	0.2	1.0	12.2	9.9	6.3	1.4	.7	1.5	9.0	6.2	4.2	0.6	0.3	1.1
October	6.7	5.7	3.7	.7	.6	.7	9.0	9.8	6.3	1.7	.7	1.1	7.2	6.4	4.4	.7	.5	.8
1944: April	4.8	5.6	3.6	.6	.7	.7	7.3	8.9	5.7	1.7	.6	.9	5.9	6.6	4.2	.8	.7	.9
October	4.1	6.5	4.0	.7	1.6	.2	8.4	9.5	6.4	1.8	.9	.4	7.2	5.6	4.2	.8	.3	.3
1945: April	3.2	5.7	3.0	.6	1.7	.4	4.9	12.9	6.4	1.8	4.1	.6	5.2	6.5	4.3	.8	1.0	.4
October	12.0	13.8	4.3	.4	8.9	.2	8.1	24.0	8.9	1.5	13.4	.2	11.8	5.9	3.1	.3	2.4	.1
1946: April	7.2	6.5	2.5	.3	3.6	.1	8.5	19.2	4.1	.7	14.3	.1	8.1	5.7	3.8	.5	1.1	.3
October	6.4	4.0	2.7	.4	.9	(3)	9.6	15.2	4.0	.7	10.4	.1	6.9	9.5	5.1	.7	3.5	.2
1947: April	3.2	6.8	3.5	.6	2.7	(3)	12.2	12.0	5.0	1.1	5.8	.1	5.3	4.7	3.5	.5	.6	.1
October	3.3	3.5	2.0	.4	1.0	.1	11.6	11.0	4.5	1.2	5.2	.1	4.6	5.3	3.3	.5	1.3	.2

See footnotes at end of table.

TABLE B-2: Monthly labor turn-over rates (per 100 employees) in selected groups and industries, 1940-47[1]—Continued

MANUFACTURING—Continued

Period	Accession	Separation					Accession	Separation					Accession	Separation				
		Total	Quit	Discharge	Lay-off	Misc. including military		Total	Quit	Discharge	Lay-off	Misc. including military		Total	Quit	Discharge	Lay-off	Misc. including military
	Motor vehicles, bodies, and trailers						Motor vehicle parts and accessories						Nonferrous metals and their products					
1940: April	2.3	6.5	0.7	0.1	5.6	0.1	4.2	5.7	0.7	0.1	4.8	0.1	......	......	......	......	......	......
October	9.8	4.0	1.4	.1	2.3	.2	10.2	3.9	1.8	.4	1.5	.2	......	......	......	......	......	......
1941: April	4.9	3.6	1.8	.1	1.1	.6	6.2	5.6	2.1	.4	2.5	.6	......	......	......	......	......	......
October	4.3	4.2	1.6	.2	1.9	.5	6.8	5.0	2.3	.4	1.9	.4	......	......	......	......	......	......
1942: April	7.6	6.2	1.8	.2	3.2	1.0	7.8	5.9	2.7	.6	1.7	.9	......	......	......	......	......	......
October	9.1	6.0	2.9	.3	1.1	1.7	9.3	8.6	4.8	.8	1.2	1.8	......	......	......	......	......	......
1943: April	9.7	5.6	4.0	.4	.2	1.0	8.2	6.8	4.4	.8	.4	1.2	7.7	8.1	5.9	0.6	0.4	1.2
October	6.6	5.9	4.1	.4	.6	.8	7.6	6.7	4.6	.9	.4	.8	8.7	7.3	5.4	.8	.3	.8
1944: April	5.2	6.1	3.6	.5	1.4	.6	6.3	6.7	4.5	.9	.3	1.0	5.2	7.7	5.3	.6	1.0	.8
October	6.3	5.0	3.6	.8	.3	.3	7.7	6.1	4.7	.8	.3	.3	5.2	7.2	4.7	.6	1.5	.4
1945: April	4.3	6.4	3.8	.8	1.4	.4	5.8	6.6	4.7	.8	.7	.4	5.7	6.3	4.7	.6	.6	.4
October	8.4	4.7	2.3	.2	2.1	.1	16.9	7.7	4.3	.5	2.8	.1	[5]10.1	[5]8.0	[5]5.4	[5].7	[5]1.6	[5].3
1946: April	7.5	6.0	3.9	.7	1.0	.4	9.3	5.7	3.7	.3	1.4	.3	7.7	5.8	4.2	.5	.9	.2
October	6.4	9.9	5.5	.7	3.6	.1	7.8	8.4	4.3	.6	3.2	.3	7.2	5.9	4.7	.6	.5	.1
1947: April	5.4	4.5	3.6	.5	.3	.1	5.0	5.2	3.4	.6	1.0	.2	4.2	6.0	3.5	.6	1.8	.1
October	4.6	5.4	3.4	.4	1.4	.2	4.4	5.2	3.2	.6	1.2	.2	4.8	4.9	3.0	.5	1.3	.1
	Primary smelting and refining, except aluminum and magnesium						Rolling and drawing of copper and copper alloys						Lighting equipment					
1940: April	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
October	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
1941: April	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
October	......	......	......	......	......	......	......	......	......	......	......	......	3.2	2.6	1.9	0.2	0.3	0.2
1942: April	......	......	......	......	......	......	......	......	......	......	......	......	7.6	12.5	3.1	.2	8.5	.7
October	......	......	......	......	......	......	......	......	......	......	......	......	12.2	9.0	5.7	.3	.6	2.4
1943: April	4.2	4.5	3.0	0.5	0.2	0.8	5.8	7.6	5.6	0.6	0.3	1.1	10.6	6.2	4.8	.3	.2	.9
October	4.6	4.5	3.2	.3	.3	.7	5.8	5.2	4.1	.4	.1	.6	6.7	7.0	5.5	.6	.2	.7
1944: April	3.2	4.3	3.2	.2	.2	.7	3.1	4.4	3.2	.5	.2	.5	6.3	6.3	4.3	.6	.6	.8
October	2.7	3.8	3.0	.2	.2	.4	4.2	4.1	3.3	.4	.2	.2	8.7	7.0	5.3	1.0	.4	.3
1945: April	3.2	3.7	2.9	.3	.1	.4	3.3	4.1	3.2	.5	.1	.3	5.2	6.5	5.9	.3	.1	.2
October	6.9	5.1	4.5	.2	.3	.1	7.2	5.8	4.4	.4	.7	.3	15.0	8.8	7.3	.5	.8	.2
1946: April	4.2	2.9	2.1	.2	.3	.3	6.2	4.0	3.1	.3	.5	.1	11.1	6.9	6.0	.3	.5	.1
October	5.8	3.8	3.0	.5	.1	.2	5.1	4.4	4.0	.3	(3)	.1	6.7	7.6	5.9	.3	1.2	.2
1947: April	3.7	3.3	2.6	.3	.3	.1	2.4	4.2	2.8	.3	1.0	.1	5.4	4.9	3.5	.4	1.0	(3)
October	2.5	3.0	2.0	.4	.3	.3	2.3	2.7	1.4	.2	1.0	.1	6.4	7.9	3.8	.6	3.4	.1
	Nonferrous-metal foundries, except aluminum and magnesium						Lumber and timber basic products						Sawmills					
1940: April	......	......	......	......	......	......	......	......	......	......	......	......	5.7	4.1	1.1	0.2	2.7	0.1
October	......	......	......	......	......	......	......	......	......	......	......	......	5.2	4.7	1.7	.2	2.5	.3
1941: April	......	......	......	......	......	......	......	......	......	......	......	......	7.2	4.2	2.4	.3	1.2	.3
October	......	......	......	......	......	......	......	......	......	......	......	......	5.1	6.9	3.8	.3	2.4	.4
1942: April	......	......	......	......	......	......	......	......	......	......	......	......	10.5	10.5	7.5	.5	1.4	1.1
October	......	......	......	......	......	......	......	......	......	......	......	......	8.1	10.2	6.3	.5	1.3	2.1
1943: April	7.7	7.5	5.5	0.9	0.2	0.9	8.8	8.9	6.7	0.4	1.1	0.7	[2]8.8	[2]8.3	[2]6.2	[2].4	[2]1.1	[2].6
October	7.1	7.0	5.2	.8	.4	.6	6.9	7.6	6.0	.3	.7	.6	6.8	7.3	5.9	.2	.6	.6
1944: April	6.1	7.7	6.0	.7	.3	.7	7.6	9.3	7.3	.4	.8	.8	7.8	8.5	6.9	.3	.5	.8
October	6.1	7.9	5.6	.7	1.4	.2	8.5	9.2	8.0	.4	.5	.3	8.4	8.9	7.8	.4	.4	.3
1945: April	4.3	5.9	4.3	.7	.6	.3	8.3	9.4	7.6	.4	.9	.5	8.1	9.1	7.5	.3	.8	.5
October	10.8	9.4	6.3	.9	1.6	.6	10.4	9.9	8.2	.3	1.2	.2	9.8	9.2	7.9	.4	.7	.2
1946: April	7.9	6.9	4.4	.5	1.6	.4	10.5	8.6	7.4	.4	.7	.1	9.7	8.1	7.0	.3	.7	.1
October	7.0	5.9	4.9	.5	.3	.2	10.5	9.0	8.0	.5	.4	.1	10.7	8.9	8.0	.4	.4	.1
1947: April	5.0	6.8	4.4	.9	1.3	.2	9.1	7.7	6.5	.5	.6	.1	8.8	7.0	6.0	.3	.6	.1
October	6.0	6.0	3.9	.6	1.3	.2	7.1	6.8	5.5	.4	.8	.1	6.6	6.5	5.2	.4	.8	.1
	Planing and plywood mills						Furniture and finished lumber products						Furniture, including mattresses and bedsprings					
1940: April	3.7	2.8	0.7	0.2	1.8	0.1	......	......	......	......	......	......	3.4	3.4	0.8	0.2	2.3	0.1
October	7.7	4.2	1.8	.3	1.9	.2	......	......	......	......	......	......	5.4	4.0	1.4	.3	2.0	.3
1941: April	5.1	5.8	2.7	.3	2.3	.5	......	......	......	......	......	......	6.2	4.5	2.9	.3	.8	.5
October	5.3	5.9	3.5	.5	1.5	.4	......	......	......	......	......	......	6.1	5.7	3.4	.5	1.4	.4
1942: April	9.8	11.7	7.3	.7	2.6	1.1	......	......	......	......	......	......	7.2	11.3	6.4	.4	3.6	.9
October	12.2	12.9	7.5	.7	2.6	2.1	......	......	......	......	......	......	11.8	13.1	7.2	.7	3.1	2.1
1943: April	8.5	9.7	7.5	.4	.8	1.0	9.9	11.5	9.4	0.7	0.5	0.9	10.1	12.3	9.9	.8	.6	1.0
October	6.2	7.1	5.0	.6	1.1	.4	10.7	10.5	7.8	.7	1.4	.6	10.2	11.3	8.2	.8	1.7	.6
1944: April	5.5	8.7	6.3	.7	1.2	.5	8.6	9.9	7.9	.7	.5	.8	8.6	10.4	8.5	.8	.3	.8
October	6.6	7.7	6.4	.5	.4	.4	8.8	9.4	8.0	.6	.6	.2	9.5	9.4	8.1	.6	.5	.2
1945: April	6.1	7.4	6.1	.5	.3	.5	7.5	8.6	7.4	.6	.3	.3	7.5	8.4	7.3	.6	.2	.3
October	9.5	9.2	6.2	.3	2.5	.2	12.3	9.2	7.6	.6	.8	.2	12.7	9.0	7.8	.7	.4	.1
1946: April	8.4	6.4	5.3	.6	.3	.2	8.9	8.7	7.3	.7	.5	.2	9.2	8.9	7.5	.7	.5	.2
October	7.2	6.6	5.3	.5	.6	.2	9.5	8.6	7.2	.7	.6	.1	9.7	8.6	7.1	.8	.6	.1
1947: April	6.2	5.6	4.7	.5	.3	.1	6.8	8.3	6.0	.8	1.4	.1	6.9	8.4	6.1	.8	1.4	.1
October	5.6	4.7	3.9	.4	.3	.1	8.9	7.6	6.1	.8	.6	.1	8.9	7.6	6.2	.9	.4	.1

See footnotes at end of table.

TABLE B–2: Monthly labor turn-over rates (per 100 employees) in selected groups and industries, 1940–47[1]—Continued

MANUFACTURING—Continued

Period	Accession	Separation					Accession	Separation					Accession	Separation				
		Total	Quit	Discharge	Lay-off	Misc. including military-		Total	Quit	Discharge	Lay-off	Misc. including military		Total	Quit	Discharge	Lay-off	Misc. including military
	Stone, clay, and glass products						Glass and glass products						Cement					
1940: April	......	......	......	......	......	......	2.6	2.2	0.3	0.1	1.7	0.1	9.2	1.5	0.2	0.1	1.0	0.2
October	......	......	......	......	......	......	6.6	2.2	.7	.1	1.1	.3	1.6	2.5	.6	.1	1.6	.2
1941: April	......	......	......	......	......	......	4.7	2.7	1.2	.2	.9	.4	8.4	1.8	.8	.1	.4	.5
October	......	......	......	......	......	......	6.0	4.0	1.6	.3	1.5	.6	2.0	2.4	.9	.1	1.1	.3
1942: April	......	......	......	......	......	......	4.8	5.7	2.8	.2	1.7	1.0	6.2	3.5	2.4	.2	.2	.7
October	......	......	......	......	......	......	9.3	8.9	4.7	.3	2.1	1.8	5.2	6.4	4.2	.3	.2	1.7
1943: April	6.9	7.1	5.4	0.3	0.5	0.9	7.7	7.0	5.0	.4	.6	1.0	5.8	5.1	3.8	.2	.4	.7
October	5.8	6.0	4.5	.3	.5	.7	7.1	6.3	4.5	.4	.6	.8	2.6	4.9	3.1	.3	1.1	.4
1944: April	5.3	6.0	4.1	.4	.6	.9	5.7	6.1	3.8	.7	.4	1.2	6.3	6.4	2.8	.2	2.8	.6
October	4.8	5.1	3.8	.3	.7	.3	5.7	5.7	3.6	.4	1.3	.4	3.0	3.4	2.4	.2	.6	.2
1945: April	4.3	5.3	4.1	.4	.3	.5	4.5	5.9	4.1	.6	.6	.6	4.1	4.3	3.4	.3	.2	.4
October	8.8	6.4	4.9	.5	.7	.3	8.1	5.6	4.1	.6	.5	.4	9.5	5.8	4.9	.4	.3	.2
1946: April	6.8	5.6	4.2	.4	.8	.2	5.8	5.9	3.6	.4	1.6	.3	9.3	5.9	4.8	.5	.3	.3
October	6.0	5.3	4.2	.4	.5	.2	5.8	5.2	3.6	.5	.8	.3	5.6	5.3	4.5	.5	.2	.1
1947: April	4.4	4.5	3.2	.4	.8	.1	4.3	4.8	2.9	.5	1.2	.2	4.6	4.1	3.5	.4	.1	.1
October	5.1	5.2	3.2	.5	1.3	.2	5.9	6.1	2.7	.5	2.6	.3	3.7	4.3	3.3	.5	.2	.3
	Brick, tile, and terra cotta						Pottery and related products						Textile-mill products					
1940: April	7.9	5.5	0.6	0.1	4.7	0.1	......	......	......	......	......	......	......	......	......	......	......	......
October	6.0	4.7	1.3	.3	2.9	.2	......	......	......	......	......	......	......	......	......	......	......	......
1941: April	12.2	3.9	2.2	.4	.9	.4	......	......	......	......	......	......	......	......	......	......	......	......
October	3.2	4.2	2.0	.3	1.7	.2	......	......	......	......	......	......	......	......	......	......	......	......
1942: April	7.8	6.0	4.1	.3	1.1	.5	......	......	......	......	......	......	......	......	......	......	......	......
October	7.3	9.2	5.8	.5	1.4	1.5	......	......	......	......	......	......	......	......	......	......	......	......
1943: April	7.1	8.5	6.7	.4	.4	1.0	6.2	7.6	6.2	.3	0.4	0.7	7.6	8.3	7.0	0.3	0.3	0.7
October	6.1	7.3	5.7	.3	.5	.8	6.6	5.8	4.8	.3	.2	.5	6.7	6.7	5.5	.4	.3	.5
1944: April	5.5	7.6	5.9	.3	.5	.9	5.7	6.7	5.7	.3	.1	.6	5.3	7.0	5.7	.4	.3	.6
October	5.7	5.4	4.5	.3	.4	.2	4.8	5.9	5.1	.2	.3	.3	5.7	5.9	5.0	.4	.3	.2
1945: April	4.9	6.1	4.6	.4	.5	.6	4.7	5.8	5.2	.2	.1	.3	5.0	6.5	5.5	.4	.3	.3
October	13.4	9.1	8.1	.4	.3	.3	9.9	7.4	6.2	.5	.4	.3	8.1	6.7	5.7	.4	.4	.2
1946: April	9.0	6.5	5.8	.3	.2	.2	6.4	5.2	4.6	.3	.1	.2	6.5	6.1	5.2	.4	.3	.2
October	7.4	7.2	6.2	.4	.5	.1	6.3	4.8	4.1	.3	.3	.1	6.5	5.5	4.8	.4	.2	.1
1947: April	5.9	4.7	3.6	.5	.5	.1	4.8	4.2	3.1	.3	.8	(3)	4.9	5.5	4.0	.4	1.0	.1
October	6.5	5.7	4.3	.9	.3	.2	4.2	4.3	3.7	.3	.3	(3)	5.9	4.8	3.8	.4	.5	.1
	Cotton						Silk and rayon goods						Woolen and worsted, except dyeing and finishing					
1940: April	3.0	5.4	1.4	0.2	3.7	0.1	3.6	6.0	0.9	0.1	4.9	0.1	4.4	9.5	0.6	0.1	8.7	0.1
October	7.0	3.6	2.2	.2	.9	.3	5.3	6.4	2.0	.1	4.2	.1	7.6	3.8	2.4	.2	1.1	.1
1941: April	6.2	4.6	3.4	.3	.6	.3	6.0	6.4	3.5	.9	1.8	.2	6.6	4.7	3.1	.3	1.0	.3
October	5.4	4.9	3.5	.3	.8	.3	4.6	5.6	3.2	.2	1.9	.3	4.5	4.0	2.6	.3	.9	.2
1942: April	8.0	7.6	5.8	.4	.8	.6	7.7	7.8	5.3	.4	1.1	1.0	8.0	6.7	4.9	.2	.7	.9
October	8.6	9.1	6.6	.4	.5	1.6	7.4	8.3	6.1	.3	.8	1.1	6.0	7.8	4.4	.2	1.4	1.8
1943: April	8.6	9.3	7.9	.3	.3	.8	8.5	9.5	8.3	.2	.3	.7	5.7	5.9	4.5	.2	.6	.6
October	7.3	7.4	6.1	.5	.3	.5	7.2	8.0	6.3	.7	.4	.6	4.7	4.9	3.8	.2	.5	.4
1944: April	6.2	7.9	6.6	.4	.3	.6	5.4	7.1	5.9	.4	.3	.5	3.1	4.4	3.5	.2	.3	.4
October	6.8	6.8	5.9	.4	.3	.2	6.4	6.1	5.3	.5	.1	.2	3.6	3.9	3.1	.2	.4	.2
1945: April	6.0	7.6	6.7	.4	.2	.3	5.2	6.5	5.3	.5	.4	.3	3.2	4.1	2.9	.2	.7	.3
October	8.8	7.5	6.7	.4	.2	.2	9.0	7.6	6.3	.5	.6	.2	6.9	5.4	4.4	.3	.5	.2
1946: April	7.4	7.2	6.4	.4	.2	.2	7.0	6.5	5.5	.4	.4	.2	5.0	5.0	4.0	.4	.4	.2
October	7.6	6.5	5.8	.4	.1	.2	6.0	5.2	4.5	.3	.3	.1	5.0	4.8	3.8	.4	.4	.2
1947: April	5.8	6.3	5.1	.4	.7	.1	3.9	5.1	3.1	.3	1.6	.1	3.8	4.5	2.7	.4	1.3	.1
October	6.6	5.5	4.5	.4	.5	.1	5.4	4.1	3.1	.2	.7	.1	4.9	4.7	2.8	.4	1.3	.2
	Hosiery, full-fashioned						Hosiery, seamless						Knitted underwear					
1940: April	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
October	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
1941: April	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
October	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
1942: April	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
October	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
1943: April	4.2	5.6	4.8	0.2	0.2	0.4	7.7	7.8	6.7	0.4	0.3	0.4	7.0	8.1	7.3	0.3	0.1	0.4
October	4.6	5.0	4.4	.2	.1	.3	6.5	6.6	5.5	.3	.4	.4	7.5	7.6	6.6	.3	.5	.2
1944: April	3.9	5.8	4.6	.1	.3	.8	4.7	6.9	5.6	.2	.6	.5	3.8	5.9	4.8	.2	.6	.3
October	3.2	3.9	3.6	.1	.1	.1	5.3	5.5	5.0	.2	.2	.1	4.3	4.8	4.4	.2	.1	.1
1945: April	2.7	4.2	3.6	.2	.2	.2	4.8	6.3	5.8	.2	.1	.2	4.1	5.4	4.3	.2	.8	.1
October	6.2	4.0	3.2	.3	.4	.1	8.0	6.4	5.5	.2	.6	.1	7.7	6.4	5.6	.4	.3	.1
1946: April	4.4	3.7	3.3	.2	.1	.1	6.4	5.9	5.3	.3	.2	.1	5.6	5.8	5.2	.3	.2	.1
October	4.3	3.7	3.2	.3	.1	.1	6.8	5.4	5.2	.2	(3)	(3)	6.1	5.6	5.1	.3	.1	.1
1947: April	2.3	4.2	2.4	.3	1.4	.1	5.0	7.1	4.8	.2	1.8	.3	5.0	5.7	3.9	.4	1.4	(3)
October	4.3	3.2	2.8	.2	.2	(3)	6.2	4.4	3.9	.2	.2	.1	7.3	4.4	4 0	.4	(3)	(3)

See footnotes at end of table.

TABLE B–2: Monthly labor turn-over rates (per 100 employees) in selected groups and industries, 1940–47[1]—Continued

MANUFACTURING—Continued

Period	Accession	Separation					Accession	Separation					Accession	Separation				
		Total	Quit	Discharge	Lay-off	Misc. including military		Total	Quit	Discharge	Lay-off	Misc. including military		Total	Quit	Discharge	Lay-off	Misc. including military
	Dyeing and finishing textiles, including woolen and worsted						Apparel and other finished textile products						Men's and boy's suits, coats, and overcoats					
1940: April	2.1	3.9	0.8	0.1	2.9	0.1	......	......	......	......	......	......	......	......	......	......	......	......
October	5.6	2.8	1.6	.2	.7	.3	......	......	......	......	......	......	......	......	......	......	......	......
1941: April	4.8	4.3	2.7	.3	1.0	.3	......	......	......	......	......	......	......	......	......	......	......	......
October	5.0	4.7	3.0	.3	1.1	.3	......	......	......	......	......	......	......	......	......	......	......	......
1942: April	8.0	8.4	5.4	.7	1.4	.9	......	......	......	......	......	......	......	......	......	......	......	......
October	10.9	10.5	6.6	1.1	.7	2.1	......	......	......	......	......	......	......	......	......	......	......	......
1943: April	8.2	8.5	6.3	.8	.4	1.0	6.4	8.0	6.5	0.2	1.0	0.3	4.0	7.1	4.1	0.2	2.5	0.3
October	5.3	6.0	4.2	.5	.7	.6	6.6	6.7	5.8	.2	.5	.2	4.4	5.0	4.0	.1	.7	.2
1944: April	3.4	5.4	3.8	.6	.5	.5	5.2	6.3	5.3	.2	.6	.2	4.2	4.6	3.9	.2	.4	.1
October	3.8	4.1	2.8	.5	.5	.3	5.5	5.4	4.9	.2	.2	.1	4.1	4.0	3.5	.1	.3	.1
1945: April	3.1	4.1	3.1	.4	.2	.4	4.3	5.4	4.7	.2	.4	.1	3.1	4.1	3.8	.1	.1	.1
October	5.9	4.7	3.6	.3	.6	.2	8.6	7.7	6.3	.3	1.1	(3)	5.5	5.6	4.7	.1	.7	.1
1946: April	5.1	3.9	2.8	.5	.3	.3	6.2	5.8	5.0	.2	.5	.1	5.6	4.3	3.9	.2	.1	.1
October	5.0	3.8	2.6	.6	.4	.2	7.1	5.8	5.3	.2	.3	(3)	5.0	3.7	3.4	.2	.1	(3)
1947: April	3.5	3.7	1.8	.5	1.3	.1	5.5	5.7	4.5	.3	.9	(3)	4.6	3.9	3.5	.2	.2	(3)
October	4.7	3.2	2.2	.6	.3	.1	6.4	5.4	4.6	.3	.5	(3)	4.9	3.9	3.4	.2	.3	(3)
	Men's and boy's furnishings, work clothing, and allied garments						Leather and leather products						Leather					
1940: April	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
October	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
1941: April	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
October	......	......	......	......	......	......	......	......	......	......	......	......	3.4	2.8	1.4	0.2	1.0	0.2
1942: April	......	......	......	......	......	......	......	......	......	......	......	......	3.8	4.5	2.5	.2	1.1	.7
October	......	......	......	......	......	......	......	......	......	......	......	......	6.6	6.5	4.3	.2	.5	1.5
1943: April	7.0	7.6	6.9	0.3	0.1	0.3	5.6	8.2	6.5	0.3	0.6	0.8	3.8	6.9	5.4	.3	.6	.6
October	6.7	7.2	6.5	.3	.2	.2	5.3	6.8	5.4	.3	.5	.6	3.5	5.0	3.8	.2	.5	.5
1944: April	5.0	6.5	5.5	.2	.6	.2	5.9	6.4	5.2	.4	.3	.5	4.3	5.2	3.8	.3	.6	.5
October	5.5	5.6	5.2	.2	.1	.1	5.7	5.9	5.2	.3	.2	.2	4.2	4.6	3.8	.2	.3	.3
1945: April	4.4	5.3	4.8	.2	.2	.1	5.0	5.6	5.0	.2	.2	.2	3.8	4.2	3.7	.2	(3)	.3
October	9.5	8.7	6.8	.4	1.5	(3)	7.8	6.5	5.3	.4	.6	.2	6.4	5.2	3.9	.2	.9	.2
1946: April	6.1	5.9	5.3	.1	.5	(3)	5.8	5.4	4.7	.2	.4	.1	4.5	4.9	3.4	.2	1.1	.2
October	7.2	6.5	5.9	.2	.4	(3)	5.0	5.4	4.6	.2	.5	.1	3.9	4.6	3.5	.2	.8	.1
1947: April	5.6	5.9	4.7	.3	.9	(3)	4.6	4.8	3.7	.3	.7	.1	3.3	3.4	2.4	.3	.6	.1
October	6.5	5.6	4.9	.2	.5	(3)	5.0	4.7	4.1	.2	.4	(3)	3.4	3.2	2.5	.3	.4	(3)
	Boots and shoes						Food and kindred products						Meat products					
1940: April	1.5	4.2	0.7	0.1	3.3	0.1	......	......	......	......	......	......	6.5	7.6	0.5	0.2	6.7	0.2
October	2.5	3.8	.9	.1	2.6	.2	......	......	......	......	......	......	9.7	5.5	.8	.2	4.3	.2
1941: April	3.1	3.7	1.7	.1	1.5	.4	......	......	......	......	......	......	9.1	9.0	1.4	.2	6.9	.5
October	3.7	3.6	1.8	.2	1.4	.2	......	......	......	......	......	......	10.4	9.1	1.9	.3	6.3	.6
1942: April	4.7	5.0	3.1	.3	1.0	.6	......	......	......	......	......	......	12.8	9.5	3.2	.3	4.6	1.4
October	8.0	7.7	5.7	.2	.5	1.3	......	......	......	......	......	......	13.4	15.5	8.7	.7	3.2	2.9
1943: April	[2]5.9	[2]8.4	[2]6.7	[2].3	[2].6	[2].8	8.9	13.2	9.1	0.6	2.4	1.1	7.6	13.2	9.3	.6	2.0	1.3
October	5.6	7.0	5.7	.3	.4	.6	12.5	11.2	9.0	.7	.7	.8	10.5	10.1	7.5	.8	.8	1.0
1944: April	6.2	6.6	5.4	.4	.3	.5	8.5	10.0	8.1	.5	.6	.8	8.4	10.4	8.4	.5	.6	.9
October	6.0	6.2	5.5	.3	.2	.2	9.1	9.0	7.9	.5	.3	.3	8.1	8.8	7.6	.4	.5	.3
1945: April	5.2	5.8	5.2	.2	.2	.2	6.8	8.7	7.3	.5	.5	.4	4.7	8.1	6.7	.5	.5	.4
October	8.1	6.7	5.6	.4	.5	.2	10.8	10.5	8.2	.7	1.3	.3	11.5	11.0	8.4	.8	1.4	.4
1946: April	6.0	5.4	4.9	.2	.2	.1	6.2	8.8	4.5	.5	3.5	.3	6.9	9.9	4.1	.5	5.0	.3
October	5.3	5.5	4.8	.2	.4	.1	9.4	7.9	5.5	.4	1.8	.2	35.4	7.4	3.2	.3	3.5	.4
1947: April	4.8	5.0	3.9	.3	.7	.1	6.3	5.9	4.3	.5	1.0	.1	7.2	6.8	3.6	.6	2.4	.2
October	5.3	5.0	4.4	.2	.4	(3)	8.4	6.8	4.5	.7	1.5	.1	8.4	7.2	4.1	.8	2.1	.2
	Grain-mill products						Tobacco manufactures						Paper and allied products					
1940: April	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
October	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
1941: April	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
October	4.0	4.7	2.9	0.5	1.0	0.3	......	......	......	......	......	......	......	......	......	......	......	......
1942: April	6.1	6.3	4.4	.4	1.0	.5	......	......	......	......	......	......	......	......	......	......	......	......
October	12.5	10.7	7.2	.8	.6	2.1	......	......	......	......	......	......	......	......	......	......	......	......
1943: April	9.1	9.8	7.9	.5	.6	.8	6.3	7.5	6.6	0.2	0.2	0.5	8.1	8.1	6.4	0.4	0.5	0.8
October	12.7	11.3	9.2	.9	.4	.8	8.1	7.7	6.9	.4	.1	.3	7.5	7.3	5.9	.4	.3	.7
1944: April	6.8	9.2	7.2	.6	.5	.9	5.7	7.8	6.6	.3	.5	.4	6.2	7.0	5.6	.4	.4	.6
October	9.6	9.4	8.4	.7	.1	.2	8.4	7.5	6.9	.3	.1	.2	6.7	6.4	5.5	.4	.2	.3
1945: April	9.8	10.2	9.2	.5	(3)	.5	7.2	8.1	7.4	.4	.2	.1	5.8	6.4	5.5	.4	.1	.4
October	12.9	11.7	9.5	1.1	.8	.3	9.3	8.2	6.2	.5	1.4	.1	10.4	8.3	6.8	.8	.4	.3
1946: April	5.0	8.9	5.7	.8	2.3	.1	6.1	6.8	5.7	.2	.6	.3	7.1	6.2	5.1	.5	.4	.2
October	7.3	8.0	6.2	.4	1.2	.2	7.8	5.6	4.7	.5	.2	.2	6.7	5.8	4.9	.5	.2	.2
1947: April	3.1	5.0	3.6	.4	.9	.1	4.6	5.8	3.4	.3	2.0	.1	4.4	4.5	3.3	.6	.4	.2
October	5.8	5.5	3.5	.6	1.3	.1	6.9	4.9	4.2	.4	.3	(3)	4.2	4.0	3.0	.4	.4	.2

See footnotes at end of table.

TABLE B–2: Monthly labor turn-over rates (per 100 employees) in selected groups and industries, 1940–47[1]—Continued

MANUFACTURING—Continued

Period	Accession	Separation					Accession	Separation					Accession	Separation				
		Total	Quit	Discharge	Lay-off	Misc. including military-		Total	Quit	Discharge	Lay-off	Misc. including military		Total	Quit	Discharge	Lay-off	Misc. including military
	Paper and pulp						Paper boxes						Chemicals and allied products					
1940: April	1.9	1.3	0.4	0.1	0.6	0.2	......	......	......	......	......	......	......	......	......	......	......	......
October	2.4	2.6	.8	.2	1.2	.4	......	......	......	......	......	......	......	......	......	......	......	......
1941: April	4.3	2.3	1.2	.2	.5	.4	8.0	4.1	2.2	0.6	0.9	0.4	......	......	......	......	......	......
October	3.7	3.4	1.7	.3	1.1	.3	6.8	4.8	3.0	.3	1.2	.3	......	......	......	......	......	......
1942: April	5.6	5.8	3.6	.4	.9	.9	5.4	6.4	4.1	.3	1.3	.7	......	......	......	......	......	......
October	8.3	9.1	5.9	.4	.7	2.1	10.8	9.4	6.8	.5	.6	1.5	......	......	......	......	......	......
1943: April	6.8	7.0	5.6	.3	.3	.8	10.6	10.5	7.9	.5	1.3	.8	7.3	5.7	3.8	0.5	0.5	0.9
October	6.1	6.4	5.0	.4	.3	.7	10.6	9.5	8.1	.6	.2	.6	5.4	6.4	4.3	.6	.8	.7
1944: April	5.7	6.5	5.1	.3	.4	.7	7.9	8.4	6.9	.5	.4	.6	4.6	6.2	3.6	.4	1.5	.7
October	6.2	6.1	5.1	.4	.2	.4	8.8	8.1	7.0	.6	.2	.3	5.5	5.0	3.9	.6	.2	.3
1945: April	5.3	6.3	5.2	.4	.2	.5	7.0	7.3	6.4	.4	.1	.4	5.2	5.5	4.3	.6	.2	.4
October	9.5	7.5	6.0	.8	.4	.3	12.9	10.2	9.0	.8	.2	.2	6.3	7.4	3.8	.5	2.9	.2
1946: April	6.4	5.3	4.4	.4	.3	.2	9.0	8.3	6.9	.5	.6	.3	4.2	3.7	2.4	.3	.8	.2
October	5.4	5.1	4.1	.5	.3	.2	10.2	8.2	7.2	.7	.1	.2	4.1	3.3	2.4	.3	.4	.2
1947: April	3.9	3.7	2.7	.5	.3	.2	5.6	6.7	4.8	.9	.8	.2	2.6	2.8	1.7	.3	.7	.1
October	3.6	3.4	2.7	.3	.3	.1	5.6	5.5	4.4	.5	.5	.1	2.7	2.5	1.6	.3	.5	.1
	Paints, varnishes, and colors						Rayon and allied products						Industrial chemicals, except explosives					
1940: April	2.0	1.7	0.5	0.1	1.0	0.1	4.0	3.1	2.4	0.2	0.5	(3)	2.6	1.9	1.1	0.1	0.7	(3)
October	2.9	2.3	1.0	.2	1.0	.1	2.6	2.2	1.1	.2	.7	0.2	3.4	2.2	1.3	.1	.7	0.1
1941: April	6.7	3.2	2.0	.4	.4	.4	4.0	1.8	1.0	.1	.2	.5	5.2	2.9	1.7	.3	.4	.5
October	2.7	3.7	1.8	.3	1.2	.4	2.5	2.9	.9	.2	1.4	.4	4.0	2.9	1.4	.4	.7	.4
1942: April	3.7	7.6	3.4	.3	1.9	2.0	3.4	2.9	1.2	.2	.8	.7	5.7	5.1	3.1	.4	.7	.9
October	8.1	9.5	6.5	.5	.4	2.1	4.6	4.2	2.0	.2	.3	1.7	7.5	6.9	4.0	.4	.6	1.9
1943: April	6.5	7.3	5.4	.6	.2	1.1	4.8	5.8	3.7	.4	.6	1.1	4.8	4.5	3.0	.4	.1	1.0
October	6.4	5.8	3.7	1.2	.3	.6	4.7	4.4	3.2	.4	.3	.5	4.6	4.7	3.3	.4	.3	.7
1944: April	4.0	4.7	3.5	.5	.2	.5	4.3	4.3	2.9	.2	.6	.6	4.2	4.4	3.1	.4	.2	.7
October	3.7	4.0	3.2	.3	.3	.2	4.4	4.3	3.5	.3	.2	.3	4.1	4.4	3.3	.6	.2	.3
1945: April	2.3	3.0	2.3	.3	(3)	.4	3.9	4.9	3.6	.3	.4	.6	3.6	4.0	3.0	.5	.2	.3
October	8.9	4.8	3.7	.7	.2	.2	7.3	5.2	4.4	.4	.2	.2	6.6	5.4	3.7	.6	.9	.2
1945: April	4.3	4.0	2.7	.3	.9	.1	3.2	3.7	2.6	.4	.5	.2	4.4	3.1	2.2	.3	.4	.2
October	3.0	3.3	2.4	.4	.4	.1	2.5	2.7	1.9	.2	.4	.2	5.1	3.2	2.5	.3	.2	.2
1947: April	3.1	2.7	1.8	.6	.3	(3)	1.7	1.8	1.2	.2	.2	.2	2.8	3.3	1.8	.3	1.1	.1
October	2.5	2.5	1.6	.3	.6	(3)	1.8	1.6	1.1	.2	.2	.1	2.9	2.8	1.8	.3	.6	.1
	Products of petroleum and coal						Petroleum refining						Rubber products					
1940: April	......	......	......	......	......	......	2.2	1.2	0.2	0.1	0.7	0.2	......	......	......	......	......	......
October	......	......	......	......	......	......	1.7	2.1	.4	.1	1.4	.2	......	......	......	......	......	......
1941: April	......	......	......	......	......	......	2.6	1.5	.4	.1	.7	.3	......	......	......	......	......	......
October	......	......	......	......	......	......	1.9	2.0	.5	(3)	1.1	.4	......	......	......	......	......	......
1942: April	......	......	......	......	......	......	2.7	2.1	.8	.1	.5	.7	......	......	......	......	......	......
October	......	......	......	......	......	......	3.5	4.7	2.0	.2	.4	2.1	......	......	......	......	......	......
1943: April	3.6	3.1	2.0	0.2	0.2	0.7	3.4	2.9	1.9	.2	.2	.6	6.1	6.5	5.2	0.3	0.1	0.9
October	3.7	3.4	2.2	.3	.3	.6	3.5	3.0	2.0	.2	.2	.6	7.7	6.7	5.5	.4	.1	.7
1944: April	3.8	3.1	2.3	.2	.1	.5	3.8	3.0	2.2	.2	.1	.5	5.0	6.1	5.1	.3	.2	.5
October	3.2	3.2	2.5	.3	.2	.2	3.1	3.1	2.4	.3	.2	.2	5.7	6.1	5.1	.5	.2	.3
1945: April	2.9	3.2	2.0	.3	.5	.4	2.9	3.1	1.9	.3	.5	.4	4.3	5.6	4.7	.4	.2	.3
October	5.7	3.5	2.4	.3	.6	.2	5.7	3.5	2.4	.3	.6	.2	10.0	7.2	5.8	.5	.6	.3
1946: April	3.1	1.9	1.1	.1	.5	.2	2.9	1.8	1.0	.1	.5	.2	5.4	4.7	3.8	.3	.4	.2
October	2.0	1.8	1.2	.1	.3	.2	1.8	1.7	1.1	.1	.3	.2	6.2	5.1	4.4	.3	.2	.2
1947: April	2.1	1.1	.7	.1	.2	.1	2.1	1.0	.6	.1	.2	.1	3.1	4.1	2.8	.3	.9	.1
October	1.3	1.5	.8	.2	.4	.1	1.2	1.2	.7	.1	.3	.1	4.4	4.1	3.1	.3	.5	.2
	Rubber tires and inner tubes						Rubber footwear and related products						Miscellaneous rubber industries					
1940: April	1.7	2.4	0.3	0.1	1.9	0.1	2.5	3.2	0.6	0.1	2.2	0.3	......	......	......	......	......	......
October	3.6	1.8	.6	.1	.9	.2	5.2	2.4	1.3	.1	.5	.5	......	......	......	......	......	......
1941: April	3.7	2.6	1.2	.1	1.0	.3	7.7	4.0	2.5	.3	.6	.6	......	......	......	......	......	......
October	2.2	3.3	1.5	.1	1.2	.5	6.9	3.3	2.5	.2	.1	.5	......	......	......	......	......	......
1942: April	5.7	5.1	1.7	.1	2.5	.8	6.2	5.8	3.7	.2	.9	1.0	......	......	......	......	......	......
October	11.1	6.6	4.4	.2	.1	1.9	12.5	10.4	8.6	.3	(3)	1.5	......	......	......	......	......	......
1943: April	5.7	4.0	2.9	.2	.1	.8	[2]7.8	[2]8.2	[2]7.1	[2].3	(2)(3)	[2].8	5.9	7.1	5.8	0.3	0.1	0.9
October	7.3	5.2	4.3	.1	.1	.7	6.9	7.2	6.2	.3	(3)	.7	8.0	7.4	6.0	.6	.2	.6
1944: April	3.9	4.8	3.9	.3	(3)	.6	6.0	6.8	6.1	.3	(3)	.4	6.0	7.7	6.3	.5	.4	.5
October	5.6	6.1	5.3	.4	.1	.3	6.7	6.5	5.7	.5	.1	.2	5.4	5.8	4.8	.5	.2	.3
1945: April	4.0	5.4	4.6	.4	.1	.3	4.7	6.2	5.6	.2	.1	.3	4.8	5.9	4.7	.5	.4	.3
October	10.3	7.2	5.9	.4	.6	.3	9.2	7.9	7.1	.4	.2	.2	9.7	6.9	5.2	.6	.8	.3
1946: April	4.0	3.6	3.1	.2	.1	.2	7.2	6.5	5.4	.2	.7	.2	7.3	6.1	4.5	.4	.9	.3
October	4.6	3.7	3.2	.2	.1	.2	7.0	6.7	6.1	.2	.3	.1	8.7	7.0	5.9	.6	.4	.1
1947: April	1.9	2.6	1.9	.2	.4	.1	4.4	6.4	4.5	.3	1.6	(3)	4.7	6.3	3.9	.6	1.6	.2
October	2.8	3.1	2.1	.2	.6	.2	6.3	5.3	4.8	.2	.2	.1	6.6	5.3	4.1	.6	.5	.1

See footnotes at end of table.

TABLE B–2: Monthly labor turn-over rates (per 100 employees) in selected groups and industries, 1940–47[1]—Continued

MANUFACTURING—Continued

Period	Accession	Separation					Accession	Separation					Accession	Separation				
		Total	Quit	Discharge	Lay-off	Misc. including military		Total	Quit	Discharge	Lay-off	Misc. including military		Total	Quit	Discharge	Lay-off	Misc. including military
	Miscellaneous industries																	
1940: April	......	......	......	......	......	......												
October	......	......	......	......	......	......												
1941: April	......	......	......	......	......	......												
October	......	......	......	......	......	......												
1942: April	......	......	......	......	......	......												
October	......	......	......	......	......	......												
1943: April	5.8	4.3	2.8	0.4	0.1	1.0												
October	4.3	4.8	3.5	.5	.2	.6												
1944: April	3.6	5.2	3.5	.5	.5	.7												
October	4.3	5.1	3.8	.5	.5	.3												
1945: April	2.9	4.2	2.9	.6	.3	.4												
October	6.8	6.5	3.7	.4	2.2	.2												
1946: April	5.7	5.2	3.2	.3	1.5	.2												
October	5.7	5.2	4.0	.5	.5	.2												
1947: April	3.7	4.3	2.5	.3	1.4	.1												
October	4.2	4.0	2.9	.3	.7	.1												
NONMANUFACTURING																		
	Metal mining						Iron-ore						Copper-ore					
1940: April	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
October	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
1941: April	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
October	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
1942: April	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
October	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
1943: April	6.3	7.2	5.6	0.6	0.2	0.8	7.2	3.4	2.2	0.1	0.1	1.0	6.1	7.8	6.2	0.5	0.2	0.9
October	4.8	7.1	4.6	.6	1.3	.6	2.5	4.6	2.6	.4	.9	.7	5.4	6.2	5.2	.5	.1	.4
1944: April	4.7	7.1	4.6	.4	.5	1.6	4.2	4.3	2.7	.2	.5	.9	4.0	7.6	5.5	.3	.3	1.5
October	3.6	6.0	4.4	.4	.6	.6	1.7	4.5	2.7	.3	1.0	.5	4.7	6.7	5.2	.4	.3	.8
1945: April	4.8	4.6	3.8	.3	.2	.3	4.0	2.5	1.8	.1	.3	.3	5.4	5.2	4.3	.3	.2	.4
October	6.7	6.3	4.9	.4	.7	.3	3.3	3.7	2.2	.1	1.0	.4	8.0	7.7	6.5	.7	.2	.3
1946: April	8.2	6.3	5.5	.4	.2	.2	7.3	2.0	1.4	.1	.1	.4	8.6	8.2	7.1	.7	.3	.1
October	6.4	5.4	4.4	.4	.4	.2	3.1	2.8	1.8	.1	.6	.3	9.1	6.8	6.0	.5	.2	.1
1947: April	6.7	5.9	5.0	.4	.3	.2	6.4	2.8	2.3	.1	.1	.3	7.1	8.0	7.1	.6	.2	.1
October	6.0	5.4	4.4	.4	.4	.2	4.0	3.3	2.2	.2	.6	.3	6.7	6.9	6.4	.3	.1	.1
	Lead and zinc-ore						Anthracite mining						Bituminous-coal mining					
1940: April	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
October	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
1941: April	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
October	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
1942: April	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
October	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
1943: April	5.3	6.1	4.9	0.5	0.1	0.6	3.1	3.5	2.5	0.1	0.2	0.7	4.3	6.2	5.2	0.1	0.2	0.7
October	5.2	5.8	4.2	.6	.5	.5	1.7	2.4	1.5	.1	.5	.3	2.9	3.6	2.8	.2	.1	.5
1944: April	4.2	8.7	5.7	.3	.1	2.6	1.2	2.0	1.6	(3)	.1	.3	2.5	3.8	2.8	.2	.2	.6
October	4.8	6.6	5.7	.5	(3)	.4	1.1	1.6	1.3	(3)	.1	.2	3.4	3.9	3.4	.2	.1	.2
1945: April	4.7	6.3	5.4	.4	.1	.4	.9	1.6	1.2	(3)	.2	.2	2.6	3.3	2.8	.2	.1	.2
October	8.8	6.8	6.0	.3	.2	.3	2.7	1.9	1.4	.1	.3	.1	5.0	4.5	4.0	.2	.1	.2
1946: April	6.9	6.9	6.2	.4	.1	.2	1.8	2.3	1.4	(3)	.8	.1	(4)	(4)	(4)	(4)	(4)	(4)
October	6.9	5.6	5.0	.4	.1	.1	2.2	2.0	1.4	.1	.4	.1	3.7	3.9	3.3	.2	.2	.2
1947: April	5.5	6.1	5.1	.5	.4	.1	1.5	2.5	1.5	.1	.7	.2	3.0	3.6	3.0	.2	.3	.1
October	7.2	5.5	4.2	.6	.7	(3)	1.9	2.3	1.4	(3)	.8	.1	4.3	3.2	2.8	.2	.1	.1
	Telephone						Telegraph											
1940: April	......	......	......	......	......	......	......	......	......	......	......	......						
October	......	......	......	......	......	......	......	......	......	......	......	......						
1941: April	......	......	......	......	......	......	......	......	......	......	......	......						
October	......	......	......	......	......	......	......	......	......	......	......	......						
1942: April	......	......	......	......	......	......	......	......	......	......	......	......						
October	......	......	......	......	......	......	......	......	......	......	......	......						
1943: April	......	......	......	......	......	......	......	......	......	......	......	......						
October	3.3	3.6	3.1	0.1	0.2	0.2	......	......	......	......	......	......						
1944: April	2.8	3.0	2.6	.1	.1	.2	3.4	3.5	3.1	0.1	0.1	0.2						
October	3.1	3.3	2.9	.1	.1	.2	3.5	3.5	3.2	.1	.1	.1						
1945: April	3.3	2.9	2.6	.1	.1	.1	2.6	3.4	3.1	.1	.1	.1						
October	6.2	3.7	3.3	.2	.1	.1	6.1	4.4	4.1	.1	.1	.1						
1946: April	5.9	2.9	2.5	.2	.1	.1	(4)	(4)	(4)	(4)	(4)	(4)						
October	4.1	2.9	2.6	.1	.1	.1	3.3	4.1	3.2	.1	.7	.1						
1947: April	(4)	(4)	(4)	(4)	(4)	(4)	2.2	3.0	2.4	.1	.4	.1						
October	3.2	2.1	1.8	.1	.1	.1	2.1	2.5	1.8	.1	.6	(3)						

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[1] Turn-over rates for certain seasonal industries such as canning and preserving are not included. From April 1943, the printing and publishing industries have been excluded. Beginning in January 1943, labor turn-over data cover all employees; for previous periods they refer to factory workers only. From January 1943, also, manufacturing firms reporting labor turn-over have been assigned to industry groups on the basis of products currently made.

[2] Data for previous years are not strictly comparable.

[3] Less than 0.05.

[4] Not available.

[5] Industry group rates based on incomplete returns.

Section C: Earnings, Hours, and Wage Rates

A substantial part of the work of the Bureau of Labor Statistics has been devoted to the collection and analysis of wage and related hours data. The chief comprehensive and continuous measures of the changes in earnings and hours of production and related workers in both manufacturing and nonmanufacturing industries are those showing gross average weekly earnings, average weekly hours, and average hourly earnings. The gross hourly earnings series for manufacturing industries adjusted for overtime payments for hours in excess of 40 per week has been used as the basis for adjusted hourly earnings, in recent years, to meet growing needs for such information. Another series shows the distribution of workers in manufacturing industries by their straight-time hourly earnings. Data on the trend of average weekly earnings also are the basis for the calculation of average spendable earnings.

In the collection of wage-rate data, as distinguished from earnings, the Bureau of Labor Statistics has long been active. During World War II, the preparation of semiannual series was undertaken which show general indexes of urban wage rates in manufacturing and in selected nonmanufacturing industries. The wage-rate index was calculated to meet the need for a measure which is unaffected by changes in the length of the workweek, in the amount of premiums for overtime and night work, and by various kinds of changes in the geographic and industrial location and skill of workers—all of which enter into statistical series on earnings that are computed from reports on employment, man-hours, and total pay rolls. Union scales of wages and hours in highly organized trades have been collected annually for several decades and provide national and city data on an occupational basis.

Straight-time hourly earnings of railroad workers that are presented are those published by the Interstate Commerce Commission and the wage rates shown for hired farm labor are compiled by the United States Department of Agriculture.

Earnings and Hours in Manufacturing and Nonmanufacturing

Average Earnings and Hours

Averages of weekly earnings, weekly hours, and hourly earnings of workers are published monthly by the Bureau of Labor Statistics for manufacturing and selected nonmanufacturing industries. The figures for manufacturing, mining, and laundries relate to production workers only. Data for the other industries are for all employees unless otherwise noted. In the construction industry, however, the average hours and earnings figures cover all types of site employees of the reporting contractors, such as foremen, time clerks, skilled workers, helpers, apprentices, and common laborers. The averages apply to employees engaged in privately financed construction at the site only.

Production and related workers include working foremen and all nonsupervisory workers (including lead men and trainees) engaged in fabricating, processing, assembling, inspection, receiving, storage, handling, packing, warehousing, shipping, maintenance, repair, janitorial, watchman services, product development, auxiliary production for plant's own use (that is, power plant), and record-keeping and other services closely associated with the production operations listed. Excluded are supervisory employees (above the working foreman level) and their clerical staffs, routemen, salesmen, and other groups of employees mentioned on page 14.

The nonsupervisory employee classification is not intended to cover persons in high-salaried positions, and therefore omits proprietors and firm members, officers of corporations, and other principal executives. The group includes all other employees, both full- and part-time, who worked or received pay for any part of the period reported. Included are employees on paid vacation during the pay period covered but excluded are members of the armed forces, pensioners, and others carried on rolls in a pay or nonpay status but not working during the period. Slight variations exist between industries, depending upon the type of operations.

The durable- and nondurable-goods groups are best defined by reference to the major groups which make up the totals (see table A-3).

The types of payments included in the reports on pay rolls are wages and salaries before deductions (for social security, taxes, etc.). Commissions are included in the wholesale and retail trade, insurance, and brokerage reports. Wages paid for sick leave, holidays, and vacations during the pay period covered by the report are included, and sick, holiday, and vacation hours paid for are included in the man-hour figures. Cash payments in lieu of vacations not taken are excluded, as are bonuses (unless paid regularly each pay period) and payments made as a result of retroactive wage adjustments. No allowance is made for payments in kind.

Approximately 31,000 establishments employing more than 7 million workers are included in the sample for manufacturing. For the nonmanufacturing industries, the samples vary. In retail trade—one of the more important industries—reports cover 25,000 establishments with 650,000 employees. The establishment coverage is somewhat less than that used in the estimates of employment (see page 2).

By questionnaire, reporting firms are asked to supply employment, pay-roll, and man-hour data for the pay period ending nearest the 15th of the month. This pay period was selected to eliminate from the pay period reported, insofar as possible, the influence of such factors as national holidays.

The Bureau of Labor Statistics requests information on the total number of employees in the reporting establishment and, in addition, on the number of production or nonsupervisory workers and their total wages and aggregate hours. These data relate to a week or pay period; if a period other than a week is reported, pay rolls and man-hours are converted to a weekly basis. Tabulations are then made by industry, and the averages of hours and earnings for individual industries are computed directly, as follows: Pay rolls divided by employment yield average weekly earnings; pay rolls divided by man-hours yield average hourly earnings; man-hours divided by employment yield average hours per week. The average resultant weekly hours figure is affected by absenteeism, turn-over, and similar factors, as the employment figure includes all persons working at any time during the pay period. The average hours do not refer to scheduled hours of work.

The weekly earnings are not necessarily the product of the average hours per week and the gross average hourly earnings because some plants do not report man-hour data.

In the average weekly earnings series, a measure is provided of the money-wage income of those workers covered. The average hourly earnings series indicates changes in employers' labor costs per man-hour. In industries in which piece work is common, the averages are affected by changes in production per man-hour as well as by changes in rates. Overtime payments are reflected in the averages for all industries.

For the 20 major manufacturing groups, for the durable- and nondurable-goods divisions, and for all manufacturing industries combined, weighted averages are obtained as follows: In computing the weighted group average of hours worked per week, the average for each of 133 individual industries is weighted by the estimated number of production workers in that industry; in deriving the hourly earnings, the earnings for each industry are weighted by estimates of the total number of hours worked in that industry for the week covered. The weekly earnings average for each group is obtained by multiplying the weighted average of weekly hours by the weighted average of hourly earnings. Consequently, shifts in employment and changes in hours of employment influence the averages for the groups and for all manufacturing.

Average weekly earnings, average weekly hours, and average hourly earnings are shown in table C-1 for manufacturing industries as a group, for the durable- and nondurable-goods groups, and for individual manufacturing industries. The data for nonmanufacturing industries are given for individual groups only. The time coverage of the different series is 1932–47, with a footnote statement added which gives the all manufacturing averages for selected periods from 1909 through 1931.

For construction, the table presents average hours and earnings data only for total privately financed, on-site building construction for the years 1934 through 1939. Additional data became available in 1940, making it possible to provide separate averages for certain special trades contractors. Nonbuilding construction (highways, bridges, tunnels, dams, etc.) is included beginning with February 1946.

The averages for class I steam-railroad employees are derived from Interstate Commerce Commission data. Coverage is for employees classified on an hourly basis (excluding most of the executive, professional, and supervisory employees). The derivation of the data on employment and pay rolls is described on page 23.

The Interstate Commerce Commission publishes a number of series of man-hours and of compensation, and it reports the number of employees at the middle of the month and the number receiving pay during the month. The computations of average hours and earnings presented in table C–1 are derived from total pay rolls, total man-hours paid for, and the number of employees who receive pay during the month. Since railroad transportation is carried on continuously throughout the year, the total man-hours are reduced to a weekly basis by dividing the annual or monthly totals of man-hours by 365, 366, 30, 31, 28, or 29 and multiplying by 7. Average weekly earnings are computed by multiplying average hourly earnings by average weekly hours, conforming to the computation of averages for major industry groups in other series, as described above.

TABLE C–1: Average earnings and hours in manufacturing and nonmanufacturing industries, 1932–47[1]

MANUFACTURING

Period	TOTAL									Iron and steel and their products								
	All manufacturing[2]			Durable goods			Nondurable goods			Total: Iron and steel and their products			Blast furnaces, steel works, and rolling mills			Gray-iron and semi-steel castings		
	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings
			Cents			Cents			Cents			Cents			Cents			Cents
1932	$17.05	38.3	44.6	$16.21	32.6	49.7	$17.57	41.9	42.0	......	......	......	......	......	......	......	......	......
1933	16.73	38.1	44.2	16.43	34.8	47.2	16.89	40.0	42.7	......	......	......	......	......	......	......	......	......
1934	18.40	34.6	53.2	18.87	33.9	55.6	18.05	35.1	51.5	......	......	......	......	......	......	......	......	......
1935	20.13	36.6	55.0	21.52	37.3	57.7	19.11	36.1	53.0	......	......	......	......	......	......	......	......	......
1936	21.78	39.2	55.6	24.04	41.0	58.6	19.94	37.7	52.9	......	......	......	......	......	......	......	......	......
1937	24.05	38.6	62.4	26.91	40.0	67.4	21.53	37.4	57.7	......	......	......	......	......	......	......	......	......
1938	22.30	35.6	62.7	24.01	35.0	68.6	21.05	36.1	58.4	......	......	......	......	......	......	......	......	......
1939	23.86	37.7	[3]63.3	26.50	38.0	[3]69.8	21.78	37.4	[3]58.2	$27.52	37.2	73.9	$29.88	35.3	84.5	$25.93	37.1	69.9
1940	25.20	38.1	66.1	28.44	39.3	72.4	22.27	37.0	60.2	29.11	38.6	75.5	31.49	37.0	85.1	27.91	39.2	71.2
1941	29.58	40.6	[3]72.9	34.04	42.1	[3]80.8	24.92	38.9	[3]64.0	34.66	41.6	83.3	37.18	39.0	95.3	33.99	43.3	78.5
1942	36.65	42.9	[3]85.3	42.73	45.1	[3]94.7	29.13	40.3	[3]72.3	40.96	43.6	93.9	41.67	40.2	103.0	40.26	44.8	88.9
1943	43.14	44.9	96.1	49.30	46.6	105.9	34.12	42.5	80.3	47.76	46.2	103.3	49.77	44.3	112.4	47.39	47.3	100.3
1944	46.08	45.2	101.9	52.07	46.6	111.7	37.12	43.1	86.1	50.63	46.8	108.2	54.02	46.3	116.7	51.34	47.7	107.7
1945	44.39	43.4	102.3	49.05	44.1	111.1	38.29	42.3	90.4	49.10	44.6	110.0	52.44	44.1	118.8	50.86	46.2	110.1
1946	43.74	40.4	108.4	46.49	40.2	115.6	41.02	40.5	101.2	47.36	39.6	119.5	48.25	37.4	129.1	50.70	42.5	119.4
1947	49.25	40.3	122.1	52.45	40.6	129.2	45.87	40.1	114.5	54.09	40.3	134.3	55.95	38.9	143.9	55.58	41.9	132.8
1945: January	47.50	45.4	104.6	53.54	46.8	114.4	38.66	43.4	89.1	51.65	46.9	110.1	55.04	46.2	119.1	52.71	47.9	111.0
February	47.37	45.4	104.3	53.30	46.8	113.9	38.69	43.4	89.2	51.56	46.9	109.8	54.58	46.3	118.1	53.16	48.1	110.6
March	47.40	45.4	104.4	53.22	46.7	113.9	38.96	43.5	89.6	52.09	47.1	110.7	56.10	47.0	119.5	54.00	48.4	111.6
April	47.12	45.1	104.4	52.90	46.5	113.8	38.80	43.2	89.9	52.08	46.9	110.9	56.32	47.0	119.9	53.18	48.0	110.8
May	46.02	44.1	104.2	51.56	45.5	113.4	38.18	42.3	90.3	51.14	46.0	111.2	56.24	46.6	120.8	51.93	46.7	111.2
June	46.32	44.6	103.8	51.74	45.8	113.0	38.95	43.1	90.4	51.14	46.0	111.2	55.39	45.6	121.4	52.38	47.6	110.0
July	45.45	44.0	103.3	50.66	44.9	112.7	38.59	42.8	90.2	50.41	45.2	111.4	54.89	45.1	121.8	51.22	46.5	110.2
August	41.72	40.7	102.4	45.72	41.1	111.3	36.63	40.3	90.9	46.31	41.7	110.9	50.74	42.2	120.4	47.17	42.8	110.2
September	40.87	41.4	98.7	43.95	41.0	107.2	37.80	41.8	90.3	45.48	41.8	108.9	47.51	40.4	117.1	48.45	44.7	108.4
October	40.97	41.6	98.5	44.23	41.6	106.3	37.76	41.5	90.9	45.40	42.1	107.8	46.22	40.4	114.3	48.59	44.8	108.5
November	40.77	41.2	99.0	43.71	41.1	106.4	37.89	41.3	91.8	45.51	42.1	108.2	46.81	40.8	114.6	47.15	43.3	108.2
December	41.21	41.5	99.4	44.08	41.4	106.6	38.52	41.5	92.7	46.38	42.5	109.1	47.33	41.0	115.5	49.20	45.1	109.1
1946: January	41.15	41.0	100.4	43.67	40.8	107.0	38.75	41.2	94.1	44.95	41.1	109.5	44.93	38.5	116.9	49.37	45.0	109.7
February	40.58	40.5	100.2	42.57	40.0	106.4	39.01	40.9	95.3	42.45	39.1	108.4	36.75	30.4	(4)	47.70	43.4	110.0
March	42.15	40.7	103.5	44.79	40.6	110.3	39.83	40.9	97.5	46.80	40.0	116.9	48.93	37.9	129.0	49.51	43.8	112.3
April	42.88	40.5	105.8	45.71	40.4	113.1	40.13	40.6	98.8	47.28	39.9	118.6	48.57	37.5	129.4	50.15	43.2	115.7
May	42.51	39.7	107.1	45.10	39.3	114.7	39.93	40.1	99.6	45.74	38.4	119.0	46.16	35.8	129.0	48.68	41.4	117.8
June	43.31	40.0	108.4	46.32	39.8	116.5	40.28	40.2	100.3	46.74	38.8	120.6	46.98	36.0	130.3	50.01	41.8	119.8
July	43.38	39.7	109.3	46.24	39.3	117.7	40.46	40.1	100.9	46.80	38.5	121.6	47.85	36.4	131.4	48.53	40.4	120.3
August	44.99	40.5	111.2	48.02	40.5	118.6	41.89	40.4	103.6	48.78	39.9	122.2	49.84	38.2	130.5	50.90	41.8	121.8
September	45.39	40.3	112.6	48.36	40.3	120.1	42.34	40.3	105.0	49.29	39.7	124.1	50.28	38.0	132.5	52.58	42.3	124.3
October	45.73	40.5	113.0	48.90	40.7	120.2	42.45	40.2	105.6	49.86	40.3	123.9	50.39	38.7	130.3	53.36	42.8	124.8
November	45.79	40.2	113.9	48.62	40.2	121.0	42.87	40.3	106.5	49.91	40.0	124.7	50.82	38.8	131.0	52.78	41.8	126.3
December	46.96	40.9	114.8	49.57	40.8	121.6	44.24	41.1	107.7	49.67	39.8	124.8	48.59	37.0	131.4	53.98	42.6	126.6
1947: January	47.10	40.6	116.1	49.60	40.5	122.4	44.47	40.7	109.4	50.64	40.2	126.1	50.89	38.2	133.2	54.43	42.7	127.5
February	47.29	40.4	117.0	49.74	40.5	122.9	44.67	40.4	110.7	50.33	40.0	125.8	50.67	38.5	131.7	54.04	42.1	128.3
March	47.69	40.4	118.0	50.30	40.7	123.6	44.89	40.1	111.9	51.31	40.4	126.9	51.77	38.9	133.3	54.49	42.3	129.0
April	47.50	40.1	118.6	50.34	40.5	124.3	44.40	39.6	112.2	51.78	40.4	128.0	52.83	39.2	134.7	54.57	42.0	130.0
May	48.44	40.1	120.7	51.72	40.5	127.8	44.88	39.7	113.0	53.71	40.3	133.3	56.26	38.9	144.5	56.34	42.6	132.2
June	49.33	40.2	122.6	52.99	40.7	130.3	45.31	39.8	114.0	55.18	40.5	136.3	58.12	39.5	147.2	56.79	42.3	134.5
July	48.98	39.8	123.0	52.19	40.0	130.5	45.61	39.7	115.0	53.67	39.3	136.5	55.23	37.4	147.8	55.64	41.6	134.1
August	49.17	39.8	123.6	52.46	40.0	131.2	45.78	39.5	115.8	54.53	39.6	137.6	58.25	39.2	148.8	53.77	40.3	133.5
September	50.47	40.4	124.9	54.06	40.6	133.1	46.80	40.2	116.5	56.21	40.3	139.6	58.96	39.0	151.3	56.86	41.7	137.1
October	51.05	40.6	125.8	54.69	40.9	133.7	47.29	40.2	117.5	56.61	40.5	139.7	58.56	39.0	150.2	56.66	41.9	136.5
November	51.29	40.4	126.8	54.86	40.7	134.6	47.56	40.1	118.5	56.93	40.5	140.4	59.52	39.4	151.0	55.51	40.9	135.9
December	52.69	41.2	127.8	56.48	41.7	135.4	48.72	40.8	119.6	58.13	41.2	141.2	60.01	39.5	151.9	58.16	42.5	136.8

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[1] These figures are based on reports from cooperating establishments covering both full- and part-time employees who worked or received pay during any part of one pay period ending nearest the 15th of the month. For manufacturing, mining (including crude petroleum production), power laundries, and cleaning and dyeing industries, the data relate to production and related workers only. For the remaining industries the data relate to all employees except high paid executives and officials. Exceptions are noted.

[2] For earlier years the averages are as follows:

Year	Average weekly earnings	Average weekly hours	Average hourly earnings (Cents)
1909	$ 9.84	51.0	19.3
1914	11.01	49.4	22.3
1919	22.08	46.3	47.7
1923	23.82	45.6	52.2
1924	23.93	43.7	54.7
1925	24.37	44.5	54.7
1926	24.65	45.0	54.8
1927	24.74	45.0	55.0
1928	24.97	44.4	56.2

Year	Average weekly earnings	Average weekly hours	Average hourly earnings (Cents)
1929	$25.03	44.2	56.6
1930	23.25	42.1	55.2
1931	20.87	40.5	51.5

[3] Average hourly earnings (in cents) for certain key dates are as follows:

	August 1939	January 1941	October 1942
All manufacturing	62.4	68.3	89.3
Durable goods	68.8	74.9	99.0
Nondurable goods	57.6	61.0	75.1

[4] To prevent misinterpretation of the average of 121.7 cents for those workers who were employed in February 1946, it is not inserted in the table. The increase from 116 9 to 121.7 cents per hour does not measure the increase awarded when the steel strike was settled. Maintenance workers were kept on during the strike, while low-paid production workers were on strike. Since hours and weekly earnings are normally used only to interpret what has happened to those people who were employed, these figures are shown but should be used with caution.

TABLE C–1: Average earnings and hours in manufacturing and nonmanufacturing industries, 1932–47[1]—Continued

MANUFACTURING—Continued

Period	Iron and steel and their products—Continued																	
	Malleable-iron castings			Steel castings			Cast-iron pipe and fittings			Tin cans and other tinware			Wirework			Cutlery and edge tools		
	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings
			Cents			Cents			Cents			Cents			Cents			Cents
1932	......	......	......	......	......	......	$14.21	32.5	44.4	$19.89	......	......	......	......	......	$18.67	......	......
1933	......	......	......	......	......	......	13.33	29.7	45.3	18.95	......	......	......	......	......	17.53	......	......
1934	......	......	......	......	......	......	14.57	29.7	48.9	19.31	36.5	52.7	$19.71	......	......	18.66	35.8	51.9
1935	......	......	......	......	......	......	15.40	31.0	49.0	19.75	38.3	51.3	20.97	37.6	55.6	20.30	37.8	53.5
1936	......	......	......	......	......	......	18.99	38.2	49.3	20.69	39.3	52.5	22.36	40.4	55.4	21.53	41.0	52.6
1937	......	......	......	......	......	......	21.17	37.8	55.5	22.65	39.2	57.9	24.39	37.6	64.9	23.81	41.2	59.0
1938	......	......	......	......	......	......	19.15	32.8	57.7	22.68	37.7	60.5	22.89	34.1	67.3	21.36	35.7	61.3
1939	$24.16	36.0	67.1	$27.97	36.9	75.9	21.33	36.4	58.1	23.61	38.8	61.1	25.96	38.1	68.3	23.11	39.1	60.1
1940	25.43	37.5	67.8	29.66	38.6	76.8	22.51	37.2	60.1	24.46	39.0	63.0	27.74	39.5	70.3	24.19	39.5	62.2
1941	31.57	41.7	75.7	37.00	43.7	84.4	27.71	41.3	66.8	27.46	42.3	66.9	30.92	41.6	74.5	29.76	43.2	69.8
1942	37.15	42.5	87 4	43.77	45.8	95.5	33.13	43.1	77.1	30.53	41.0	74.9	39.01	45.1	86.5	36.33	45.6	80.2
1943	46.14	46.5	99.4	48.79	46.4	105.2	36.96	43.8	84.4	37.27	44.5	83.7	47.27	47.8	99.0	41.89	46.7	89.6
1944	50.98	47.9	106.4	51.59	46.2	111.6	40.65	46.3	87.7	39.53	44.7	88.5	50.31	47.8	105.3	43.89	46.4	94.6
1945	49.83	45.4	109.9	49.98	43.9	113.8	41.57	45.7	90.9	40.71	44.5	91.5	48.82	45.9	106.4	43.50	45.0	96.7
1946	49.51	40.9	121.1	48.45	38.8	124.8	42.49	41.4	102.6	42.86	40.8	105.5	47.77	41.4	115.5	45.06	43.4	103.6
1947	54.87	40.5	135.3	55.12	40.2	137.2	49.35	42.0	117.3	49.44	41.2	120.3	52.27	40.8	128.1	48.20	41.9	114.9
1945: January	52.76	48.8	108.2	53.25	46.6	114.7	43.13	46.9	92.0	41.67	45.5	91.6	52.07	48.4	107.7	45.69	46.6	97.5
February	52.79	[5]47.7	[5]110.5	52.96	46.5	113.8	43.79	47.6	91.9	41.87	45.8	91.5	51.41	47.7	107.9	45.37	46.6	97.4
March	52.51	47.4	110.7	53.84	46.9	114.7	42.62	46.4	91.7	41.73	45.6	91.5	51.90	48.1	108.1	44.97	46.1	97.5
April	52.37	47.5	110.7	53.81	46.8	114.9	42.19	47.0	89.7	41.24	45.1	91.3	50.78	47.2	107.7	44.69	45.9	97.7
May	51.02	46.1	110.9	51.49	44.7	115.1	41.59	46.3	89.8	39.05	43.0	90.9	48.83	45.7	106.8	43.18	44.5	97.4
June	51.47	47.1	109.2	50.97	44.3	115.2	43.47	47.5	91.5	41.07	45.2	91.0	49.03	46.1	106.4	44.12	45.4	97.2
July	49.01	45.3	108.2	48.69	43.0	113.2	42.25	46.9	90.1	41.74	46.1	90.8	49.64	46.6	106.7	44.35	45.6	97.4
August	42.51	38.7	109.8	45.34	39.9	113.4	37.74	41.9	90.0	38.96	43.1	90.3	44.79	42.7	104.9	39.77	41.3	96.2
September	46.68	43.1	108.2	43.88	39.0	112.3	39.64	43.8	90.4	40.31	44.1	91.7	45.43	43.8	103.6	41.57	43.9	94.6
October	48.24	44.2	109.1	45.89	41.4	110.9	41.23	45.6	90.5	39.25	42.6	92.5	46.33	44.3	104.4	41.48	44.4	93.5
November	46.54	42.4	109.9	46.11	41.3	111.6	40.67	44.5	91.3	40.02	43.3	92.4	47.26	44.9	105.2	41.94	44.1	95.3
December	50.62	45.4	111.4	47.57	42.1	113.1	40.12	43.9	92.6	41.22	44.5	93.1	46.31	44.1	105.1	43.24	44.5	97.1
1946: January	48.27	43.9	110.1	42.09	37.6	111.9	41.69	44.5	93.6	41.38	44.4	93.7	46.52	44.1	105.5	43.42	44.5	97.4
February	47.17	42.9	109.8	47.15	41.6	113.9	40.93	43.0	95.2	38.84	41.0	94.7	44.00	41.5	106.0	43.84	44.2	99.1
March	47.24	41.8	113.8	46.12	38.7	119.2	40.85	41.7	97.7	40.29	39.9	101.6	45.61	42.1	108.4	44.83	44.7	99.8
April	48.20	41.6	115.7	49.36	39.6	124.7	38.90	39.4	98.5	41.92	40.4	104.3	47.27	41.9	112.9	[6]43.21	[6]43.7	[6]98.8
May	45.18	37.7	119.9	48.18	38.7	124.4	39.76	39.8	99.8	39.25	37.6	104.6	44.55	39.2	113.8	44.79	43.8	102.2
June	48.36	39.9	121.1	48.29	38.4	125.8	41.11	39.7	103.6	42.43	40.2	105.4	47.20	41.2	114.4	45.03	43.4	103.7
July	49.60	40.6	122.2	46.35	36.7	126.3	41.55	40.1	103.5	43.47	40.9	106.7	49.61	41.9	118.3	43.74	42.3	103.2
August	51.28	40.7	126.0	49.32	38.9	126.9	42.30	40.8	103.6	45.97	42.6	108.6	49.36	41.5	118.8	44.98	43.1	104.3
September	51.50	40.7	126.6	49.28	38.3	128.6	43.67	40.7	107.1	46.22	41.9	111.1	49.89	41.3	120.7	45.83	43.0	106.5
October	52.27	40.9	127.7	50.27	38.9	129.3	45.23	42.3	106.8	44.68	40.8	110.0	48.87	40.9	119.6	46.49	43.0	108.0
November	51.74	40.4	128.2	51.87	39.9	129.8	45.92	43.0	106.7	42.68	39.1	109.7	48.94	40.6	120.5	46.41	42.7	108.6
December	51.35	40.3	127.5	51.72	39.8	130.0	46.17	41.8	110.3	44.79	40.8	110.4	49.28	41.0	120.2	47.50	43.3	109.5
1947: January	52.92	40.9	128.8	50.68	39.0	129.8	49.51	43.9	112.8	44.30	40.0	111.1	50.05	41.3	121.3	47.19	42.7	110.4
February	52.81	40.9	129.0	49.72	38.6	128.8	47.90	42.6	112.4	43.78	39.4	111.7	49.60	41.0	120.8	47.59	42.7	111.3
March	52.72	40.5	130.0	52.23	40.0	130.5	48.71	43.0	113.2	44.95	40.3	111.6	50.50	41.2	122.6	47.85	42.9	111.5
April	53.52	41.0	130.6	53.01	40.4	131.1	48.41	42.4	114.2	44.85	40.1	112.7	49.79	40.7	122.4	46.84	41.6	112.6
May	55.02	41.0	134.1	54.33	40.5	134.2	51.86	43.4	119.3	45.66	40.2	113.8	49.72	39.8	125.0	46.94	41.1	114.1
June	54.36	39.8	136.5	56.18	40.5	138.7	52.27	43.0	121.5	47.61	40.3	118.1	52.19	40.1	130.0	48.85	41.9	116.4
July	55.08	40.4	136.4	56.25	40.3	139.5	49.65	41.4	119.6	51.34	41.5	124.1	51.85	39.7	131.1	47.45	41.2	115.1
August	51.68	37.7	137.2	54.71	39.1	139.9	46.79	39.9	118.4	53.57	42.5	125.9	51.45	39.6	130.0	46.56	40.2	115.8
September	55.66	40.3	139.0	56.50	39.9	141.5	48.34	40.5	118.4	55.28	43.4	127.5	53.70	40.3	132.3	49.20	42.2	117.1
October	57.73	41.2	141.1	58.15	40.7	142.9	49.60	41.4	119.8	53.74	42.5	127.0	54.35	41.0	132.6	49.57	42.1	117.5
November	58.06	41.2	141.1	58.73	41.0	143.4	48.93	40.7	120.1	52.16	41.1	126.8	56.10	42.0	133.5	50.48	42.3	119.2
December	59.18	41.8	141.4	60.05	41.6	144.3	50.98	42.2	120.6	53.92	42.5	126.5	57.83	42.6	135.6	50.26	42.0	119.7

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[1] See footnote, p. 54.

[5] New series; comparable January data are 48.0 hours and 109.8 cents.

[6] New series; comparable March data are $44.25, 45.0 hours, and 98.3 cents.

TABLE C–1: Average earnings and hours in manufacturing and nonmanufacturing industries, 1932–47[1]—Continued

MANUFACTURING—Continued

Period	Iron and steel and their products—Continued																	
	Tools (except edge tools, machine tools, files, and saws)			Hardware			Plumbers' supplies			Stoves, oil burners, and heating equipment not elsewhere classified			Steam and hot-water heating apparatus and steam fittings			Stamped and enameled ware and galvanizing		
	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings
			Cents			Cents			Cents			Cents			Cents			Cents
1932	$16.12	......	......	......	......	......	$15.66	......	......	$17.34	......	......	$17.73	......	......	$16.85	......	......
1933	16.87	......	......	......	......	......	15.73	......	......	17.67	35.8	48.2	17.38	33.5	51.6	15.88	......	......
1934	19.31	......	......	......	......	......	16.65	30.6	54.1	18.94	35.1	54.0	19.92	34.6	57.6	18.56	35.2	52.7
1935	21.55	39.7	54.1	......	......	......	20.74	37.4	55.6	21.58	38.1	56.6	21.76	37.3	58.1	19.97	37.4	53.4
1936	23.43	43.5	53.8	......	......	......	22.23	39.0	57.0	24.12	41.7	58.2	24.25	41.2	58.7	22.44	40.0	55.8
1937	24.82	41.6	59.5	......	......	......	24.70	38.9	63.4	25.02	39.4	63.8	27.08	40.0	67.6	24.29	38.8	62.5
1938	22.03	35.7	61.5	......	......	......	22.28	33.4	66.6	23.67	36.0	66.3	23.15	33.1	69.9	22.65	35.9	62.9
1939	24.49	39.7	61.8	$23.13	38.9	59.3	25.80	38.2	67.6	25.25	38.1	66.6	26.19	37.6	69.7	23.92	38.1	62.7
1940	26.06	41.1	63.5	23.56	39.2	60.4	26.83	38.9	69.1	26.33	38.8	68.0	28.71	40.3	71.4	25.51	39.1	65.2
1941	33.14	46.2	71.9	28.20	43.1	66.1	29.93	40.1	74.5	29.41	40.5	72.8	34.82	43.9	79.6	28.91	40.9	70.8
1942	39.62	47.3	83.8	35.30	45.5	77.6	35.21	41.7	85.1	35.05	42.4	83.0	43.31	46.7	92.6	36.41	43.8	83.1
1943	44.47	48.1	92.7	42.66	47.8	89.2	44.10	46.9	94.0	43.10	46.4	93.0	46.60	47.9	97.4	43.47	45.5	95.5
1944	45.68	47.1	97.0	45.43	47.3	96.0	47.25	46.1	102.4	47.20	46.8	100.8	48.47	47.7	101.6	46.74	45.7	102.2
1945	45.37	45.8	99.1	44.93	45.7	98.4	46.65	44.5	104.8	46.23	44.6	103.7	47.73	45.5	104.8	45.47	44.1	103.2
1946	47.00	43.3	108.6	43.94	41.8	105.0	45.71	40.9	111.7	46.13	40.8	113.2	47.76	40.5	117.8	44.66	40.3	110.8
1947	51.17	42.4	120.8	49.20	41.5	118.6	52.04	40.5	128.4	51.65	40.6	127.3	53.03	40.6	130.6	50.31	40.2	125.2
1945: January	47.67	47.8	99.8	47.22	47.6	99.1	49.55	46.9	105.7	48.63	46.8	103.9	50.10	47.7	105.0	49.29	46.5	105.9
February	47.58	47.4	100.3	47.23	47.6	99.2	50.06	47.2	106.1	49.27	47.1	104.5	49.70	47.7	104.3	49.18	46.6	105.6
March	47.35	47.3	100.1	47.61	47.6	100.1	49.97	46.6	107.2	48.76	46.6	104.7	49.32	47.2	104.5	48.71	46.2	105.4
April	47.36	47.4	100.4	47.57	47.2	100.8	50.07	46.6	107.5	49.09	46.5	105.5	49.87	47.4	105.1	47.93	45.7	104.8
May	45.66	45.7	99.8	46.97	46.6	100.8	49.07	45.5	107.9	46.83	44.3	105.9	48.87	46.3	105.5	46.87	44.6	105.0
June	46.04	46.5	100.0	46.46	46.4	100.2	47.57	44.7	106.4	47.71	45.6	104.7	49.89	47.3	105.5	46.37	44.8	103.4
July	45.95	46.6	98.6	44.70	45.2	98.9	47.20	44.5	106.0	46.77	44.4	105.3	47.78	45.3	105.4	44.78	43.5	102.8
August	42.83	43.6	98.3	40.05	41.0	97.7	42.01	40.5	103.8	40.60	39.7	102.2	44.58	42.3	105.4	40.78	40.2	101.4
September	42.14	43.3	97.4	40.80	43.2	94.5	41.89	42.0	99.7	42.15	42.2	99.8	45.11	43.3	104.2	40.50	41.2	98.7
October	43.48	44.5	97.8	42.02	43.9	95.6	42.13	42.2	99.8	44.16	43.7	101.2	44.69	43.3	103.2	42.04	42.4	99.2
November	42.46	43.5	97.7	41.23	44.0	93.6	42.98	42.5	101.1	43.13	42.5	101.7	44.12	42.7	103.5	41.74	41.6	100.4
December	44.02	44.6	98.4	42.49	44.6	95.3	44.07	43.0	102.5	44.36	43.4	102.3	45.38	43.1	105.2	42.38	42.0	101.0
1946: January	44.87	45.0	99.8	42.61	44.1	96.6	43.85	42.5	103.2	43.97	42.7	103.1	42.47	39.9	106.5	42.03	41.8	100.5
February	45.57	44.8	101.8	40.95	42.6	96.1	43.57	42.2	103.1	41.81	40.8	102.6	46.40	42.4	109.5	41.78	40.9	102.2
March	46.14	45.0	102.6	42.04	43.0	97.7	44.38	42.2	105.2	44.01	41.2	107.0	46.77	42.1	111.1	42.90	40.6	105.0
April	45.06	43.5	103.1	42.54	42.0	101.3	44.80	42.0	106.6	44.87	41.1	109.3	47.37	40.8	116.0	43.81	40.9	107.1
May	45.57	43.1	105.7	42.51	41.6	102.1	44.34	40.7	108.9	43.93	39.8	110.6	47.12	40.4	116.6	43.53	40.0	108.8
June	46.31	43.0	107.7	42.79	40.8	105.1	44.24	39.9	110.8	45.56	40.3	113.1	46.35	39.5	117.4	44.19	39.8	111.0
July	46.16	42.5	108.7	43.75	41.2	106.6	43.98	39.0	112.8	44.68	39.6	112.9	46.28	39.5	117.2	43.15	38.7	111.4
August	46.91	42.4	110.6	44.88	41.7	106.9	46.00	40.2	113.8	47.16	40.6	116.1	47.81	40.3	118.6	45.53	40.5	112.5
September	47.59	42.5	112.1	45.11	41.2	109.5	45.63	39.4	115.7	47.36	40.2	117.8	49.72	40.8	121.9	45.49	39.6	115.0
October	49.01	42.9	114.1	46.24	41.9	110.5	48.64	41.4	117.4	48.89	41.0	119.2	51.45	41.1	125.2	46.83	40.7	115.0
November	49.03	42.4	115.8	45.65	41.3	110.6	48.06	40.7	118.3	48.64	40.6	119.9	50.83	40.6	125.3	46.10	39.7	116.1
December	50.02	43.3	115.6	46.42	41.7	111.3	49.68	41.4	120.2	49.61	41.3	120.1	48.78	39.9	122.2	48.30	41.1	117.6
1947: January	50.39	43.3	116.4	47.04	41.6	111.9	51.27	42.3	121.9	50.26	41.1	122.4	50.12	40.7	123.1	47.57	40.5	117.6
February	49.54	42.6	116.4	47.45	41.9	113.1	48.51	39.9	121.5	49.02	40.2	122.0	50.31	40.7	123.5	46.71	39.6	117.9
March	49.93	42.9	116.3	47.29	41.7	113.5	49.90	40.7	122.7	49.79	40.6	122.6	51.02	40.9	124.6	48.14	40.3	119.3
April	50.48	42.9	117.6	47.90	41.5	115.3	50.22	40.6	123.6	50.11	40.7	123.0	51.63	40.6	127.1	48.44	40.3	120.1
May	50.86	42.5	119.8	49.15	41.7	117.9	49.92	40.0	124.7	50.38	40.2	124.9	51.39	40.1	128.2	49.96	40.1	124.7
June	51.22	42.4	120.7	49.53	41.4	119.5	51.81	40.4	128.3	51.00	40.2	126.9	53.72	40.8	131.6	50.34	39.9	126.1
July	49.40	41.0	120.4	49.29	41.0	120.1	52.45	40.3	130.1	50.65	40.0	126.6	52.74	39.6	133.1	50.11	39.3	127.4
August	50.10	41.0	122.1	48.19	40.2	121.0	49.93	38.9	128.5	49.75	39.0	127.5	50.60	38.1	132.9	50.40	39.5	127.6
September	52.39	42.2	124.3	50.43	41.3	122.2	52.38	40.0	131.0	53.32	40.9	130.5	54.54	40.4	135.2	51.72	39.9	129.7
October	52.47	42.1	124.8	51.22	41.7	122.8	54.65	40.7	134.3	55.15	41.6	132.6	55.46	41.1	135.0	52.40	40.4	129.8
November	52.97	42.2	125.5	51.58	41.6	123.3	56.42	41.4	136.4	53.39	40.1	133.1	57.64	41.8	138.0	52.81	40.5	130.5
December	54.44	43.0	126.6	52.55	42.2	124.5	57.00	41.6	137.0	56.22	42.0	133.9	58.66	42.2	138.9	54.72	41.5	132.0

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[1] See footnote, p. 54.

TABLE C–1: Average earnings and hours in manufacturing and nonmanufacturing industries, 1932–47[1]—Continued

MANUFACTURING—Continued

Period	Iron and steel and their products—Continued																	
	Fabricated structural and ornamental metalwork			Metal doors, sash, frames, molding, and trim			Bolts, nuts, washers, and rivets			Forgings, iron and steel			Screw-machine products and wood screws			Steel barrels, kegs, and drums		
	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings
			Cents			Cents			Cents			Cents			Cents			Cents
1932	$18.42	32.2	54.3	......	......	......	$15.54	......	......	$16.06	......	......	......	......	......	......	......	......
1933	16.08	32.8	48.0	......	......	......	16.91	......	......	17.28	......	......	......	......	......	......	......	......
1934	19.27	33.3	57.9	......	......	......	17.82	32.8	54.1	20.46	......	......	......	......	......	......	......	......
1935	20.58	35.2	58.6	......	......	......	21.12	37.1	56.9	23.62	38.5	61.5	......	......	......	......	......	......
1936	24.32	41.7	58.4	......	......	......	24.08	41.9	57.5	26.11	41.7	62.7	......	......	......	......	......	......
1937	28.18	41.2	68.4	......	......	......	25.79	39.5	65.4	28.84	40.9	71.1	......	......	......	......	......	......
1938	25.98	36.0	72.3	......	......	......	21.42	30.5	70.2	23.97	32.3	74.4	......	......	......	......	......	......
1939	27.95	38.5	72.7	......	......	......	26.04	37.7	69.0	29.45	38.4	76.7	......	......	......	......	......	......
1940	28.83	39.2	73.6	......	......	......	27.50	39.5	69.6	32.56	41.2	79.1	......	......	......	......	......	......
1941	34.97	43.0	81.4	......	......	......	34.41	43.9	78.0	40.93	45.9	89.4	......	......	......	......	......	......
1942	42.80	46.2	92.6	......	......	......	40.33	44.9	88.8	49.93	47.9	104.7	......	......	......	......	......	......
1943	51.28	48.6	105.5	$48.03	48.9	98.2	46.54	47.6	97.8	56.88	48.2	118.0	$48.03	49.8	96.5	$41.14	43.3	95.0
1944	54.79	48.7	112.6	51.20	47.9	107.0	48.59	47.1	103.2	59.62	47.7	125.1	50.13	48.6	103.2	42.61	43.7	97.5
1945	50.37	45.5	110.7	50.24	45.6	110.2	48.51	45.9	105.7	56.79	45.0	126.2	49.65	46.7	106.2	42.10	42.1	100.0
1946	47.40	40.3	117.5	49.00	41.5	118.0	44.89	39.7	112.7	52.77	39.9	132.4	49.02	42.4	115.6	45.52	40.9	111.2
1947	54.21	41.7	130.0	54.58	42.1	129.7	52.95	41.1	128.5	61.48	41.1	149.6	53.55	42.2	126.9	52.57	40.7	129.3
1945: January	53.48	47.1	113.5	51.30	48.1	108.9	49.89	46.9	106.5	61.95	48.2	128.6	52.13	48.9	106.5	42.38	43.2	98.0
February	53.58	47.6	112.4	53.03	[7]48.1	110.4	50.49	47.7	105.9	62.73	48.7	128.9	52.38	49.2	106.4	43.36	43.7	99.0
March	52.29	46.5	112.5	53.29	48.2	110.7	52.21	48.5	107.3	61.62	48.0	128.5	52.44	49.0	106.9	41.90	41.9	99.9
April	53.64	47.4	113.2	52.58	47.3	111.1	51.13	48.1	106.8	61.71	48.1	128.4	51.73	48.4	106.8	46.10	45.5	101.4
May	53.29	47.2	112.7	50.25	45.3	111.0	50.77	47.7	106.6	58.40	45.9	127.3	50.00	47.0	106.3	41.57	41.8	99.9
June	52.79	47.6	110.9	52.79	46.2	114.2	50.96	47.6	107.2	59.07	46.5	127.1	50.87	47.6	106.9	48.01	46.9	103.0
July	50.23	45.8	109.7	51.77	45.9	112.7	47.42	44.8	106.0	56.77	45.0	126.1	49.66	46.7	106.2	43.74	42.9	102.4
August	47.26	43.3	109.1	45.80	42.9	106.7	47.88	44.8	106.5	47.62	38.5	123.5	46.10	43.8	105.2	39.81	38.6	103.1
September	43.34	41.0	105.1	45.47	42.3	107.5	40.17	39.3	101.9	47.48	39.7	119.5	45.04	42.8	105.2	36.23	36.7	98.0
October	44.94	42.5	105.0	46.51	43.0	108.1	45.62	44.4	102.5	51.71	42.4	121.9	46.57	43.9	105.6	38.47	39.5	96.9
November	44.00	41.8	104.6	46.90	42.9	108.5	46.12	44.3	104.0	50.24	41.4	121.4	46.86	43.8	106.4	39.94	40.5	98.3
December	44.26	41.6	106.3	48.19	43.9	109.7	46.24	44.3	104.2	52.75	42.2	125.0	47.52	44.2	106.8	39.14	40.1	97.4
1946: January	43.90	40.5	106.4	44.12	41.4	107.3	43.01	41.4	104.6	53.31	42.8	124.6	47.09	43.3	107.9	40.32	40.6	99.4
February	41.43	38.1	108.7	43.73	41.7	104.6	44.10	42.5	104.3	48.34	39.3	123.2	45.22	41.7	107.5	41.47	41.0	101.2
March	46.01	40.7	112.8	45.68	[8]41.8	[8]110.1	43.09	39.6	107.8	48.95	39.1	125.3	47.06	42.5	109.7	42.47	40.3	106.2
April	47.79	41.1	115.4	48.66	42.3	114.6	42.81	39.0	109.3	52.18	40.2	129.7	48.29	43.0	112.3	45.79	41.5	111.3
May	46.83	40.3	116.8	45.49	40.7	111.7	41.20	36.9	111.0	50.11	38.4	130.6	47.48	41.7	113.8	45.30	41.1	110.1
June	46.59	39.8	117.7	47.08	41.8	112.5	44.29	39.2	112.6	51.16	39.1	130.8	48.74	41.8	116.7	44.32	40.4	109.8
July	46.38	39.3	118.5	49.59	41.3	120.1	41.59	36.6	113.0	49.72	37.8	131.4	48.69	41.5	117.4	42.94	38.2	112.5
August	48.69	40.7	119.6	50.23	41.2	121.8	46.41	40.4	114.3	53.94	40.0	134.9	50.65	42.8	118.4	47.06	41.7	113.0
September	48.85	40.6	120.3	52.13	41.1	126.9	45.70	38.9	116.7	54.22	39.5	136.3	50.57	42.3	119.6	45.46	39.8	114.3
October	49.74	41.0	121.4	51.58	41.6	124.0	46.89	39.7	117.6	55.86	40.4	138.3	52.13	43.3	120.4	47.02	41.1	114.4
November	48.06	39.6	121.3	51.45	40.8	126.1	48.87	41.0	118.9	56.22	40.1	140.1	51.50	42.5	121.2	50.16	42.3	118.5
December	51.10	41.7	122.5	53.54	42.8	124.9	48.76	40.8	119.2	58.04	40.9	141.8	52.19	42.9	121.6	50.68	42.8	118.3
7: January	49.82	40.5	122.9	[9]51.06	[9]41.8	[9]122.1	48.83	40.2	121.1	59.01	41.3	143.0	52.21	42.7	122.4	[10]48.41	39.9	[10]121.8
February	50.40	41.0	123.0	51.21	41.6	123.0	50.46	41.2	122.2	59.78	41.5	144.0	51.99	42.5	122.4	50.95	40.9	124.6
March	51.73	41.7	124.0	53.56	42.3	126.8	50.28	40.9	122.7	60.42	41.7	144.8	53.42	43.0	124.3	50.85	41.0	124.2
April	51.94	41.7	124.6	52.99	41.5	127.6	50.72	41.4	122.3	59.68	41.3	144.3	52.73	42.5	124.2	51.16	40.9	125.2
May	53.07	41.8	126.9	56.06	42.9	130.7	53.51	42.1	126.8	60.22	41.3	145.9	53.37	42.3	126.2	51.75	40.5	127.9
June	54.90	42.0	130.6	55.45	42.7	129.1	54.49	41.5	131.1	61.93	41.1	150.8	53.79	42.1	127.8	53.49	41.0	130.5
July	53.54	40.7	131.6	52.42	40.8	128.6	51.88	40.0	129.5	59.07	39.7	148.9	52.93	41.4	127.8	53.04	40.3	131.6
August	55.64	41.7	133.4	54.12	41.2	131.5	52.45	40.0	131.0	57.42	38.7	148.4	52.38	40.8	128.4	53.38	40.3	132.4
September	55.87	41.6	134.4	55.75	42.0	132.8	53.08	40.2	131.7	62.38	40.9	152.6	53.91	41.9	128.5	55.08	40.7	135.3
October	57.60	42.6	135.2	56.48	42.0	134.4	56.52	42.1	133.9	65.54	41.8	156.9	55.02	42.1	130.6	52.13	39.4	132.2
November	57.31	42.0	136.8	57.11	42.7	133.9	55.98	41.3	135.3	65.00	41.4	157.2	54.55	41.6	131.1	53.81	40.8	132.0
December	58.81	42.7	137.8	58.97	43.5	135.4	57.79	42.5	135.9	67.20	42.2	159.1	56.77	43.0	131.9	57.08	42.5	134.4

See footnote, p. 54.

[7] New series; comparable January data are 47.1 hours.

[8] New series; comparable February data are 40.5 hours and 108.5 cents.

[9] New series; comparable December 1946 data are $52. 33,43.2 hours, and 121.2 cents.

[10] New series; comparable December 1946 data are $49.69 and 116.9 cents.

TABLE C-1: Average earnings and hours in manufacturing and nonmanufacturing industries, 1932–47[1]—Continued

MANUFACTURING—Continued

Period	Iron and steel and their products—Continued			Electrical machinery												Machinery, except electrical		
	Firearms			Total: Electrical machinery			Electrical equipment			Radios and phonographs			Communication equipment			Total: Machinery, except electrical		
	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings
			Cents			Cents			Cents			Cents			Cents			Cents
1932	......	......	......	......	......	......	......	......	......	$19.92	......	......	......	......	......	......	......	......
1933	......	......	......	......	......	......	......	......	......	18.30	......	......	......	......	......	......	......	......
1934	......	......	......	......	......	......	......	......	......	18.45	33.7	54.0	......	......	......	......	......	......
1935	......	......	......	......	......	......	......	......	......	19.40	35.9	54.2	......	......	......	......	......	......
1936	......	......	......	......	......	......	......	......	......	20.10	37.3	54.0	......	......	......	......	......	......
1937	......	......	......	......	......	......	......	......	......	21.26	36.3	58.8	......	......	......	......	......	......
1938	......	......	......	......	......	......	......	......	......	21.55	36.0	60.1	......	......	......	......	......	......
1939	$27.28	41.3	66.0	$27.09	38.6	70.2	$27.95	38.7	72.2	22.34	38.5	58.1	$28.74	38.3	75.1	$29.27	39.3	74.6
1940	32.51	47.0	69.1	29.38	40.4	72.8	30.45	41.0	74.3	23.60	38.5	61.4	30.51	39.5	77.3	31.87	41.9	76.1
1941	42.78	50.9	84.0	35.04	43.7	80.2	36.55	44.3	82.4	27.96	41.2	68.0	34.74	43.2	80.4	38.34	45.9	83.4
1942	55.03	49.7	111.0	41.94	46.2	90.7	43.67	46.6	93.6	35.88	45.1	79.6	39.48	45.6	86.6	47.28	49.2	96.1
1943	57.66	47.9	120.3	45.53	46.9	97.1	48.02	47.3	101.4	39.18	46.2	84.8	41.51	46.0	90.1	52.37	49.3	106.3
1944	60.50	47.1	128.4	47.76	46.4	102.9	50.37	46.8	107.6	41.22	45.8	90.0	44.66	45.3	97.8	54.63	48.7	112.3
1945	56.39	45.1	125.1	46.43	44.1	105.3	48.73	44.7	109.1	41.10	44.1	93.1	46.10	44.1	104.2	52.24	45.8	114.0
1946	50.83	41.6	122.3	45.64	40.3	113.1	46.73	40.1	116.6	41.09	39.6	103.8	48.51	41.8	116.1	50.12	41.2	121.8
1947	56.64	41.3	137.1	51.40	40.2	127.9	52.99	40.3	131.5	44.84	39.3	114.1	51.87	40.7	127.6	55.88	41.3	135.3
1945: January	57.67	45.4	127.1	49.64	46.5	106.9	52.37	46.9	111.8	43.14	46.2	93.5	45.93	45.1	101.4	55.92	48.7	114.9
February	59.26	46.4	127.8	49.85	46.7	106.7	52.31	47.0	111.3	43.05	46.3	93.1	47.31	45.9	102.8	56.13	48.8	115.1
March	59.96	46.6	128.7	49.89	46.6	107.0	52.53	47.1	111.6	43.04	45.9	93.4	47.03	45.5	103.0	56.07	48.6	115.3
April	57.41	44.7	128.3	49.59	46.4	106.8	51.91	46.7	111.1	43.07	46.0	93.7	47.47	45.7	103.6	55.46	48.1	115.2
May	59.10	45.6	129.5	48.73	45.6	106.8	51.18	46.1	111.1	41.91	45.0	93.1	46.60	44.7	103.9	53.68	46.6	115.2
June	58.15	46.1	126.0	48.53	45.7	106.1	50.83	46.1	110.3	41.79	45.1	92.6	46.88	45.0	103.6	54.91	47.7	115.0
July	58.11	46.2	125.8	47.91	45.3	105.7	49.66	45.4	109.5	41.75	45.1	92.5	47.69	45.2	105.1	53.58	46.7	114.8
August	52.14	42.1	123.9	42.75	41.2	103.8	43.50	40.8	106.7	37.21	40.9	90.9	45.51	42.8	105.5	48.41	42.7	113.4
September	47.14	41.1	114.8	41.37	40.8	101.4	41.87	40.9	102.4	37.53	40.8	91.9	42.58	40.4	105.7	48.12	43.0	111.9
October	47.44	43.0	110.3	42.39	41.1	103.1	43.14	41.4	104.3	36.70	39.3	93.4	43.79	41.6	105.5	48.12	43.0	111.8
November	47.66	42.9	111.2	42.98	41.3	103.9	43.51	41.4	105.1	38.84	40.5	95.9	44.02	41.8	105.5	47.90	42.6	112.4
December	48.92	43.8	111.6	43.58	41.5	105.0	44.05	41.4	106.3	38.55	40.8	94.5	45.91	42.3	108.8	48.63	42.9	113.4
19 6: January	48.55	43.8	110.8	43.52	41.3	105.3	44.05	41.3	106.7	38.78	40.5	95.8	46.13	42.3	108.5	47.84	42.0	113.9
February	48.44	43.5	111.3	41.49	40.3	102.9	40.94	40.0	102.3	39.01	39.7	98.7	45.01	41.8	108.1	47.53	41.4	114.7
March	48.93	42.6	114.9	41.81	40.3	103.6	41.32	40.1	103.0	38.87	39.0	99.6	45.67	41.9	108.9	48.82	41.7	117.2
April	49.70	41.9	118.7	44.03	40.2	109.6	43.97	39.8	110.6	39.04	39.1	99.9	48.38	42.1	114.9	48.94	41.5	117.9
May	50.54	[11]41.0	[11]122.7	43.99	38.9	113.1	45.49	39.3	115.8	38.94	37.9	102.8	43.60	38.5	113.2	48.32	40.1	120.4
June	51.91	41.2	126.1	45.72	39.8	114.8	46.15	39.3	117.3	40.00	38.9	102.9	49.37	42.2	117.1	50.04	40.9	122.3
July	51.06	41.0	124.4	45.59	39.4	115.8	46.31	38.9	118.9	40.40	39.1	103.4	47.80	41.1	116.4	49.76	40.4	123.2
August	49.86	40.4	123.5	47.49	40.6	116.9	48.28	40.2	120.2	41.54	39.8	104.4	49.71	42.2	118.1	50.99	40.9	124.6
September	53.30	42.3	125.9	48.31	40.8	118.5	49.24	40.5	121.4	42.63	40.0	106.6	50.60	42.2	119.9	51.74	41.1	126.0
October	51.10	40.7	125.6	48.28	40.7	118.6	48.92	40.3	121.3	42.88	40.1	107.0	51.36	42.7	120.3	52.57	41.5	126.6
November	52.89	40.7	130.1	48.33	40.6	119.1	49.12	40.2	122.1	43.42	40.3	107.6	50.48	42.0	120.3	52.06	40.9	127.3
December	53.37	40.5	131.8	49.13	41.1	119.5	49.80	40.7	122.4	44.38	40.9	108.6	51.58	42.7	120.8	52.87	41.4	127.7
1947: January	54.15	41.3	131.2	48.63	40.5	119.9	49.64	40.3	123.1	42.33	39.4	107.4	51.48	42.5	121.3	53.12	41.4	128.3
February	54.33	41.3	131.5	48.13	40.0	120.3	48.98	39.7	123.2	41.72	38.6	108.0	51.59	42.3	122.2	53.22	41.3	129.0
March	55.09	41.7	133.5	49.07	40.5	121.2	50.28	40.4	124.4	42.37	39.1	108.2	51.52	42.1	122.6	53.82	41.5	129.8
April	54.62	41.1	133.0	48.36	40.0	121.0	50.22	40.2	125.0	42.31	38.9	108.8	47.84	40.5	117.9	54.25	41.5	130.8
May	56.38	41.3	136.6	50.24	39.8	126.4	52.65	40.1	131.4	44.57	39.1	113.9	46.52	39.1	118.9	55.20	41.4	133.4
June	57.54	41.6	138.3	51.57	39.8	129.5	54.04	40.5	133.5	43.98	38.2	115.1	49.62	38.8	127.7	56.30	41.3	136.3
July	56.69	41.0	138.4	52.00	39.8	130.8	53.84	40.1	134.4	46.17	39.6	116.6	50.57	38.7	130.6	56.06	40.9	137.1
August	56.65	40.8	138.9	51.53	39.2	131.4	53.50	39.6	135.0	44.29	38.0	116.7	51.18	38.9	131.6	55.74	40.5	137.7
September	58.51	41.8	140.1	53.46	40.4	132.5	55.05	40.5	136.0	47.24	40.0	118.2	53.66	40.2	133.5	57.36	41.1	139.5
October	57.90	41.2	140.5	54.10	40.6	133.1	55.35	40.6	136.4	47.98	40.2	119.3	55.81	41.4	135.0	57.87	41.3	140.0
November	58.53	41.1	142.4	54.32	40.6	133.9	55.76	40.6	137.4	47.61	39.8	119.7	55.94	41.4	135.2	57.92	41.2	140.4
December	60.01	42.0	142.9	55.34	41.1	134.6	56.99	41.2	138.4	48.59	40.4	120.3	56.15	41.7	134.8	59.67	42.2	141.3

[1] See footnote, p. 54.

[11] New series; comparable April data are 41.1 hours and 121.1 cents.

TABLE C–1: Average earnings and hours in manufacturing and nonmanufacturing industries, 1932–47[1]—Continued

MANUFACTURING—Continued

Period	Machinery, except electrical—Continued																	
	Machinery and machine-shop products			Engines and turbines			Tractors			Agricultural machinery, excluding tractors			Machine tools			Machine-tool accessories		
	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings
			Cents			Cents			Cents			Cents			Cents			Cents
1932	......	......	......	......	......	......	......	......	......	......	......	......	$19.48	31.0	60.4	......	......	......
1933	......	......	......	......	......	......	......	......	......	......	......	......	19.44	33.9	56.8	......	......	......
1934	......	......	......	......	......	......	......	......	......	......	......	......	22.49	37.2	60.4	......	......	......
1935	......	......	......	......	......	......	......	......	......	......	......	......	25.89	41.5	62.4	......	......	......
1936	......	......	......	......	......	......	......	......	......	......	......	......	28.40	44.6	63.6	......	......	......
1937	......	......	......	......	......	......	......	......	......	......	......	......	32.24	45.1	71.6	......	......	......
1938	......	......	......	......	......	......	......	......	......	......	......	......	26.61	36.3	73.3	......	......	......
1939	$28.76	39.4	73.0	$28.67	37.4	76.7	$32.13	38.3	83.9	$26.46	37.0	71.6	32.25	42.9	75.2	$31.78	40.9	77.7
1940	31.18	41.6	74.9	32.79	41.1	79.8	34.41	40.1	85.8	28.66	39.0	73.4	36.97	48.2	76.8	35.33	47.3	74.7
1941	38.21	46.0	82.9	41.03	45.4	90.2	38.25	41.4	92.5	33.11	40.4	82.0	43.55	51.7	84.3	43.98	51.5	85.4
1942	46.30	48.8	94.6	52.04	49.2	106.1	45.60	44.0	103.6	39.03	41.8	93.4	51.86	53.4	97.1	53.09	53.4	99.5
1943	51.23	48.9	104.5	58.04	50.1	116.4	51.40	46.7	110.0	50.13	47.0	106.7	54.37	50.9	106.8	56.54	51.0	110.9
1944	53.27	48.2	110.3	60.25	49.1	123.2	53.12	47.0	113.1	53.27	47.4	112.3	57.39	50.7	113.1	59.23	49.7	119.2
1945	51.91	46.1	112.4	54.32	44.5	122.4	51.60	44.6	115.8	51.33	45.4	113.0	56.57	47.8	118.3	56.91	46.6	122.4
1946	49.89	41.5	119.9	52.47	40.1	130.9	49.86	39.3	126.8	47.41	39.9	118.9	53.80	42.5	126.5	56.23	42.3	132.8
1947	55.06	41.5	132.6	58.99	40.8	144.9	56.83	40.4	140.8	54.88	40.4	135.8	57.69	42.1	136.9	59.58	41.6	143.3
1945: January	54.92	48.5	113.2	61.18	48.5	126.3	53.44	46.6	115.1	53.40	46.9	113.7	60.21	51.6	117.2	61.14	49.5	123.5
February	55.02	48.7	112.9	[12]60.70	[12]48.4	125.5	53.11	46.2	114.9	54.12	47.3	114.4	60.34	[13]51.0	118.3	61.82	50.5	122.7
March	55.06	48.7	113.0	59.91	48.0	125.1	52.98	45.9	115.5	54.68	47.5	115.1	60.49	50.9	118.8	61.08	49.8	123.2
April	54.80	48.3	113.3	58.28	47.4	123.3	52.73	45.7	115.4	54.19	47.1	115.0	59.53	50.2	118.7	60.40	49.1	123.1
May	52.82	46.6	113.1	56.44	45.9	123.3	52.72	45.1	116.8	51.30	44.9	114.3	56.50	47.7	118.3	58.86	47.8	123.5
June	53.78	47.8	112.6	57.44	46.5	123.8	54.09	46.4	116.7	54.35	47.5	114.5	58.23	48.9	119.1	59.25	47.8	124.2
July	52.57	46.6	112.8	56.23	45.5	123.6	53.71	46.0	116.7	53.69	46.9	114.5	56.37	47.7	118.2	57.24	46.4	123.8
August	47.81	42.7	111.8	46.47	39.4	118.9	50.82	43.6	116.6	48.16	42.9	112.3	53.63	45.6	117.6	50.33	42.0	120.1
September	47.15	42.6	110.3	43.10	37.3	115.8	51.32	43.8	117.2	50.63	45.6	111.1	51.23	44.7	115.2	50.11	42.2	119.3
October	47.60	43.1	110.3	46.22	39.7	116.2	46.77	41.2	114.0	47.47	43.4	109.4	51.65	44.1	117.2	51.18	42.4	120.9
November	47.58	42.9	110.9	44.93	38.7	115.9	47.86	41.6	115.1	45.61	41.9	108.9	52.35	43.9	119.3	51.21	42.1	122.2
December	47.98	42.8	112.0	48.89	41.0	119.3	48.26	41.4	116.5	45.79	41.6	110.0	53.80	44.4	121.0	53.08	43.6	122.7
1946: January	47.81	42.5	112.3	49.61	41.5	119.6	49.34	41.9	117.6	45.02	40.6	110.9	53.07	44.4	119.5	53.53	43.3	124.0
February	47.91	42.3	112.9	48.48	39.7	122.2	46.26	38.2	121.2	43.76	40.5	108.0	52.19	43.3	120.6	52.99	42.6	124.4
March	48.29	41.7	115.4	47.39	39.1	121.6	51.40	41.7	123.4	43.86	40.5	108.4	52.92	43.6	121.4	54.78	42.8	128.2
April	49.26	42.2	116.3	46.57	37.4	124.8	45.81	38.7	118.3	45.34	40.9	110.8	51.92	42.6	122.0	53.92	41.9	128.6
May	47.86	40.4	118.0	51.42	40.1	128.2	42.68	34.4	124.2	43.51	36.8	118.3	52.01	41.6	125.1	54.74	41.7	131.3
June	49.70	41.2	120.2	52.43	40.0	132.0	50.58	39.1	129.3	47.77	39.6	121.0	53.86	42.2	127.7	[14]56.36	42.3	[14]133.1
July	49.49	40.7	121.2	52.86	40.3	131.3	49.73	37.9	131.1	47.55	39.7	119.9	52.44	41.3	126.9	54.63	41.1	133.0
August	51.15	41.6	122.8	51.95	39.0	132.8	51.01	39.1	130.3	48.66	39.9	122.4	54.07	42.0	129.1	56.89	41.8	136.1
September	51.05	41.2	123.8	55.26	40.5	136.5	51.21	39.3	130.2	50.42	40.4	124.7	54.45	41.9	130.0	58.76	42.5	138.0
October	51.91	41.6	124.5	55.38	41.1	136.5	52.28	40.2	130.2	50.34	40.4	124.5	55.61	42.6	130.6	58.70	42.6	137.8
November	51.38	41.1	124.9	55.57	40.5	137.0	52.53	40.3	130.4	49.65	39.8	124.8	55.90	42.3	132.2	58.08	42.1	138.0
December	52.62	41.8	125.7	56.88	41.5	137.1	51.99	40.1	129.7	49.75	39.8	125.1	56.66	42.8	132.2	59.71	43.2	138.1
1947: January	52.78	41.7	126.4	56.08	41.0	136.8	51.96	39.5	131.5	49.84	39.9	125.0	56.17	42.2	132.6	58.43	42.5	137.9
February	52.61	41.5	126.7	56.37	41.1	137.2	51.96	39.8	130.5	51.59	40.6	127.2	56.09	42.3	132.5	58.16	41.8	139.2
March	53.10	41.6	127.5	56.92	41.2	138.2	52.99	40.3	131.4	51.78	40.1	129.2	56.46	42.3	133.4	58.40	42.1	138.9
April	53.31	41.6	127.9	57.27	41.3	139.4	54.73	40.3	135.8	51.93	40.3	128.9	56.06	42.0	133.4	58.66	41.8	140.4
May	54.44	41.6	130.7	58.74	41.2	142.8	56.95	39.9	142.6	53.18	40.0	133.0	57.13	42.1	135.7	58.92	41.7	141.4
June	55.53	41.5	133.6	60.20	41.2	146.0	57.57	40.0	144.7	55.80	40.8	136.8	58.31	42.2	138.1	59.14	41.6	143.2
July	55.00	40.8	134.9	59.51	40.3	147.7	57.77	40.1	144.0	56.83	41.0	138.5	56.78	41.6	136.6	58.42	41.2	143.0
August	55.07	40.9	135.3	61.34	40.9	151.0	57.67	40.0	144.3	56.29	40.8	139.2	57.77	41.4	139.4	57.43	39.9	144.7
September	56.41	41.3	137.0	60.16	40.5	149.4	59.08	40.7	145.0	57.97	40.6	141.7	58.69	41.8	140.5	61.16	41.2	148.6
October	56.75	41.3	137.4	58.72	39.6	148.9	60.17	41.1	146.5	58.36	40.9	143.9	59.25	42.1	140.8	61.42	41.4	148.2
November	57.03	41.4	138.1	62.04	41.2	151.6	60.13	41.1	146.4	55.91	39.6	141.5	59.53	41.9	141.2	61.30	41.1	149.4
December	59.22	42.7	139.1	61.14	40.5	151.9	60.24	41.3	145.9	57.85	40.6	142.4	61.34	43.1	142.4	63.47	42.4	149.7

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[1] See footnote p. 54.

[12] New series; comparable January data are $60.15 and 47.4 hours.

[13] New series; comparable January data are 51.0 hours.

[14] New series; comparable May data are $55.66 and 133.3 cents.

TABLE C-1: Average earnings and hours in manufacturing and nonmanufacturing industries, 1932-47[1]—Continued

MANUFACTURING—Continued

Period	Machinery, except electrical—Continued																	
	Textile machinery			Typewriters			Cash registers; adding and calculating machines			Washing machines, wringers, and driers, domestic			Sewing machines, domestic and industrial			Refrigerators and refrigeration equipment		
	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings
			Cents			Cents			Cents			Cents			Cents			Cents
1932	$18.35	......	......	$15.11	26.1	51.7	$23.05	......	......	......	......	......	......	......	......	......	......	......
1933	19.85	36.5	56.5	17.04	36.3	48.0	24.12	......	......	......	......	......	......	......	......	......	......	......
1934	20.67	35.2	59.9	21.44	39.2	54.7	25.46	38.2	67.2	......	......	......	......	......	......	......	......	......
1935	22.46	36.7	61.3	21.92	38.2	57.4	26.70	39.5	69.0	......	......	......	......	......	......	......	......	......
1936	24.55	41.0	59.9	23.98	42.1	56.9	28.78	41.3	71.0	......	......	......	......	......	......	......	......	......
1937	27.52	42.4	65.1	24.92	40.2	62.0	32.45	41.5	78.8	......	......	......	......	......	......	......	......	......
1938	23.00	34.7	66.4	21.05	32.5	64.8	28.76	35.5	81.5	......	......	......	......	......	......	......	......	......
1939	26.19	39.8	66.0	23.98	37.3	64.3	30.38	37.2	82.1	......	......	......	......	......	......	......	......	......
1940	26.56	40.3	66.1	25.94	39.5	65.7	33.06	40.1	82.9	......	......	......	......	......	......	......	......	......
1941	34.05	46.5	73.6	33.13	45.1	73.4	39.81	44.4	90.5	......	......	......	......	......	......	......	......	......
1942	41.32	49.4	83.6	37.49	45.7	82.1	49.72	47.5	105.7	......	......	......	......	......	......	......	......	......
1943	46.13	49.9	92.4	46.86	49.2	95.3	58.53	50.1	117.7	$44.49	46.7	95.3	$55.86	52.8	106.5	$48.71	47.5	102.7
1944	48.00	49.0	98.0	48.64	49.1	99.1	59.50	49.3	121.3	47.12	45.9	102.7	57.40	51.8	111.7	51.10	46.6	109.7
1945	48.93	47.6	102.7	47.28	46.6	101.4	56.16	45.9	123.0	46.25	44.9	103.1	55.29	49.3	112.9	49.10	44.0	111.5
1946	48.83	43.2	112.9	46.35	42.1	110.0	55.27	41.4	134.2	44.48	41.0	108.6	51.00	42.6	120.4	45.90	38.3	119.6
1947	54.72	42.4	129.0	51.39	41.6	123.5	61.83	42.0	148.3	54.72	42.0	130.2	58.20	41.7	139.8	53.64	40.1	133.8
1945: January	50.33	49.6	101.6	49.27	49.3	100.0	59.32	48.7	123.1	47.94	46.3	103.4	58.01	51.7	113.3	51.58	46.5	110.6
February	50.68	49.4	102.7	49.52	49.1	100.8	59.12	48.3	123.0	49.23	46.8	105.1	57.89	51.6	113.2	52.76	46.6	113.3
March	51.12	49.7	102.8	49.56	49.0	101.1	59.91	48.7	123.7	48.49	45.5	106.6	57.99	51.4	113.6	52.58	46.1	113.9
April	50.33	49.0	102.6	49.40	48.6	101.7	58.70	48.0	122.9	50.24	46.6	107.8	57.44	51.0	113.2	52.66	46.1	114.2
May	48.84	47.7	102.5	50.00	47.8	104.6	57.40	46.8	123.4	45.37	43.2	105.1	54.38	48.4	112.8	51.53	45.2	114.0
June	50.13	48.7	103.0	50.21	48.4	103.8	58.72	47.8	123.6	48.39	46.5	104.0	55.87	49.8	112.8	51.62	45.8	112.6
July	48.22	46.9	102.8	48.74	47.2	103.2	59.38	48.3	123.9	46.08	44.9	102.7	55.80	49.6	113.0	50.82	45.6	111.4
August	44.34	43.6	101.6	41.68	40.6	102.7	51.44	43.4	118.8	43.70	42.8	102.0	52.13	47.4	110.7	41.20	36.9	111.6
September	47.91	47.0	101.9	45.05	45.3	99.5	49.90	42.0	119.2	43.27	43.9	98.6	55.13	49.5	112.4	46.09	42.3	108.9
October	48.05	46.8	102.7	44.83	45.1	99.4	50.80	42.1	121.0	42.08	42.3	99.5	54.05	48.2	112.7	45.85	42.2	108.7
November	47.55	45.6	104.3	44.30	44.4	99.7	53.89	42.8	126.5	42.45	44.0	96.6	52.48	46.5	113.8	44.65	41.2	108.1
December	49.06	47.1	104.1	44.79	44.6	100.4	52.28	41.8	125.6	42.61	43.5	97.9	48.71	42.9	113.8	44.72	40.7	109.7
1946: January	48.28	46.3	104.4	44.12	43.4	101.8	53.18	42.5	126.3	42.28	42.7	98.9	48.75	43.6	112.5	34.62	32.7	106.4
February	47.87	45.7	104.8	44.42	43.6	102.0	50.49	39.3	129.2	41.23	40.4	99.2	49.59	44.0	113.1	38.74	34.8	111.7
March	48.87	44.7	109.4	45.69	43.1	105.9	53.56	41.3	130.9	40.73	41.8	98.4	49.84	43.9	113.8	46.16	39.4	117.3
April	49.35	44.4	111.2	45.44	42.5	106.8	54.24	41.4	131.5	42.65	42.0	101.5	50.29	44.2	114.1	46.98	39.8	118.4
May	48.32	43.3	111.6	45.33	[15]42.8	[15]105.8	55.03	41.4	133.3	38.37	37.2	103.3	49.48	43.6	115.1	47.89	39.4	121.7
June	46.99	41.9	112.3	45.08	42.3	106.5	56.00	42.0	133.8	43.81	40.2	109.0	50.40	43.6	116.5	46.64	38.6	120.8
July	47.42	41.4	114.4	46.49	41.7	111.6	56.29	41.9	134.9	44.99	40.7	110.5	49.58	43.1	115.6	46.77	38.6	121.0
August	48.28	41.9	115.2	46.01	41.1	111.9	52.84	39.9	133.8	46.30	41.2	112.4	52.27	42.1	124.8	48.46	39.7	122.2
September	49.43	42.6	116.1	47.19	41.7	113.2	57.91	42.6	137.0	47.87	41.7	114.7	51.15	40.4	127.4	49.54	40.1	123.5
October	50.26	42.9	117.3	47.89	41.9	114.3	57.34	42.3	136.6	49.60	42.7	116.1	52.63	41.2	128.2	49.71	40.2	123.7
November	49.60	41.8	118.6	48.98	42.1	116.5	58.42	41.8	140.6	45.76	39.6	115.5	52.63	40.8	129.1	47.67	38.4	124.1
December	52.12	43.5	119.9	47.41	40.6	116.9	56.37	40.7	139.1	48.43	41.5	116.8	54.13	41.7	130.2	47.56	38.1	124.9
1947: January	53.15	43.2	122.9	47.56	40.8	116.5	57.14	41.1	139.9	[16]52.31	42.4	[16]122.5	54.02	41.5	130.7	51.59	40.4	126.7
February	53.67	43.1	124.5	47.95	40.9	117.1	60.47	42.7	142.7	49.21	40.4	121.8	54.61	41.6	131.5	[17]48.79	38.2	127.6
March	53.86	43.2	124.8	48.13	40.9	117.6	60.68	42.5	143.9	52.31	42.1	124.1	55.28	42.0	132.1	51.09	40.0	128.1
April	53.14	42.5	125.1	49.29	41.2	119.7	61.83	42.4	146.9	53.91	42.8	125.8	54.46	41.2	132.8	53.42	40.7	131.2
May	54.10	42.6	126.9	50.15	41.6	121.9	61.68	42.3	146.8	54.89	42.5	129.1	56.25	41.7	135.5	53.19	40.4	131.7
June	54.88	42.6	128.9	51.58	42.8	120.9	63.67	41.9	151.0	55.16	41.8	131.8	58.97	41.7	141.5	54.77	40.4	135.6
July	54.79	41.9	130.1	52.33	43.7	119.8	60.35	40.6	149.0	54.85	41.6	131.8	58.43	41.0	142.5	55.37	40.8	135.6
August	51.91	40.2	129.1	51.22	40.5	126.5	59.52	40.2	148.7	52.82	40.1	131.6	56.35	40.0	140.9	52.22	38.5	135.6
September	56.08	42.2	132.9	51.91	40.6	128.0	63.21	42.1	151.3	54.17	41.0	132.0	60.72	42.0	145.4	54.18	39.5	137.3
October	55.77	42.1	132.5	54.04	42.0	128.8	63.82	42.3	152.3	57.13	42.4	134.6	62.27	42.5	146.9	56.33	40.7	138.3
November	56.88	42.1	135.5	55.54	42.5	130.6	63.29	42.1	151.8	57.96	42.7	135.8	62.17	42.4	146.5	54.41	39.8	136.7
December	58.56	43.1	135.8	55.89	42.9	130.1	65.67	42.9	153.7	60.42	43.7	138.4	63.21	42.9	147.2	57.05	41.2	138.4

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[1] See footnote, p. 54.

[15] New series; comparable April data are 43.1 hours and 105.4 cents.

[16] New series; comparable December 1946 data are $49.81 and 119.4 cents.

[17] New series; comparable January data are $51.05.

TABLE C–1: Average earnings and hours in manufacturing and nonmanufacturing industries, 1932–47[1]—Continued

MANUFACTURING—Continued

Period	Transportation equipment, except automobiles																	
	Total: Transportation equipment, except automobiles			Locomotives			Cars, electric- and steam-railroad			Aircraft and parts, excluding aircraft engines			Aircraft engines			Shipbuilding and boatbuilding		
	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings
			Cents			Cents			Cents			Cents			Cents			Cents
1932	....	....	....	$22.72	....	....	$18.51	....	....	$31.42	....	....	....	....	....	$23.62	34.4	63.5
1933	....	....	....	18.71	....	....	18.85	....	....	27.46	....	....	....	....	....	20.81	31.0	60.8
1934	....	....	....	21.65	34.9	61.9	19.99	33.9	59.0	24.65	39.4	63.6	....	....	....	22.80	31.0	72.8
1935	....	....	....	21.70	34.4	63.0	21.77	35.2	62.0	25.75	40.9	65.0	....	....	....	24.77	32.8	75.0
1936	....	....	....	25.54	40.4	63.3	23.74	38.1	62.2	26.08	42.1	63.2	....	....	....	27.35	35.7	76.0
1937	....	....	....	31.79	43.7	72.5	28.14	39.4	71.5	27.83	42.3	66.6	....	....	....	30.51	37.1	81.4
1938	....	....	....	26.43	34.2	77.2	25.82	34.8	74.3	29.02	40.1	72.8	....	....	....	30.91	36.6	83.7
1939	$30.51	38.9	78.5	28.33	36.7	77.1	26.71	36.0	74.1	30.34	41.5	74.5	$36.58	44.1	83.5	31.91	38.0	83.5
1940	32.59	41.0	79.5	31.25	39.4	79.3	28.47	38.0	75.0	31.40	43.2	74.3	38.50	45.8	84.0	34.81	39.8	87.0
1941	40.30	44.4	90.7	40.45	44.9	90.1	33.88	40.3	84.1	37.75	45.3	84.0	47.04	46.9	103.3	44.59	44.4	100.2
1942	52.08	47.6	109.4	53.42	48.2	110.4	43.59	43.1	101.3	46.21	47.0	98.7	59.03	48.7	121.2	55.99	48.0	116.5
1943	56.44	47.1	119.9	60.04	48.5	123.7	49.07	45.1	108.9	49.76	46.4	107.2	59.81	47.4	126.2	60.84	47.5	128.0
1944	60.28	47.3	127.4	64.91	49.0	132.4	52.83	46.2	114.4	54.50	47.1	115.9	61.14	46.6	131.2	63.84	47.5	134.4
1945	56.07	43.6	128.3	61.24	45.6	134.3	50.36	43.6	115.5	54.37	45.7	119.1	57.93	44.5	130.1	61.72	45.1	137.0
1946	52.34	39.5	132.5	58.06	40.4	143.5	48.65	40.9	118.9	52.24	40.6	128.8	54.78	41.2	133.0	52.34	38.0	137.8
1947	55.90	39.9	140.0	58.98	39.8	148.2	55.27	40.8	135.5	54.11	39.8	136.0	56.28	39.9	140.9	57.42	39.6	145.0
1945: January	62.61	48.0	130.4	63.36	47.1	134.6	54.26	45.5	119.2	57.19	47.7	119.8	62.41	46.3	135.0	66.12	48.7	136.7
February	61.56	47.2	130.4	65.65	48.7	134.9	55.03	45.6	120.7	56.22	47.3	118.9	62.67	[18]47.4	[18]132.3	65.12	[19]47.1	138.2
March	61.13	47.1	129.9	66.58	48.7	136.6	55.71	46.5	119.8	56.10	47.1	119.0	62.29	47.1	132.1	64.56	46.9	137.6
April	60.58	46.8	129.5	65.42	47.7	137.2	54.30	45.6	119.1	55.66	46.8	118.9	59.62	45.8	130.0	64.68	47.0	137.8
May	59.56	45.9	129.7	64.64	47.2	137.0	52.75	44.2	119.4	55.32	46.5	118.9	58.92	45.1	130.8	63.26	45.8	138.2
June	60.03	46.2	130.0	61.73	46.7	132.2	52.35	44.3	118.2	56.07	46.9	119.6	57.16	44.2	129.3	64.15	46.3	138.5
July	59.63	45.8	130.1	60.45	45.6	132.4	50.32	43.5	115.6	54.87	45.9	119.7	56.16	43.6	128.7	64.62	46.6	138.8
August	54.07	41.7	129.7	51.56	40.9	126.2	46.09	40.4	114.2	48.43	40.7	119.0	47.31	37.2	127.1	60.46	43.6	138.6
September	48.98	38.8	126.4	55.39	42.2	131.4	43.27	40.6	106.6	44.81	38.1	117.6	43.56	36.7	118.8	51.06	38.7	131.9
October	48.92	39.1	125.0	56.70	42.8	132.3	45.24	41.8	108.3	47.60	40.1	118.8	46.37	39.0	118.8	49.50	38.2	129.7
November	46.56	37.4	124.4	60.12	44.2	136.0	43.57	40.7	107.0	46.98	39.7	118.3	44.91	37.6	119.4	45.56	35.0	130.1
December	49.18	39.7	123.9	60.92	43.6	139.8	44.53	42.0	106.1	48.40	40.8	118.7	48.67	40.3	120.8	49.44	38.3	129.2
1946: January	49.29	40.0	123.1	57.89	42.3	136.8	44.50	41.5	107.2	48.84	41.1	118.8	51.48	40.9	125.8	49.44	38.8	127.3
February	48.09	39.0	123.4	54.58	43.2	126.2	42.99	40.4	106.4	49.91	40.8	122.2	53.43	42.1	126.8	47.61	37.3	127.8
March	50.51	40.0	126.4	56.92	42.7	133.3	45.60	41.9	108.8	50.53	41.0	123.3	52.80	41.9	125.9	51.32	38.8	132.4
April	52.50	39.9	131.6	56.23	39.5	142.3	48.19	41.7	115.6	51.68	41.3	125.3	54.08	41.8	129.3	53.43	38.5	138.9
May	52.09	39.1	133.3	55.96	38.7	144.6	47.44	39.7	119.6	51.63	40.7	126.8	55.26	41.3	133.9	52.79	37.6	140.3
June	53.32	39.5	135.0	58.91	40.5	146.6	49.17	40.8	120.5	52.55	40.4	130.2	55.91	41.6	134.3	53.99	38.1	141.6
July	53.70	39.3	136.6	59.18	40.5	146.0	48.21	39.6	121.9	53.01	40.0	132.5	54.72	40.6	134.8	55.20	38.4	143.6
August	53.91	39.7	135.9	57.27	39.8	143.9	50.23	41.1	122.3	53.85	40.7	132.3	56.08	41.4	135.4	54.41	38.0	143.1
September	52.65	38.8	135.6	57.92	39.6	146.2	49.38	39.9	123.8	53.73	40.6	132.3	56.93	41.9	135.7	50.91	35.7	142.6
October	54.32	40.0	135.9	60.63	41.6	145.6	51.75	41.8	123.9	53.81	40.6	132.6	57.31	42.1	136.3	53.96	37.7	143.2
November	52.37	38.4	136.4	57.22	39.9	143.3	52.46	41.2	127.2	52.53	39.6	132.6	51.06	37.2	137.3	51.47	35.7	144.1
December	55.35	40.6	136.2	59.99	41.5	144.5	52.24	41.5	126.0	53.46	40.4	132.5	56.89	41.9	135.7	57.21	40.0	143.0
1947: January	54.48	40.2	135.6	55.64	39.8	139.7	52.17	40.6	128.3	52.59	39.8	132.1	56.15	41.4	135.7	57.05	40.2	142.0
February	54.34	39.7	136.7	56.97	40.4	141.1	53.42	41.3	129.2	53.41	40.1	133.2	54.77	40.7	134.4	55.37	38.4	144.2
March	54.25	39.8	136.2	51.68	37.4	138.4	53.67	40.8	[20]131.5	53.22	39.8	133.8	53.02	39.4	134.4	56.59	39.9	141.8
April	54.29	39.8	136.3	52.20	37.2	140.2	53.51	40.9	131.0	52.54	39.6	132.6	53.77	39.7	135.3	56.97	39.9	142.6
May	55.31	40.2	137.6	59.09	40.2	146.9	54.80	41.4	132.3	52.42	39.5	137.8	54.97	39.6	138.3	57.91	40.4	143.3
June	55.59	40.1	138.7	59.10	40.0	147.8	55.76	41.1	135.6	52.58	39.2	134.1	55.44	38.8	142.8	57.79	40.7	142.1
July	56.02	40.1	139.5	59.26	39.7	149.4	56.83	41.7	136.4	54.48	39.7	137.2	56.19	39.2	143.5	56.77	39.9	142.1
August	55.75	39.6	140.6	61.75	40.6	152.2	51.89	38.6	134.3	55.30	40.0	138.1	56.58	39.2	144.3	56.93	39.3	144.7
September	56.54	39.7	142.4	64.69	41.3	156.7	55.03	39.9	137.8	54.44	39.3	138.6	58.43	40.0	146.0	57.71	39.5	146.2
October	58.07	40.4	143.7	62.32	40.6	153.4	58.09	41.4	140.4	56.01	40.2	139.5	59.19	40.5	146.1	59.31	39.8	149.0
November	56.42	38.6	146.2	61.64	39.8	154.9	57.61	40.4	142.5	55.48	39.3	141.3	57.51	39.4	146.1	55.20	36.1	152.9
December	59.79	40.8	146.5	63.63	40.7	156.5	59.84	41.4	144.7	57.12	40.6	140.6	60.39	41.2	146.5	61.74	40.5	152.5

[1] See footnote, p. 54.

[18] New series; comparable January data are 46.7 hours and 133.7 cents.

[19] New series; comparable January data are 48.1 hours.

[20] New series; comparable February data aro 130.3 cents.

TABLE C–1: Average earnings and hours in manufacturing and nonmanufacturing industries, 1932–47[1]—Continued

MANUFACTURING—Continued

Period	Transportation equipment, except automobiles—Continued			Automobiles			Nonferrous metals and their products											
	Motorcycles, bicycles, and parts			Total: Automobiles			Total: Nonferrous metals and their products			Smelting and refining, primary, of nonferrous metals			Alloying and rolling and drawing of nonferrous metals except aluminum			Clocks and watches		
	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings
			Cents			Cents			Cents			Cents			Cents			Cents
1932	......	......	......	$21.27	31.3	68.0	......	......	......	$17.58	......	......	......	......	......	$14.29	......	......
1933	......	......	......	20.96	35.2	59.3	......	......	......	18.19	......	......	......	......	......	15.26	37.7	41.9
1934	......	......	......	23.31	33.3	70.0	......	......	......	20.19	37.6	53.6	......	......	......	18.08	38.2	47.3
1935	......	......	......	27.41	37.1	73.9	......	......	......	21.61	38.9	55.6	......	......	......	19.51	39.9	48.5
1936	......	......	......	29.75	38.5	77.4	......	......	......	23.99	41.5	57.8	......	......	......	21.50	41.9	50.5
1937	......	......	......	31.94	35.9	89.1	......	......	......	27.91	41.3	67.6	......	......	......	22.74	40.5	56.2
1938	......	......	......	30.45	32.9	92.5	......	......	......	26.15	38.2	68.5	......	......	......	19.44	33.0	58.9
1939	......	......	......	32.91	35.4	92.9	$26.74	38.9	68.7	26.67	38.2	69.9	$28.77	39.6	72.9	22.27	37.9	58.7
1940	......	......	......	35.76	37.7	94.8	28.39	39.9	71.1	27.97	38.8	72.1	31.73	41.3	77.5	23.64	39.4	59.9
1941	......	......	......	41.25	39.6	104.2	33.07	42.4	77.9	31.67	39.3	80.5	38.22	43.9	87.0	27.52	41.6	66.2
1942	......	......	......	51.94	44.4	116.9	40.78	44.6	91.3	37.90	41.3	90.9	47.22	46.0	102.6	34.73	44.5	77.9
1943	$48.72	48.0	101.6	56.94	46.2	123.4	47.20	46.6	101.3	46.07	44.8	102.9	52.15	47.8	109.2	39.87	46.0	86.8
1944	50.33	47.7	105.6	57.82	45.5	127.0	49.16	46.8	105.0	48.80	46.1	106.0	53.81	48.1	112.0	43.33	46.7	92.9
1945	50.71	46.8	108.3	51.99	41.3	125.6	48.28	45.2	106.8	48.98	45.7	107.3	53.50	47.0	113.8	42.41	44.3	95.8
1946	48.81	41.2	118.5	50.22	37.6	133.3	47.84	41.5	115.5	47.43	40.6	116.8	51.73	41.7	124.1	42.15	41.2	102.3
1947	55.17	41.5	133.0	57.44	39.0	147.3	51.83	40.7	127.5	53.13	41.0	129.6	54.24	40.1	135.3	45.90	40.4	113.6
1945: January	52.78	48.9	107.9	59.42	45.2	131.4	50.92	47.2	107.9	49.20	45.8	107.4	56.15	48.7	115.3	44.63	46.3	97.1
February	53.73	49.2	109.3	59.49	46.5	127.9	50.76	47.1	107.8	49.08	45.9	106.9	56.14	48.8	115.2	45.57	47.0	97.1
March	53.25	48.7	109.3	58.99	46.1	128.0	51.18	47.3	108.1	49.61	46.5	106.7	56.40	48.7	115.8	46.06	47.1	97.9
April	53.97	48.8	110.6	58.28	45.5	128.0	50.96	47.1	108.2	50.56	47.1	107.3	56.39	48.9	115.4	45.28	46.4	97.6
May	54.25	47.8	113.5	55.74	43.9	126.9	49.52	46.0	107.7	49.93	46.6	107.0	53.41	46.9	114.6	44.30	45.8	96.7
June	52.46	47.4	110.7	55.55	43.8	126.8	49.55	46.2	107.2	49.76	46.2	107.7	53.51	47.3	113.2	43.82	45.6	96.2
July	52.77	47.6	110.9	53.29	42.3	126.0	48.81	45.7	106.8	51.55	47.0	109.6	51.79	46.3	111.9	43.64	45.7	95.7
August	49.88	46.7	106.8	41.70	33.5	124.5	46.15	43.3	106.7	50.22	45.8	109.7	52.55	46.8	112.5	39.41	41.7	94.6
September	41.44	41.1	100.8	44.65	36.5	122.4	44.41	42.5	104.4	47.30	44.5	106.7	48.32	43.8	110.4	36.39	39.1	94.0
October	44.84	43.7	102.6	46.86	38.4	121.9	45.30	43.2	104.8	46.79	44.6	105.9	50.06	44.4	112.7	38.42	41.5	92.6
November	45.88	43.8	104.8	45.99	37.8	121.7	45.71	43.2	105.8	46.98	44.2	106.3	50.24	44.8	112.0	38.49	41.5	92.7
December	46.68	44.4	105.0	43.89	36.0	122.0	46.08	43.3	106.3	46.36	43.5	106.7	50.78	44.8	113.1	39.12	41.4	94.4
1946: January	46.36	43.3	107.0	46.19	37.5	123.0	46.13	43.3	106.6	46.91	43.3	108.4	51.69	45.5	113.5	39.31	41.0	95.8
February	44.41	41.9	106.0	43.01	34.5	124.8	47.13	43.2	109.1	46.06	42.1	109.4	52.02	44.3	117.4	[21]39.56	41.6	[21]94.9
March	44.20	40.9	108.1	46.75	37.0	126.4	46.92	42.2	111.3	46.32	40.9	113.4	51.70	43.2	119.6	41.11	42.2	97.2
April	46.86	41.6	112.5	48.72	37.4	130.2	47.29	41.8	113.1	45.93	39.9	115.1	50.42	41.8	120.8	40.90	41.7	98.0
May	46.42	39.6	117.3	48.05	36.3	132.5	47.18	41.1	114.9	46.25	40.0	115.6	51.24	41.0	125.1	40.97	41.2	99.5
June	47.05	39.8	118.2	49.32	36.6	134.7	47.61	40.9	116.3	47.45	40.1	118.2	52.53	41.7	125.8	40.70	40.3	101.1
July	44.64	38.2	116.9	51.15	37.8	135.4	46.68	40.0	116.6	47.42	39.9	118.9	50.34	40.2	125.2	40.44	39.8	101.7
August	49.30	40.6	121.5	53.80	39.2	137.3	48.00	40.8	117.7	47.85	40.2	118.9	51.59	40.8	126.6	42.75	41.1	103.9
September	50.95	41.2	123.8	53.37	38.5	138.5	48.55	40.7	119.2	48.65	40.3	120.8	51.39	40.7	126.4	43.68	41.0	106.4
October	53.24	42.6	125.0	53.41	38.8	137.6	48.92	40.9	119.5	47.80	40.0	119.6	51.93	40.7	127.5	44.81	41.6	107.8
November	52.39	41.2	127.0	53.83	38.6	139.4	49.24	40.9	120.4	48.25	39.8	121.2	52.21	40.6	128.7	45.46	41.6	109.3
December	55.23	43.2	127.8	54.98	39.4	139.5	50.40	41.7	121.0	49.75	41.1	121.5	53.69	41.7	128.6	45.39	41.4	109.6
1947: January	50.29	40.5	124.0	54.13	38.9	139.0	49.91	41.0	121.7	49.39	40.4	122.7	53.45	41.3	129.3	43.83	39.7	110.3
February	50.40	40.1	125.8	54.29	38.8	139.9	50.12	41.0	122.2	50.04	40.6	123.4	53.92	41.5	130.0	44.88	41.0	109.6
March	52.43	41.4	126.7	55.45	39.7	139.6	50.26	41.0	122.6	50.66	40.9	123.9	53.68	41.2	130.2	44.83	40.7	110.1
April	52.36	41.3	126.9	54.14	38.5	140.6	50.30	40.8	123.4	51.05	40.8	125.2	53.45	40.9	130.5	44.71	40.4	110.8
May	54.60	41.8	130.7	55.96	38.3	146.3	51.15	40.6	126.0	52.87	41.4	127.8	53.01	39.8	133.0	45.47	40.1	112.4
June	55.52	41.4	134.1	57.48	38.7	148.5	52.06	40.5	128.6	54.20	41.6	130.3	55.10	39.7	137.9	45.82	40.0	114.5
July	56.35	42.3	133.3	56.44	37.7	149.6	51.12	39.7	128.9	53.89	41.3	130.4	54.13	39.2	138.1	44.58	39.1	114.0
August	55.58	41.0	135.5	55.76	37.2	150.0	51.07	39.5	129.4	53.98	40.8	132.2	52.62	38.0	138.4	45.03	39.1	115.1
September	55.94	41.0	136.6	59.35	39.2	151.5	52.62	40.2	130.9	55.82	41.2	135.5	54.37	38.9	139.6	46.87	40.4	116.0
October	58.94	42.5	138.8	60.30	39.5	152.6	53.59	40.8	131.2	54.89	40.9	134.2	55.19	39.4	140.1	47.54	40.8	116.7
November	58.94	42.0	140.4	61.30	39.8	154.0	54.27	41.1	132.0	55.69	41.2	135.1	55.93	39.7	141.0	48.64	41.4	117.5
December	58.96	42.3	139.3	64.64	41.4	156.3	55.53	41.8	132.7	55.44	41.2	134.6	57.26	40.5	141.2	48.69	41.9	116.4

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[1] See footnote, p. 54.

[21] New series; comparable January data are $38.93 and 94.9 cents.

TABLE C-1: Average earnings and hours in manufacturing and nonmanufacturing industries, 1932-47[1]—Continued

MANUFACTURING—Continued

Period	Nonferrous metals and their products—Continued												Lumber and timber basic products					
	Jewelry (precious metals) and jewelers' findings			Silverware and plated ware			Lighting equipment			Aluminum manufactures			Total: Lumber and timber basic products			Sawmills and logging camps		
	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings
			Cents			Cents			Cents			Cents			Cents			Cents
1932	......	......	......	$19.51	......	......	$19.18	......	......	$15.64	......	......	......	......	......	$11.30	36.9	30.6
1933	......	......	......	18.06	36.2	49.1	17.61	......	......	16.85	......	......	......	......	......	11.14	37.4	30.0
1934	......	......	......	20.12	36.6	54.6	19.02	......	......	18.24	......	......	......	......	......	12.90	33.2	38.9
1935	......	......	......	21.85	37.2	58.3	21.14	38.4	55.1	21.09	39.0	54.2	......	......	......	14.41	37.2	38.7
1936	......	......	......	22.90	39.0	58.4	23.05	41.6	55.6	23.52	41.3	57.0	......	......	......	17.18	43.1	39.8
1937	......	......	......	25.27	40.2	63.1	24.85	38.9	64.1	26.78	40.7	65.9	......	......	......	18.97	43.3	43.8
1938	......	......	......	23.48	36.7	64.0	22.74	33.7	67.6	25.50	36.7	69.6	......	......	......	18.01	40.4	44.6
1939	26.36	39.4	66.0	26.03	40.7	64.3	25.73	37.1	69.3	27.49	39.3	69.9	$19.06	39.0	48.9	18.29	38.4	47.6
1940	26.37	39.1	66.4	26.46	40.6	65.5	27.29	38.9	70.1	29.97	40.6	73.6	19.69	38.6	51.1	19.09	38.0	50.1
1941	28.92	40.9	69.6	31.68	44.1	72.4	31.57	40.9	77.1	35.94	42.1	83.6	22.22	39.7	55.9	21.48	39.1	55.0
1942	33.95	44.1	76.5	37.13	44.8	83.4	38.84	43.6	88.1	43.31	45.1	95.9	26.47	40.8	64.8	25.58	40.2	63.5
1943	38.17	44.8	84.7	44.70	46.5	96.2	45.47	45.6	99.8	48.56	46.9	103.6	31.73	43.1	73.6	30.68	42.5	72.2
1944	42.77	45.0	94.4	47.44	46.8	101.5	46.51	45.1	103.2	49.48	46.5	106.3	34.19	43.2	79.1	33.18	42.5	77.9
1945	44.53	44.4	99.6	48.48	46.5	104.3	45.00	42.9	104.9	47.86	44.9	106.5	33.80	42.0	80.5	32.61	41.4	78.7
1946	47.78	43.5	109.3	53.52	45.8	117.0	45.09	39.6	113.8	46.86	40.2	116.5	36.53	40.9	89.4	35.21	40.4	87.2
1947	49.32	41.7	118.8	59.46	45.8	129.9	49.74	39.1	127.1	49.60	39.4	125.7	43.35	42.2	102.7	42.28	41.8	101.0
1945: January	45.36	45.4	98.3	47.42	46.4	102.4	43.62	45.0	108.1	51.37	47.4	108.3	33.72	42.6	79.1	32.43	42.0	77.3
February	[22]44.68	45.0	[22]98.3	43.65	46.9	103.8	47.63	45.3	105.2	51.15	47.3	108.0	34.40	43.3	79.4	33.11	42.6	77.7
March	46.07	46.2	99.0	49.53	47.5	104.3	48.27	45.6	105.9	51.20	47.4	108.0	34.38	43.1	79.8	33.15	42.5	78.0
April	45.67	45.6	99.6	48.98	47.0	104.1	47.28	45.0	106.3	50.99	47.1	108.3	35.20	43.6	80.7	34.05	43.1	79.0
May	44.35	44.7	99.1	47.90	46.1	104.0	47.40	44.8	106.9	48.69	45.4	107.3	34.97	42.9	81.4	33.90	42.4	80.0
June	45.49	45.4	99.5	47.54	46.3	102.6	48.19	45.2	107.5	48.58	45.6	106.5	36.20	44.0	82.2	35.22	43.5	80.9
July	42.24	43.4	96.2	46.58	45.4	102.6	46.65	44.4	106.0	47.92	45.0	106.4	33.52	41.4	81.0	32.20	40.6	79.4
August	41.43	42.3	95.8	45.93	45.4	101.1	34.82	33.6	103.6	45.47	42.8	106.2	32.91	40.5	81.3	32.13	40.2	79.9
September	43.88	43.7	99.7	47.39	47.0	100.9	40.61	40.4	100.6	39.86	39.0	102.0	33.41	40.8	81.9	32.38	40.3	80.4
October	44.40	43.0	102.5	47.79	46.5	102.7	41.45	40.7	101.9	42.62	41.9	101.8	33.08	42.2	78.4	31.86	41.8	76.2
November	45.04	42.9	104.1	51.49	46.5	110.8	42.58	40.7	104.7	43.23	41.7	103.8	31.98	40.5	78.9	30.69	40.1	76.5
December	47.61	44.8	105.3	52.20	46.9	111.3	40.16	40.1	100.5	42.88	41.3	103.7	31.78	39.0	81.4	30.15	38.2	79.0
1946: January	46.31	44.1	104.6	51.92	47.0	110.7	41.92	41.1	102.3	41.85	41.0	102.1	32.15	38.8	83.0	30.58	38.0	80.4
February	46.39	43.9	105.7	52.59	46.8	112.5	[23]42.73	[23]41.1	[23]104.0	45.96	42.0	109.4	33.52	40.1	83.6	31.91	39.4	81.0
March	47.42	44.4	106.0	52.61	46.5	113.2	41.81	40.6	102.8	46.92	40.8	114.0	34.88	41.1	84.8	33.47	40.5	82.6
April	47.89	44.2	107.8	52.37	46.1	113.6	45.44	41.2	110.4	47.21	40.9	115.4	35.34	41.3	85.6	34.02	40.8	83.4
May	47.40	43.6	108.1	51.31	45.2	113.6	44.59	39.6	112.6	46.86	40.3	116.4	36.01	40.9	88.0	34.71	40.4	86.0
June	47.09	43.3	108.3	51.42	44.8	114.7	45.00	39.2	114.7	46.14	39.5	116.7	37.62	41.5	90.8	36.56	41.1	88.8
July	44.69	42.0	105.7	50.29	43.9	114.6	44.44	38.2	116.3	45.98	39.1	117.6	35.60	39.1	91.0	34.66	38.9	89.2
August	46.72	42.7	108.8	52.67	45.2	116.6	45.40	39.0	116.5	46.73	39.7	117.6	38.78	41.8	92.8	37.75	41.4	91.1
September	48.93	43.5	112.4	55.48	45.9	121.0	46.10	39.1	117.8	47.32	39.5	119.7	38.73	41.4	93.5	37.69	41.2	91.5
October	49.91	43.8	114.6	56.42	46.1	122.2	45.92	39.1	117.5	46.94	39.4	119.2	39.21	41.9	93.6	37.84	41.5	91.3
November	49.31	42.6	114.9	55.70	45.2	123.4	47.13	40.0	117.8	48.15	40.0	120.4	37.74	40.6	93.1	36.37	40.2	90.6
December	51.76	44.6	115.2	58.27	46.8	124.9	46.74	39.5	118.4	49.20	40.6	121.1	38.79	41.7	93.1	37.05	41.1	90.1
1947: January	48.84	42.4	115.7	57.86	46.2	125.4	47.91	39.9	120.0	[24]48.11	40.0	120.4	39.11	40.6	96.2	37.41	40.0	93.5
February	48.37	42.1	115.4	57.34	45.6	125.8	48.92	40.4	121.0	47.60	39.2	121.3	41.18	42.1	97.9	39.89	41.8	95.4
March	48.47	41.7	116.7	58.35	45.7	127.8	47.59	39.4	120.9	48.71	40.1	121.3	40.31	41.0	98.3	39.12	40.6	96.5
April	47.09	41.0	115.9	58.01	45.6	127.5	47.63	39.2	121.5	48.55	39.7	122.1	41.01	41.4	99.0	39.81	40.9	97.2
May	47.52	40.5	118.0	58.50	45.8	127.8	50.87	39.5	128.2	48.52	39.2	124.2	43.06	42.0	102.5	41.95	41.7	100.6
June	47.34	40.7	117.6	58.97	45.7	129.2	50.44	38.7	130.5	49.20	39.0	126.7	45.04	42.8	105.3	44.14	42.5	104.0
July	44.44	39.0	114.7	58.72	45.3	130.0	47.74	36.7	130.2	48.86	38.4	127.2	43.57	42.2	103.3	42.86	42.1	101.8
August	46.40	39.8	117.2	57.20	44.1	129.9	48.78	37.4	130.5	49.34	38.9	126.6	45.32	43.3	104.8	45.05	43.1	104.4
September	50.32	42.0	120.4	60.93	46.1	132.1	50.02	38.4	130.4	49.74	38.6	128.7	45.41	42.8	106.2	44.58	42.5	104.9
October	52.97	43.6	122.2	61.31	46.4	132.1	51.73	39.3	131.7	52.02	39.7	130.0	45.23	42.6	106.3	44.09	42.2	104.6
November	53.39	42.7	125.5	61.65	45.9	134.4	52.51	40.0	131.4	52.15	39.8	130.9	45.30	42.2	107.4	44.27	41.9	105.6
December	55.53	44.4	125.4	63.80	47.2	135.3	54.11	40.5	133.6	52.86	40.1	132.0	45.65	43.2	105.6	44.20	42.8	103.2

[1] See footnote, p. 54.

[22] New series; comparable January data are $44.30 and 97.1 cents.

[23] New series; comparable January data are $42.82, 41.5 hours, and 103.3 cents.

[24] New series; comparable December 1946 data are $48.34.

TABLE C-1: Average earnings and hours in manufacturing and nonmanufacturing industries, 1932-47[1]—Continued

MANUFACTURING—Continued

Period	Lumber and timber basic products-Continued			Furniture and finished lumber products												Stone, clay, and glass products		
	Planing and plywood mills			Total: Furniture and finished lumber products			Furniture			Caskets and otber morticians' goods			Wood preserving			Total: Stone, clay, and glass products		
	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly bours	Average bourly earnings	Average weekly earnings	Average weekly bours	Average bourly earnings	Average weekly earnings	Average weekly hours	Average bourly earnings
			Cents			Cents			Cents			Cents			Cents			Cents
1932	......	......	......	......	......	......	$14.02	......	......	......	......	......	......	......	......	......	......	......
1933	......	......	......	......	......	......	13.71	36.2	37.7	......	......	......	......	......	......	......	......	......
1934	......	......	......	......	......	......	15.37	34.6	44.2	......	......	......	......	......	......	......	......	......
1935	......	......	......	......	......	......	17.58	38.9	44.8	......	......	......	......	......	......	......	......	......
1936	......	......	......	......	......	......	19.25	42.4	45.5	......	......	......	......	......	......	......	......	......
1937	......	......	......	......	......	......	20.50	40.7	50.7	......	......	......	......	......	......	......	......	......
1938	......	......	......	......	......	......	19.22	36.3	52.9	......	......	......	......	......	......	......	......	......
1939	$22.17	41.1	54.0	$19.95	38.5	51.8	20.51	38.9	53.0	......	......	......	......	......	......	$23.94	37.6	63.7
1940	22.23	40.7	54.6	20.67	38.6	53.6	21.36	39.3	54.7	......	......	......	......	......	......	24.45	37.4	65.4
1941	24.89	42.0	59.2	23.78	40.8	58.2	24.65	41.4	59.8	......	......	......	......	......	......	27.44	39.0	70.4
1942	29.72	42.9	69.2	27.36	41.6	65.7	28.27	41.8	67.9	......	......	......	......	......	......	31.29	40.2	77.7
1943	34.71	44.8	77.7	32.75	44.1	74.3	33.54	44.1	76.4	$36.01	45.5	79.2	$29.56	41.8	70.7	36.25	42.7	84.9
1944	37.18	45.2	82.4	36.05	44.2	81.5	36.64	44.1	83.4	39.25	45.3	86.9	33.10	43.1	76.9	39.07	43.6	89.7
1945	37.74	43.9	85.8	36.68	43.3	84.8	37.42	43.1	87.0	39.40	44.2	89.3	34.57	43.6	79.3	39.98	43.1	92.9
1946	40.85	42.3	96.3	39.22	41.9	93.6	39.97	41.6	96.2	41.37	42.7	96.7	35.82	41.1	87.1	42.32	40.7	104.1
1947	47.74	43.5	109.7	44.36	41.7	106.3	45.45	41.7	109.0	46.25	41.7	110.6	40.53	41.3	98.1	48.18	40.5	118.9
1945: January	37.75	44.7	84.5	37.48	44.4	84.5	38.16	44.2	86.6	41.32	46.1	90.1	33.38	43.2	77.7	39.93	43.6	91.7
February	38.38	45.5	84.4	37.95	44.8	84.7	38.94	44.8	87.2	41.90	46.4	90.6	33.12	43.0	77.0	40.10	43.8	91.6
March	38.27	44.9	85.1	37.90	44.6	85.0	38.78	44.5	87.4	41.32	46.0	90.2	34.24	44.1	77.7	40.77	44.2	92.3
April	38.82	45.2	85.8	37.92	44.3	85.5	38.81	44.2	88.1	41.94	46.3	90.8	35.30	44.8	78.8	41.36	44.5	92.9
May	38.54	44.7	85.9	37.51	43.6	85.9	38.23	43.5	88.3	41.14	45.1	91.6	35.18	44.6	78.8	40.46	43.6	92.8
June	39.41	45.6	86.2	37.54	44.1	85.2	38.01	43.7	87.2	39.95	44.8	89.5	35.45	44.8	79.2	40.69	43.8	92.9
July	37.90	44.0	85.8	36.89	43.3	85.2	37.35	42.8	87.4	40.17	44.8	90.2	34.99	44.3	79.0	40.38	43.4	93.1
August	35.77	41.3	85.9	33.89	40.6	83.5	34.49	40.2	85.8	33.48	38.3	86.9	33.71	42.4	79.4	39.08	41.6	93.9
September	36.88	42.4	86.8	35.21	42.3	83.3	35.39	41.7	85.0	38.06	43.9	86.8	36.60	44.8	81.8	39.12	41.8	93.7
October	37.13	43.4	85.2	35.89	42.7	84.1	36.59	42.5	86.2	37.94	42.9	88.5	35.63	44.1	80.8	39.61	42.5	93.2
November	36.20	41.9	86.2	35.44	42.0	84.4	36.21	41.9	86.6	36.41	41.4	87.8	34.24	43.0	79.7	38.95	42.0	92.8
December	37.00	41.8	88.4	36.50	42.5	85.9	37.21	42.3	87.9	38.71	43.9	88.4	33.22	40.5	82.1	39.33	41.9	93.9
1946: January	37.14	40.9	90.4	36.07	41.8	86.4	36.56	41.4	88.2	39.19	43.7	89.6	32.11	39.3	81.7	38.33	40.7	94.2
February	38.62	42.4	90.8	36.86	42.3	87.1	37.46	42.1	89.1	39.99	43.3	92.3	32.76	40.6	80.7	39.76	41.1	96.7
March	39.34	43.0	91.4	37.78	42.5	88.8	38.46	42.2	91.3	40.08	43.3	92.2	34.32	41.5	82.7	40.98	41.6	98.5
April	39.57	43.0	92.0	38.21	42.3	90.3	39.16	42.1	93.0	40.40	42.4	94.5	34.13	40.9	83.4	41.47	41.3	100.4
May	40.27	42.6	94.4	37.88	41.3	91.7	38.87	41.3	94.3	40.95	42.4	96.3	33.73	39.7	85.0	41.00	40.2	101.9
June	41.11	42.5	96.8	38.73	41.8	92.7	39.31	41.4	95.0	41.69	42.9	96.9	35.91	41.9	85.7	42.01	40.4	104.1
July	38.71	40.0	96.5	38.37	41.0	93.7	38.80	40.6	95.7	40.23	41.5	96.4	36.15	40.9	88.4	41.80	39.5	105.7
August	42.17	42.9	98.2	40.09	41.9	95.7	40.85	41.7	98.2	40.74	42.0	96.6	36.84	41.2	89.4	43.23	40.7	106.3
September	42.04	42.2	99.5	40.86	41.8	97.7	41.62	41.6	100.2	42.74	42.8	100.2	38.01	41.5	91.7	44.03	40.5	108.7
October	43.49	43.2	100.5	41.73	42.2	99.0	42.42	41.8	101.4	42.66	42.5	100.3	38.24	41.6	91.9	44.46	40.6	109.6
November	41.86	41.8	100.4	41.62	41.7	99.9	42.41	41.4	102.4	43.14	41.5	103.5	38.90	41.8	93.1	44.91	40.3	111.4
December	44.12	43.4	101.4	42.49	42.2	100.7	43.04	41.6	103.4	45.02	43.2	103.7	38.66	42.0	92.1	45.89	41.0	111.9
1947: January	44.11	42.5	103.9	42.41	41.8	101.5	43.35	41.5	104.6	45.02	42.7	105.2	37.55	40.4	92.2	45.58	40.5	112.5
February	45.13	42.9	104.9	42.80	41.9	102.2	44.20	42.0	104.9	44.79	42.1	106.0	38.49	40.9	94.0	45.49	40.1	113.3
March	45.10	42.8	105.4	43.00	41.7	103.1	44.33	41.9	105.9	45.67	42.3	107.7	38.90	40.8	95.3	46.38	40.5	114.4
April	45.90	43.3	105.9	42.87	41.5	103.2	43.99	41.4	106.4	45.49	42.1	107.7	39.78	41.4	96.0	46.49	40.5	114.9
May	47.65	43.5	109.7	43.45	41.5	104.6	44.21	41.2	107.4	46.88	42.2	110.8	41.66	43.0	96.9	47.24	40.3	117.3
June	48.84	44.1	110.7	44.24	41.7	106.1	45.04	41.6	108.5	46.99	42.2	111.1	41.14	41.8	98.4	48.54	40.8	119.0
July	46.58	42.6	109.3	43.51	41.1	105.8	44.12	40.9	107.9	44.32	40.2	110.3	41.05	41.6	97.8	48.00	40.1	119.8
August	48.89	44.2	110.7	44.09	41.2	107.0	44.58	41.0	108.9	45.69	40.6	112.2	42.10	42.0	100.1	49.06	40.6	120.8
September	48.94	43.8	111.8	45.38	41.5	109.3	46.24	41.4	111.7	47.06	41.6	112.8	42.41	42.2	100.5	49.57	40.4	122.7
October	50.12	44.3	113.2	46.53	42.1	110.5	47.76	42.3	113.0	47.00	41.1	113.9	42.19	41.5	101.7	50.38	40.8	123.4
November	49.60	43.2	114.7	46.32	41.8	110.8	48.07	42.3	113.7	47.35	40.9	115.0	39.98	39.7	100.7	50.47	40.5	124.7
December	51.61	44.8	115.1	47.72	42.7	111.7	49.10	42.9	114.5	49.01	42.2	115.7	40.50	39.8	101.7	51.00	41.0	124.5

[1] See footnote, p. 51.

TABLE C–1: Average earnings and hours in manufacturing and nonmanufacturing industries, 1932–47[1]—Continued

MANUFACTURING—Continued

Period	Stone, clay, and glass products—Continued																	
	Glass and glassware			Glass products made from purchased glass			Cement			Brick, tile, and terra cotta			Pottery and related products			Gypsum		
	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings
			Cents			Cents			Cents			Cents			Cents			Cents
1932	$18.73	37.3	47.8	......	......	.....	$18.44	39.8	44.1	$12.54	31.7	38.8	$15.92	.....	.....	.....	.....	......
1933	18.07	35.9	48.2	......	......	......	16.55	34.1	46.7	11.88	32.2	36.7	15.82	.....	..	......	......	......
1934	18.78	33.8	55.7	......	......	.....	18.64	32.8	56.2	14.06	31.8	43.7	16.75	33.8	49.8	.....	......	......
1935	20.56	35.4	58.4	......	......	.....	19.39	33.9	57.2	16.14	35.8	45.0	19.08	36.3	54.0	.....	......	......
1936	22.35	36.8	60.9	......	......	.....	22.27	38.5	57.9	18.94	41.9	45.3	21.22	39.9	55.3	......	......	......
1937	24.97	37.1	67.5	......	......	......	25.35	38.8	65.5	20.88	40.2	51.9	23.12	39.9	59.6	......	......	
1938	23.72	33.6	70.7	......	......	......	25.47	37.1	68.7	18.88	36.1	52.3	21.67	35.0	63.2	......	......	......
1939	25.32	35.2	72.1	......	......	.....	26.67	38.2	69.9	20.55	37.8	54.3	22.74	37.2	62.5	......	......	......
1940	26.63	35.8	74.5	......	......	.....	27.34	38.5	71.0	20.95	37.0	56.3	23.10	37.2	63.4	......	.....	......
1941	29.74	37.4	79.6	......	......	......	30.30	39.9	75.9	24.32	38.3	63.4	25.38	37.7	67.5	......	......	......
1942	32.65	38.6	84.7	....	......	......	33.76	40.7	82.9	27.21	38.7	69.9	29.15	38.4	76.1	....	....	......
1943	37.37	41.4	90.3	$30.82	43.1	71.4	37.54	42.6	88.2	30.45	40.3	75.1	33 30	40.8	82.5	$43.48	48.6	89.5
1944	39.66	42.1	94.3	34.44	44.0	78.1	41.19	44.8	92.0	32.90	41.6	78.6	35.70	41.3	87.5	44.68	48.5	92.2
1945	40.27	41.3	97.6	35.84	42.8	83.0	43.67	46.0	95.0	34.86	41.7	82.9	36.68	40.9	90.8	45.13	48.1	93.8
1946	43.59	39.4	110.9	38.48	41.4	91.0	44.24	42.3	104.6	39.26	40.3	97.0	39.85	39.1	102.7	48.21	46.6	103.5
1947	50.05	39.3	127.5	42 37	40.9	103.7	49.23	41.7	118.1	45.11	40.6	110.6	45.62	38.6	118 6	53 77	45.7	117.7
1945: January	40.32	42.0	96.3	36.06	43.9	82.1	41.64	44.6	93.4	33.68	41.1	80.9	35.92	40.7	89.5	45.47	48.5	93.8
February	40.74	42.4	96.0	35.71	43.4	81.9	42.25	45.5	92.8	34.06	41.8	80.8	36.56	41.1	90.1	44.96	47.9	93.8
March	41.27	42.8	96.8	36.27	44.0	81.6	43.10	46.0	93.7	34.69	42.3	81.4	37.78	42.3	90.7	45.77	48.5	94.4
April	41.74	42.8	97.8	36.31	44.3	82.0	45.19	47.6	95.0	35.90	43.3	81.9	37.81	42.0	90.7	45.35	48.4	93.7
May	40.65	41.7	97.7	36.37	44.4	81.9	44.38	47.2	94.0	35.17	42.3	82.5	37.34	41.5	91.3	43.61	46.2	94.3
June	40.04	41.1	97.5	35.79	43.5	82.3	45.41	47.8	94.9	35.60	43.4	81.5	37.09	41.5	90.8	45.70	48.9	93.5
July	39.80	40.7	97.8	35.01	42.5	82.2	46.43	48.0	96.6	35.59	42.7	82.3	36.24	40.4	90.6	45.97	49.0	93.9
August	38.97	39.5	98.9	34.42	41.2	82.8	44.91	46.5	96.5	33.47	40.4	82.3	35.41	39.4	90.4	44.55	47.6	93.5
September	39.39	39.8	99.2	36.15	42.1	[25]84.7	43.32	45.0	96.2	34.70	40.9	84.1	35.60	39.7	90.9	45.88	49.9	92.0
October	39.90	40.5	98.5	36.94	42.9	84.4	43.83	45.6	96.1	35.37	41.7	83.7	36.98	41.3	91.0	46.12	49.1	94.0
November	39.31	40.9	96.3	35.45	41.5	84.3	42.79	45.2	94.7	35.01	40.2	86.3	36.42	40.5	91.0	44.09	46.9	93.9
December	40.99	41.7	98.5	34.70	39.8	86.0	41.08	43.5	94.5	35.05	40.2	86.2	36.80	40.1	92.8	44.33	46.9	94.4
1946: January	38.81	38.8	100.3	34.13	39.5	85.3	39.72	42.1	94.3	35.16	40.9	85.7	36.22	39.6	92.7	43.88	46.3	94.7
February	42.10	39.9	105.7	36.22	41.6	84.9	40.50	42.5	95.4	35.25	40.6	86.3	37.61	41.0	92.7	45.44	47.5	95.8
March	42.67	40.1	106.6	37.08	42.1	86.1	41.90	42.7	98.2	36.83	41.6	88.0	38.42	41.0	95.0	45.14	46.8	96.5
April	42.96	40.0	107.5	36.85	41.8	86.0	43.72	43.1	101.5	38.28	40.7	93.7	38.22	40.5	95.6	46.07	46.7	98.7
May	42.29	39.0	108.1	38.55	43.4	86.6	43.67	42.1	103.7	36.79	38.5	95.5	37.94	39.7	96.6	45.41	45.8	99.2
June	42.16	38.7	108.9	38.22	41.2	91.4	43.10	41.4	104.2	39.05	40.0	97.9	40.69	39.5	104.0	48.02	47.2	101.6
July	41.87	38.0	110.2	37.33	40.4	90.2	44.66	41.7	107.2	39.44	39.8	99.1	38.84	36.5	106.8	46.40	44.3	104.8
August	43.14	39.4	109.5	39.60	42.1	91.7	45.63	42.3	107.9	40.67	40.0	101.2	41.34	38.5	107.9	50.45	47.2	106.9
September	45.29	39.5	114.7	38.88	40.5	93.8	47.03	42.9	109.7	41.28	40.3	102.0	41.33	38.2	108.6	50.46	46.6	108.4
October	45.71	39.4	116.1	40.29	40.9	96.4	46.02	42.4	108.5	42.25	40.9	102.7	41.89	38.4	109.6	52.04	47.8	108.8
November	46.72	39.2	119.4	41.35	41.2	97.7	46.18	42.2	109.5	42.08	40.3	103.5	41.56	37.9	110.0	50.89	46.2	110.2
December	47.96	39.9	120.3	42.53	42.0	99.8	46.12	42.4	109.0	42.57	40.7	104.0	42.82	38.6	111.0	51.39	46.8	109.9
1947: January	47.78	39.4	121.4	42.36	42.0	99.3	43.79	40.6	107.9	42.22	40.3	104.1	41.97	37.7	112.1	51.49	46.2	111.4
February	46.85	38.6	121.6	41.58	41.7	100.0	44.67	41.5	107.7	42.35	40.0	105.6	42.69	37.2	114.9	51.14	45.9	111.4
March	48.45	39.6	122.6	40.75	41.1	99.1	45.12	41.6	108.5	42.78	40.1	106.3	44.26	38.3	115.7	51.95	46.3	112.2
April	48.88	39.7	123.2	40.69	40.6	100.2	45.82	42.1	108.9	42.58	39.7	106.2	44.42	38.9	115.2	50.45	45.2	111.6
May	48.66	39.3	123.9	41.94	40.8	102.8	41.46	39.3	113.2	45.77	40.6	112.3	45.45	38.9	117.1	52.05	45.8	113.5
June	50 42	40.0	126 4	42 93	40.8	105.3	51.59	42.7	120.8	45.66	41.0	110.9	45 78	38.7	118 6	52.55	45.3	116.1
July	49 34	38 6	128 1	40 87	39 6	103 1	51 72	41 9	123 5	45 25	40 5	111 3	44 86	37 9	119 2	54 91	46 1	119.1
August	50 40	39 5	128 0	41 88	40 2	104 2	52 93	42 5	124 4	46.06	40 9	112 1	46 48	38 8	120 1	55 39	45 7	121 2
September	51 57	39 2	131.7	42 91	40.1	107.1	52 68	41.8	126.1	46.51	40 9	113 3	46.14	38 5	120.7	54 68	45 0	121.5
October	52.27	39 4	132.8	44 41	41 1	108.1	52.32	42 0	124 5	47 37	41 3	114 3	48 18	39 6	122 1	56 70	45 9	123 4
November	53.05	39 2	135 4	43 87	40 4	108 5	52.19	41 9	124 5	46.81	40.5	114 8	48 25	39 4	122 7	56 35	45 3	124 5
December	53 07	39 5	134 4	46 16	42 3	109 2	51.94	42 0	123.7	47 46	41 2	114 6	48 55	39 2	123 8	56 53	45 6	124.1

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[1] See footnote, p. 54.

[25] New series; comparable August data are 81.1 cents.

TABLE C–1: Average earnings and hours in manufacturing and nonmanufacturing industries, 1932–47[1]—Continued

MANUFACTURING—Continued

Period	Stone, clay, and glass products—Continued												Textile-mill products and other fiber manufactures					
	Lime			Marble, granite, slate, and other products			Abrasives			Asbestos products			Total: Textile mill products and other fiber manufactures			Cotton manufactures, except smallwares		
	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings
			Cents			Cents			Cents			Cents			Cents			Cents
1932	......	......	......	$22.84	......	......	......	......	......	......	......	......	......	......	......	$10.85	44.5	23.9
1933	......	......	......	18.71	......	......	......	......	......	......	......	......	......	......	......	11.56	41.4	27.7
1934	......	......	......	20.13	30.7	65.6	......	......	......	......	......	......	......	......	......	12.58	33.2	37.8
1935	......	......	......	22.30	33.9	66.0	......	......	......	......	......	......	......	......	......	13.06	34.6	37.6
1936	......	......	......	24.60	38.0	64.8	......	......	......	......	......	......	......	......	......	13.79	37.5	36.8
1937	......	......	......	24.96	38.2	65.7	......	......	......	......	......	......	......	......	......	14.97	36.2	41.3
1938	......	......	......	24.80	36.2	68.5	......	......	......	......	......	......	......	......	......	13.35	33.7	39.6
1939	......	......	......	26.18	36.9	71.4	......	......	......	$24.43	39.0	62.7	$16.84	36.6	46.0	14.26	36.7	38.9
1940	......	......	......	25.49	35.6	71.9	......	......	......	25.21	39.4	64.0	17.20	35.7	48.2	14.85	36.0	41.2
1941	......	......	......	27.07	37.3	72.7	......	......	......	29.81	42.2	70.6	20.30	38.6	52.6	18.13	39.1	46.4
1942	......	......	......	30.23	38.9	77.4	......	......	......	37.18	44.6	83.3	24.31	40.2	60.5	22.03	40.8	54.0
1943	$34.35	46.5	73.5	35.55	41.7	84.6	$44.68	47.3	94.5	44.25	47.6	93.0	27.61	41.5	66.5	24.43	41.5	59.0
1944	37.39	48.3	77.4	39.11	43.7	89.3	47.14	47.4	99.5	47.47	48.4	98.1	29.63	41.9	70.8	26.45	42.0	62.9
1945	39.31	47.8	81.6	40.41	43.1	93.8	47.71	46.3	103.1	47.42	47.0	100.9	31.08	41.1	75.7	28.20	41.3	68.3
1946	42.79	46.1	92.3	42.55	42.2	100.7	46.02	39.8	115.5	48.41	42.9	112.9	35.89	40.2	89.3	33.10	39.9	83.0
1947	47.82	45.6	103.9	46.27	41.9	110.2	52.14	40.6	128.6	53.16	42.6	124.9	40.94	39.5	103.5	38.83	39.6	98.2
1945: January	36.35	46.3	79.5	40.65	45.0	89.5	49.15	48.2	102.1	49.56	49.4	100.4	30.78	42.3	72.9	27.78	42.6	65.2
February	37.05	47.3	[26]78.6	39.98	43.4	91.6	49.08	48.4	101.4	[27]48.71	48.6	[27]100.2	30.88	42.3	73.1	27.63	42.4	65.2
March	38.06	48.1	79.1	39.95	43.5	91.7	49.74	48.5	102.5	48.85	48.5	100.7	31.07	42.4	73.3	27.79	42.5	65.4
April	40.21	49.6	80.8	43.07	45.6	94.6	48.96	48.1	101.8	48.64	48.0	101.3	30.81	41.9	73.5	27.70	42.3	65.5
May	38.46	47.9	79.5	40.45	44.3	91.7	49.43	48.1	102.8	46.77	46.6	100.4	30.38	40.7	74.5	27.52	41.3	66.7
June	40.05	48.7	80.8	41.90	44.6	93.6	50.55	48.3	104.6	48.75	48.0	101.6	31.67	41.8	75.9	29.01	42.0	69.2
July	40.65	48.9	82.0	41.96	44.1	95.6	48.40	47.6	101.8	48.91	47.9	102.2	31.50	41.3	76.3	29.38	41.7	70.5
August	39.54	48.1	81.3	37.64	39.9	94.0	48.75	45.1	108.1	47.40	46.8	101.2	29.60	38.4	77.0	27.13	38.3	70.8
September	39.73	47.2	84.0	41.26	42.4	97.4	43.17	41.4	104.4	45.48	45.9	99.1	31.01	40.6	76.3	28.32	40.6	69.8
October	41.31	48.7	83.6	40.18	42.1	95.4	42.93	42.2	101.8	45.31	45.0	100.6	31.25	40.4	77.3	28.21	40.4	69.8
November	40.04	46.7	84.9	38.47	40.4	95.0	43.98	42.9	102.4	44.85	44.0	101.8	31.65	40.3	78.6	28.72	40.3	71.3
December	40.08	45.8	85.8	39.72	41.4	96.0	44.98	43.1	104.4	45.02	43.7	103.1	32.41	40.7	79.5	29.25	40.5	72.1
1946: January	38.28	44.9	84.3	38.88	41.2	94.4	42.10	40.0	105.2	45.96	44.3	103.8	32.44	40.4	80.3	29.01	40.1	72.4
February	38.58	45.3	84.5	40.22	41.3	97.1	41.20	39.0	105.6	46.27	43.6	106.2	33.76	40.5	83.3	30.14	40.0	75.3
March	41.14	46.9	87.0	41.53	42.1	98.8	47.52	42.6	111.5	45.32	42.1	107.6	34.69	40.4	85.8	31.36	39.8	78.8
April	42.53	48.2	87.9	42.66	42.7	99.8	44.30	39.4	112.3	46.82	44.0	106.2	34.98	40.3	86.9	31.79	39.8	79.9
May	40.28	44.7	89.5	43.47	42.9	101.3	45.11	39.3	114.8	47.42	42.8	110.7	34.80	39.8	87.3	31.58	39.3	80.3
June	42.06	45.2	91.6	42.51	42.3	100.0	46.78	40.3	116.1	48.18	42.8	112.5	35.02	40.0	87.5	31.75	39.5	80.3
July	42.11	44.9	93.2	42.44	41.9	100.4	47.02	39.9	117.9	48.70	42.9	113.6	34.76	39.6	87.7	31.64	39.4	80.3
August	45.27	46.6	96.7	43.68	43.0	101.0	46.63	39.9	116.8	49.56	43.5	113.9	37.00	40.1	92.4	34.81	39.8	87.5
September	45.66	46.9	97.4	42.64	41.6	102.2	45.35	38.0	19.4	49.19	42.9	114.5	37.54	40.0	94.0	35.35	39.8	88.8
October	45.12	46.6	96.6	44.18	42.9	102.6	45.11	38.1	118.5	49.86	42.0	118.7	38.09	40.2	94.8	35.57	39.9	89.2
November	45.69	46.2	98.8	42.76	41.6	103.4	48.45	39.9	121.4	50.18	41.9	119.8	38.38	40.2	95.5	36.14	40.3	89.8
December	46.06	46.7	98.2	44.26	42.4	104.9	50.38	41.6	121.2	50.79	42.7	118.8	39.26	40.9	95.9	36.85	40.9	90.0
1947: January	43.83	44.7	98.3	43.88	42.1	104.5	52.70	43.2	122.0	51.91	43.2	120.2	39.29	40.5	97.0	37.06	40.6	91.4
February	44.80	45.3	98.1	44.18	41.9	105.6	49.46	40.7	121.6	52.73	43.9	120.1	40.32	40.4	99.7	37.56	40.5	92.7
March	45.70	46.2	98.6	45.30	42.0	107.5	50.63	40.4	125.4	53.03	43.8	121.0	41.01	40.0	102.4	39.22	40.1	97.9
April	46.53	46.6	99.4	45.51	42.1	107.9	49.72	39.7	125.3	52.46	42.8	122.5	40.12	39.1	102.7	38.53	39.3	98.1
May	47.19	46.2	101.7	46.67	42.9	108.5	50.10	39.6	126.4	52.58	42.6	123.5	39.89	38.9	102.5	37.73	38.8	97.4
June	48.45	46.0	104.5	46.07	42.2	108.5	48.66	39.1	12 4	54.21	42.9	126.4	39.54	38.6	102.4	37.10	38.3	97.0
July	47.23	44.9	104.2	45.48	42.1	107.9	50.00	39.3	127.3	54.90	43.3	126.8	39.48	38.4	102.8	37.21	38.3	97.3
August	48.90	45.4	106.9	46.61	41.4	112.6	51.26	39.2	130.6	53.53	42.2	127.7	39.44	38.2	103.2	37.50	38.4	97.7
September	49.23	45.0	108.1	47.56	42.2	112.7	54.57	40.3	135.6	52.30	41.3	126.6	41.39	39.5	104.8	38.55	39.2	98.5
October	51.96	46.1	108.5	48.60	42.5	114.3	54.30	40.4	134.5	52.57	41.3	127.3	41.94	39.7	105.5	29.32	39.6	99.1
November	50.33	45.8	108.9	46.27	40.2	115.2	55.68	40.7	137.0	54.05	41.9	129.2	43.73	40.1	109.0	42.47	40.4	105.1
December	50.48	46.4	108.5	48.68	41.9	116.0	60.68	44.0	138.0	53.85	41.8	128.9	45.15	41.0	110.0	43.64	41.1	106.1

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[1] See footnote, p. 54.

[26] New series; comparable January data are 78.4 cents.

[27] New series; comparable January data are $48.69, and 99.4 cents.

TABLE C–1: Average earnings and hours in manufacturing and nonmanufacturing industries, 1932–47[1]—Continued

MANUFACTURING—Continued

Period	Textile-mill products and other fiber manufactures—Continued																	
	Cotton smallwares			Silk and rayon goods			Woolen and worsted manufactures, except dyeing and finishing			Hosiery			Knitted cloth			Knitted outerwear and knitted gloves		
	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings
			Cents			Cents			Cents			Cents			Cents			Cents
1932	$15.34	......	......	$13.44	38.7	34.3	$16.32	42.8	38.0	$13.70	43.1	34.3	$14.54	......	......	$15.13	......	......
1933	14.91	......	......	13.29	37.1	35.6	16.26	41.3	39.6	14.03	39.9	38.4	13.79	......	......	14.12	......	......
1934	15.85	35.2	45.2	14.82	33.4	44.3	16.44	33.3	49.3	16.27	34.0	48.6	15.44	......	......	15.64	34.4	44.3
1935	16.69	37.2	44.8	15.55	34.8	44.7	18.13	36.8	49.3	17.36	34.3	51.5	15.56	......	......	16.78	36.3	45.7
1936	17.26	38.6	44.7	15.44	36.2	42.6	18.11	36.2	50.1	17.89	35.5	52.2	16.56	38.9	43.5	16.99	37.8	44.6
1937	17.85	37.7	48.1	16.16	35.9	45.0	19.99	35.3	56.9	18.87	35.5	54.7	17.22	38.7	45.7	17.33	37.1	46.3
1938	17.40	36.8	47.6	15.32	34.9	43.5	18.53	34.1	54.5	18.93	34.9	55.2	17.19	37.2	47.4	16.77	35.6	46.4
1939	18.22	39.0	47.4	15.78	36.5	42.9	19.21	36.4	52.8	18.98	35.6	53.6	18.15	38.4	46.8	17.14	37.0	46.1
1940	18.41	37.8	49.2	16.33	35.7	45.5	20.33	36.1	56.4	18.69	34.0	55.3	18.91	38.0	48.9	17.63	36.4	47.8
1941	21.97	40.9	53.9	19.00	37.8	50.0	24.85	39.2	63.4	19.85	35.9	55.4	21.66	39.6	54.1	19.24	37.8	50.4
1942	28.44	43.5	65.7	23.66	40.4	58.6	29.81	40.1	74.4	22.26	36.7	61.0	26.16	41.2	63.2	22.20	38.5	57.1
1943	31.56	43.5	72.7	26.93	41.7	64.5	33.67	41.6	80.9	26.84	38.7	69.5	30.17	43.1	69.4	27.21	40.3	66.9
1944	33.13	43.2	76.8	28.98	42.0	69.0	35.48	42.2	84.1	28.95	38.5	75.3	32.04	43.7	72.8	29.99	40.1	74.1
1945	34.99	42.9	81.7	30.82	41.4	74.4	36.27	41.6	87.2	30.01	37.5	80.0	34.24	43.4	78.7	31.38	39.0	79.6
1946	37.28	41.1	90.7	36.09	41.2	87.5	41.57	41.1	101.2	35.14	38.1	92.2	38.84	42.4	91.5	34.99	39.2	88.3
1947	40.14	39.5	101.5	42.36	41.0	103.4	45.90	39.7	115.6	38.63	37.3	103.6	41.11	40.8	100.0	36.39	38.0	95.0
1945: January	35.68	44.4	80.5	29.76	41.9	70.9	36.73	42.9	85.6	29.81	38.4	77.7	33.59	44.5	74.4	30.83	39.3	77.3
February	35.66	44.2	80.8	30.17	42.4	71.1	36.79	42.9	85.8	30.07	38.6	77.9	33.21	43.6	[28]76.1	31.77	40.1	78.1
March	36.21	44.6	81.4	30.33	42.5	71.3	36.95	42.9	86.2	30.02	38.6	77.8	33.61	44.0	76.6	32.28	40.0	79.5
April	35.43	43.6	81.5	29.83	41.6	71.6	36.52	42.2	86.5	29.82	38.0	78.4	33.10	43.3	76.4	31.84	39.6	79.3
May	34.52	42.4	81.5	29.84	40.7	73.2	35.38	40.7	86.9	28.87	36.9	78.1	32.64	42.3	77.9	31.29	38.8	80.1
June	36.58	43.9	83.5	31.38	42.0	74.7	36.93	42.3	87.3	30.13	38.1	79.1	34.06	43.6	77.6	32.25	39.5	81.3
July	35.60	43.9	81.4	31.26	41.5	75.3	36.39	44.9	86.9	28.90	36.5	79.2	33.77	43.2	77.6	30.81	39.3	78.1
August	34.62	42.1	82.2	30.07	39.3	76.6	34.59	39.5	87.7	27.31	34.2	79.8	32.27	41.5	77.8	28.82	36.7	78.0
September	33.22	41.7	79.6	31.05	40.8	76.1	35.84	41.4	86.6	30.67	37.6	81.7	35.42	43.9	80.7	30.64	38.1	79.3
October	32.86	40.8	80.4	31.86	41.8	76.2	35.60	40.4	88.2	31.34	37.7	83.0	[29]35.96	[29]44.0	[29]81.8	32.21	39.2	81.3
November	33.57	40.6	82.6	31.92	41.1	77.7	35.71	40.5	88.4	31.29	37.7	83.1	36.09	43.2	83.1	31.79	38.8	81.1
December	35.42	42.1	84.2	32.48	41.2	78.8	37.64	41.9	90.0	31.66	37.8	83.8	36.18	43.9	82.4	32.17	38.9	81.6
1946: January	35.81	42.4	84.6	32.42	41.0	79.0	38.52	41.8	92.2	31.68	37.4	84.6	36.66	43.5	84.3	31.87	38.3	82.2
February	35.59	42.1	84.6	33.74	41.5	81.2	41.04	41.6	98.8	33.15	38.4	86.2	37.73	43.8	86.2	33.14	39.3	83.8
March	36.59	42.2	86.7	34.74	41.4	83.8	41.29	41.4	99.9	33.68	38.6	87.3	38.53	43.8	88.0	34.50	39.9	85.6
April	36.45	41.6	87.6	35.10	41.6	84.5	41.81	41.4	101.0	33.87	38.4	88.2	38.56	43.1	89.4	34.71	39.6	86.7
May	35.21	40.3	87.4	35.11	41.3	84.9	41.67	41.1	101.4	33.77	38.0	88.8	37.98	41.8	90.2	35.60	39.8	88.1
June	36.41	40.8	89.3	34.64	40.8	85.0	41.63	41.1	101.4	33.89	38.1	88.9	39.41	43.1	90.9	35.31	39.6	87.9
July	37.44	41.2	90.9	34.94	40.7	85.8	41.18	40.5	101.7	33.47	37.2	89.9	38.98	42.3	92.3	33.73	38.6	87.0
August	38.67	41.0	94.2	37.42	41.3	90.6	41.88	40.9	102.4	35.96	38.1	94.6	39.20	42.2	92.9	34.35	38.6	88.1
September	38.33	40.5	94.7	37.20	40.4	92.2	42.44	41.1	103.4	36.65	37.7	97.4	39.85	41.9	95.1	35.84	38.6	91.8
October	39.00	40.6	96.1	38.67	41.6	93.1	42.40	40.9	103.7	37.65	38.3	98.2	39.94	41.7	95.7	36.69	39.4	92.2
November	38.09	39.7	96.1	38.69	41.1	94.1	41.67	40.1	103.8	38.20	38.4	99.5	39.99	40.9	96.7	37.14	39.5	93.0
December	39.64	41.0	96.7	39.57	41.8	94.4	42.96	41.3	103.9	39.05	38.8	100.6	39.26	40.2	97.2	36.74	39.2	92.8
1947: January	40.48	41.0	98.7	40.21	41.1	97.5	43.10	41.3	104.5	38.35	38.1	100.7	39.03	40.9	95.4	36.49	38.4	94.4
February	40.59	40.5	100.4	41.45	41.6	99.6	47.44	41.0	115.6	38.40	38.1	100.9	40.89	41.3	98.9	36.68	38.4	94.8
March	40.69	40.4	100.8	41.94	41.5	101.2	46.28	40.1	115.5	38.41	37.8	101.6	41.00	41.6	98.6	36.75	38.5	94.7
April	39.68	39.5	101.7	40.89	40.2	101.6	45.26	39.1	115.9	36.35	35.9	101.0	39.49	39.9	98.9	35.58	37.3	95.2
May	39.60	39.1	101.4	41.73	41.0	101.9	45.28	39.2	115.8	36.42	35.9	101.4	40.06	40.3	98.5	35.51	37.6	93.9
June	38.85	38.5	101.0	40.97	40.3	101.7	45.75	39.4	116.0	35.39	35.2	100.5	40.32	40.3	98.2	35.11	37.0	94.1
July	39.68	39.1	101.6	41.17	40.3	102.3	45.33	39.1	116.1	36.37	35.3	103.0	40.91	40.8	99.1	34.51	36.8	92.6
August	38.58	38.2	100.9	41.65	40.0	104.3	42.28	36.6	115.6	38.08	36.8	103.4	41.11	40.7	100.1	35.42	37.6	92.6
September	40.67	39.7	102.4	43.23	40.9	105.7	46.99	40.2	116.9	39.48	37.7	104.9	41.71	40.5	[*]102.7	35.86	37.5	95.1
October	40.49	39.1	103.5	43.57	41.0	106.2	46.70	39.7	117.8	41.00	38.3	106.9	42.21	41.1	102.1	38.01	38.8	96.9
November	40.13	38.7	103.6	44.84	41.2	108.8	46.95	39.6	118.8	42.11	38.7	108.7	42.53	40.8	103.5	38.30	38.7	98.0
December	42.35	40.5	104.5	46.48	42.3	110.0	49.12	41.2	119.2	42.95	39.1	109.8	44.18	41.9	104.5	38.02	38.5	97.8

[1] See footnote, p. 54.

[28] New series; comparable January data are 75.5 cents.

[29] New series; comparable September data are $36.09, 44.2 hours, and 81.7 cents.

[*] New series; comparable August data are 101.2 cents.

TABLE C-1: Average earnings and hours in manufacturing and nonmanufacturing industries, 1932–47[1]—Continued

MANUFACTURING—Continued

Period	Textile-mill products and other fiber manufactures—Continued																	
	Knitted underwear			Dyeing and finishing textiles, including woolen and worsted			Carpets and rugs, wool			Hats, fur felt			Jute goods, except felts			Cordage and twine		
	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings
			Cents			Cents			Cents			Cents			Cents			Cents
1932	$12.14	......	......	$18.81	44.5	41.9	$15.71	31.6	45.4	$17.98	......	......	......	......	......	......	......	......
1933	12.19	39.3	30.4	17.97	42.4	42.5	16.68	36.8	45.5	19.09	......	......	......	......	......	......	......	......
1934	13.33	33.3	40.0	17.95	34.2	52.3	17.45	31.3	54.8	21.04	......	......	......	......	......	......	......	......
1935	13.80	34.5	40.1	18.95	35.4	53.3	20.55	36.5	56.4	22.62	31.8	70.0	......	......	......	......	......	......
1936	14.47	37.6	38.5	20.17	38.9	51.7	20.61	36.7	56.3	23.29	34.4	67.5	......	......	......	......	......	......
1937	14.67	35.7	41.0	21.23	37.5	56.1	21.28	34.1	62.2	23.73	33.0	72.3	......	......	......	......	......	......
1938	13.90	33.0	42.2	20.27	37.2	54.1	20.00	31.4	63.8	22.39	31.5	71.1	......	......	......	......	......	......
1939	15.05	36.9	41.0	20.82	38.6	53.5	23.25	36.1	64.4	22.73	32.2	70.7	......	......	......	......	......	......
1940	15.29	35.6	43.1	20.62	37.6	54.5	23.56	35.2	66.9	23.71	32.5	73.4	......	......	......	......	......	......
1941	17.71	38.2	46.1	23.43	40.0	58.2	27.71	38.8	71.4	27.93	35.4	79.6	......	......	......	......	......	......
1942	21.51	39.5	53.4	28.21	42.2	66.8	31.70	40.1	79.2	29.77	34.9	85.6	......	......	......	......	......	......
1943	24.58	41.1	59.5	32.09	44.3	72.4	36.79	42.9	86.1	39.27	41.2	95.6	$31.58	44.0	71.7	$29.75	44.3	67.0
1944	26.49	40.6	64.7	34.21	44.9	76.1	39.17	43.4	90.5	43.04	41.4	104.6	33.93	44.6	76.0	32.50	45.1	71.9
1945	27.58	39.6	69.3	36.02	44.3	81.2	39.68	42.2	94.3	45.55	40.7	111.7	35.27	44.6	79.2	33.82	44.4	76.0
1946	31.06	38.5	80.4	40.98	42.6	96.2	42.75	40.8	105.0	51.23	41.0	124.8	37.60	43.6	87.2	35.50	41.0	88.6
1947	35.45	39.0	90.9	46.54	41.7	111.4	49.89	40.9	122.1	48.32	37.1	130.2	39.68	42.4	94.8	40.23	39.9	100.9
1945: January	27.20	40.4	67.0	35.32	45.3	77.9	40.26	43.7	92.3	45.35	41.7	108.7	35.46	45.5	77.9	33.46	45.2	73.9
February	27.78	41.0	67.5	35.73	45.6	78.3	40.54	43.7	93.1	46.18	41.8	110.3	35.47	45.1	78.7	33.79	45.5	74.2
March	28.10	41.4	67.7	35.81	45.7	78.4	41.39	44.1	94.0	46.94	42.2	110.9	35.49	45.0	78.8	34.06	45.3	75.0
April	28.10	40.8	68.6	35.59	45.4	78.4	41.48	43.7	95.2	43.18	39.7	108.7	35.22	44.9	78.4	34.13	45.2	75.3
May	27.39	39.5	69.0	34.33	43.7	78.6	38.76	40.5	95.7	43.99	39.6	110.0	35.26	44.5	79.2	33.87	44.7	75.7
June	28.05	40.5	69.0	35.64	44.9	79.4	41.70	43.6	96.0	42.91	38.9	109.3	35.21	44.5	79.1	34.75	45.1	76.8
July	27.77	39.6	69.6	35.44	44.2	80.1	40.82	42.8	95.5	43.24	41.2	108.2	34.50	43.9	78.5	34.42	44.6	77.0
August	26.61	37.3	70.8	34.46	41.7	82.5	35.00	38.2	91.8	42.41	38.1	111.0	34.60	44.0	78.7	32.63	42.5	76.6
September	27.46	38.9	70.2	[30]37.18	44.0	[30]83.9	37.80	41.5	91.2	45.75	41.7	109.7	35.67	45.1	79.2	34.04	44.2	76.8
October	27.42	38.9	70.1	36.65	43.0	85.2	37.98	41.7	91.1	48.34	41.5	115.4	35.20	44.5	79.1	33.51	43.7	76.7
November	27.21	38.1	71.1	37.73	43.6	86.6	39.96	40.9	98.0	48.67	41.4	117.2	35.54	43.8	81.2	33.49	43.4	77.2
December	27.77	38.5	71.8	38.85	44.2	87.9	39.92	41.0	97.5	49.33	41.7	118.4	35.55	44.0	80.8	33.74	43.3	77.8
1946: January	27.90	38.4	72.5	38.84	44.1	88.2	39.62	40.4	98.3	50.03	42.1	118.5	34.89	42.7	81.6	33.58	42.8	78.2
February	28.67	38.9	73.3	39.93	43.8	91.2	40.09	40.7	98.5	48.75	41.2	118.1	36.28	43.7	83.1	31.70	40.4	78.5
March	29.64	39.1	75.5	40.30	43.3	93.1	40.31	40.5	99.7	51.93	42.6	121.0	36.82	43.8	84.1	33.78	41.5	81.3
April	29.67	38.3	77.2	39.80	42.1	94.3	40.80	40.7	100.4	51.12	42.0	121.6	[31]36.46	43.8	84.5	33.98	41.0	82.8
May	29.64	37.6	78.3	39.00	41.4	94.2	40.98	40.3	101.8	49.78	41.1	120.3	36.48	44.1	84.0	33.36	39.8	83.7
June	30.60	38.4	79.2	40.64	42.9	94.8	41.64	40.8	102.4	49.57	40.8	121.4	36.47	43.9	84.4	34.68	40.8	84.8
July	31.00	38.1	81.0	39.66	41.9	94.5	41.03	40.0	102.7	48.38	39.3	123.3	36.39	42.2	87.8	34.43	40.2	85.6
August	31.79	38.1	83.0	40.92	42.1	97.1	42.10	40.4	104.3	52.93	39.7	135.2	38.23	43.4	89.7	37.17	41.3	90.1
September	32.70	38.1	85.2	40.72	41.4	98.3	43.72	41.3	106.1	53.25	40.9	130.0	39.47	44.0	91.2	37.86	41.4	91.4
October	33.05	38.4	85.5	42.69	42.3	100.8	46.01	41.1	112.2	52.92	40.6	130.2	39.52	43.7	91.8	37.63	40.9	92.2
November	33.31	38.7	85.9	43.54	42.2	103.3	46.83	41.2	113.9	52.83	40.2	130.9	39.68	43.8	92.0	37.94	40.3	94.3
December	34.26	39.3	86.8	45.38	43.6	104.2	47.86	41.8	114.7	53.70	41.3	129.9	40.57	44.4	92.9	39.03	41.4	94.4
1947: January	33.70	38.7	86.9	45.67	43.3	105.5	46.51	40.7	114.5	50.15	39.1	127.7	40.09	43.9	92.8	39.14	41.1	95.1
February	34.22	38.8	88.1	45.75	42.9	106.5	46.51	40.5	114.9	49.60	38.9	127.2	41.74	43.4	97.9	39.51	41.0	96.4
March	34.86	38.7	89.9	46.12	42.6	108.3	47.12	40.8	115.8	49.22	38.0	129.7	41.57	43.2	97.9	40.00	40.6	98.4
April	34.22	38.3	89.1	45.95	41.3	111.4	47.69	40.4	118.1	47.28	36.3	130.0	40.98	42.7	97.7	40.23	40.5	99.2
May	35.18	39.0	90.4	45.62	41.1	110.8	48.30	41.2	117.5	46.81	36.4	128.9	42.12	43.4	98.5	39.11	39.2	99.6
June	34.85	38.8	90.4	46.13	41.6	110.9	49.02	41.3	118.8	48.88	37.5	131.1	41.13	43.0	97.4	38.26	37.9	101.2
July	34.65	38.4	90.2	44.37	40.1	110.4	49.80	40.6	122.8	47.47	36.5	130.2	37.92	41.0	94.1	38.71	38.2	101.4
August	34.60	38.2	90.4	45.31	40.5	111.6	47.43	39.4	120.6	45.67	34.7	131.2	36.40	41.0	90.8	39.10	38.6	101.4
September	36.30	39.5	91.8	47.89	41.9	114.2	52.38	41.0	127.9	47.44	35.9	133.4	37.51	41.4	*90.6	40.00	38.8	103.0
October	36.50	39.3	93.0	47.16	41.5	113.6	53.53	41.4	129.5	48.33	37.0	131.1	37.27	41.1	90.6	41.70	40.1	104.1
November	37.41	39.5	94.7	48.16	41.2	116.7	53.99	41.6	130.1	47.10	36.2	130.3	37.60	41.5	90.6	42.55	40.4	105.3
December	38.17	40.2	95.1	50.25	42.7	117.5	54.91	42.2	130.6	51.52	39.1	132.1	38.21	41.2	92.7	44.13	41.3	106.8

[1] See footnote, p. 54.

[30] New series; comparable August data are $35.90 and 85.8 cents.

[31] New series; comparable March data are $36.20.

*New series; comparable August data are 89.1 cents.

TABLE C–1: Average earnings and hours in manufacturing and nonmanufacturing industries, 1932–47[1]—Continued

MANUFACTURING—Continued

Period	Apparel and other finished textile products																	
	Total: Apparel and other finished textile products			Men's clothing, not elsewhere classified			Shirts, collars, and nightwear			Underwear and neckwear, men's			Work shirts			Women's clothing, not elsewhere classified		
	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings
			Cents			Cents			Cents			Cents			Cents			Cents
1932	......	......	......	$13.78	......	......	......	......	......	......	......	......	......	......	......	$18.33	......	......
1933	......	......	......	14.30	......	......	......	......	......	......	......	......	......	......	......	17.03	......	......
1934	......	......	......	16.26	27.8	58.0	......	......	......	......	......	......	......	......	......	18.47	......	......
1935	......	......	......	18.27	30.4	59.5	......	......	......	......	......	......	......	......	......	18.59	31.9	55.7
1936	......	......	......	18.39	32.2	56.0	......	......	......	......	......	......	......	......	......	18.81	33.3	52.9
1937	......	......	......	18.98	32.0	59.1	......	......	......	......	......	......	......	......	......	19.35	31.8	56.8
1938	......	......	......	17.35	29.5	58.6	......	......	......	......	......	......	......	......	......	19.00	32.4	53.8
1939	$18.17	34.5	52.7	19.32	33.2	58.1	$13.75	34.6	39.8	$14.18	35.4	40.1	$11.03	35.8	30.9	19.20	33.9	51.9
1940	18.37	33.8	54.4	19.31	32.5	59.3	14.18	33.7	42.0	14.75	33.6	43.9	12.03	34.3	35.1	19.65	33.8	53.8
1941	20.64	35.7	57.8	22.51	35.7	63.0	16.72	36.7	45.5	16.68	35.7	46.7	14.45	36.7	39.4	21.78	35.2	58.2
1942	22.92	36.3	63.0	24.75	36.1	68.5	19.31	36.8	52.7	19.08	35.4	53.9	16.73	37.1	44.9	25.45	35.9	67.8
1943	26.97	38.0	71.0	28.66	38.1	75.0	21.76	37.4	58.2	23.60	37.2	63.4	18.49	38.2	48.2	32.29	37.4	84.8
1944	30.33	38.0	79.7	31.99	38.7	82.3	24.11	37.1	65.0	26.18	37.2	70.4	20.16	37.0	53.3	37.07	37.0	97.3
1945	31.67	36.9	85.8	33.32	37.6	88.4	25.55	36.9	69.4	27.42	36.6	74.9	20.72	35.9	57.6	40.12	35.8	109.3
1946	35.62	36.9	96.7	37.96	37.5	100.7	29.38	37.1	79.0	31.31	36.9	83.4	23.15	35.4	65.3	44.94	35.9	122.0
1947	37.29	36.3	102.8	41.43	37.2	110.6	32.40	37.1	87.4	33.65	36.0	93.4	25.30	34.7	72.9	45.29	35.3	125.3
1945: January	32.42	38.2	84.9	33.90	38.9	86.7	25.00	37.0	67.5	26.56	36.5	72.9	21.17	36.8	56.3	40.35	37.0	105.4
February	33.41	38.8	86.2	34.69	39.7	86.7	26.15	38.2	68.7	28.02	37.8	74.6	[32]21.23	37.4	56.7	[33]42.70	37.6	[33]110.6
March	34.06	39.0	87.4	35.53	40.0	88.6	26.59	38.7	68.8	28.21	38.1	74.0	21.25	37.0	57.3	43.71	37.8	112.2
April	32.65	37.9	86.2	34.72	39.0	88.6	26.29	37.9	69.5	28.13	37.8	74.3	21.10	36.8	57.2	41.37	36.4	110.2
May	30.81	36.4	84.7	32.89	37.2	88.2	25.45	36.5	69.8	27.34	36.2	75.5	20.52	35.6	57.7	38.81	35.3	107.3
June	31.26	37.2	83.9	34.38	38.4	89.4	25.60	36.9	69.5	27.98	37.8	74.0	20.93	36.3	57.5	38.15	35.7	104.3
July	30.38	36.7	82.9	33.32	37.2	89.1	25.52	36.9	69.2	27.16	36.7	73.9	20.20	35.5	56.8	36.72	35.2	102.2
August	28.06	33.2	84.6	30.10	33.6	89.6	23.03	33.3	70.0	23.72	31.7	74.8	19.46	33.5	57.9	33.75	31.5	105.2
September	31.81	36.2	87.8	32.40	36.1	89.7	25.53	36.6	70.0	26.98	35.8	75.4	20.97	35.8	58.5	40.87	35.6	111.9
October	32.12	36.7	87.5	32.38	36.7	88.3	26.06	37.4	69.6	28.02	36.7	76.3	22.05	37.1	59.5	41.45	35.9	113.0
November	31.16	36.1	86.4	31.98	36.3	88.1	25.52	36.8	69.8	27.62	36.6	75.4	20.83	35.3	58.9	40.11	35.3	111.3
December	31.88	36.4	87.5	32.77	37.0	88.8	25.74	36.6	70.5	28.93	37.5	77.1	19.37	33.6	57.6	41.07	35.6	112.6
1946: January	33.24	36.7	90.6	33.88	37.0	91.2	26.54	36.2	72.8	28.13	36.0	78.1	20.73	34.9	59.4	42.95	36.1	116.6
February	33.70	36.5	92.2	34.94	36.8	94.7	28.06	36.9	76.1	29.62	37.3	79.4	21.08	35.0	60.2	42.50	35.8	116.8
March	36.01	37.5	96.1	37.04	37.5	98.1	28.55	37.2	76.7	30.64	36.7	83.6	21.45	35.2	60.9	46.83	37.3	122.2
April	35.92	37.2	96.6	37.50	37.7	99.3	28.65	37.1	77.6	29.68	35.9	83.1	22.45	36.1	62.2	46.29	36.5	123.4
May	35.28	36.9	95.6	37.68	37.6	99.7	28.92	37.0	77.7	29.96	35.7	83.9	22.47	35.6	63.1	45.10	36.4	121.1
June	35.23	37.1	95.1	38.18	38.1	99.9	28.73	37.1	77.0	30.56	36.4	83.9	22.62	35.2	64.2	44.02	36.1	119.1
July	33.83	36.0	94.1	35.84	36.2	98.5	27.90	36.1	76.9	29.90	36.4	82.2	22.30	34.4	64.8	42.67	35.4	118.0
August	36.48	37.0	98.6	38.11	37.5	100.9	28.76	36.8	78.2	31.53	37.5	84.0	23.48	35.7	65.8	47.45	36.4	126.3
September	37.25	36.9	101.0	39.14	37.7	102.7	29.62	37.0	79.9	33.13	37.9	87.5	23.55	34.5	68.2	47.82	35.8	130.0
October	36.68	36.8	99.7	38.89	37.7	102.4	30.39	37.4	80.9	33.32	37.5	88.9	24.00	34.8	69.0	46.25	35.5	126.6
November	36.54	36.6	99.8	41.39	37.8	108.6	32.04	37.6	84.7	34.78	38.6	90.1	26.01	36.6	71.2	43.28	34.9	121.1
December	37.23	37.0	100.6	41.78	38.1	108.9	33.22	38.1	86.8	33.68	36.9	91.3	26.72	36.9	72.4	44.14	35.3	122.3
1947: January	38.22	36.9	103.7	41.70	37.8	109.5	32.17	37.1	86.9	33.37	36.7	90.8	25.43	34.7	73.1	47.30	35.7	129.7
February	38.74	36.9	104.9	41.86	37.8	109.7	32.32	37.2	86.9	33.49	36.6	91.5	25.69	35.8	71.6	48.77	36.2	131.4
March	38.41	36.7	104.5	41.99	37.6	110.6	32.11	37.0	86.9	34.35	36.5	94.0	25.37	34.3	73.3	47.75	36.1	129.3
April	35.44	35.5	99.9	40.45	36.7	109.4	31.62	36.5	86.8	32.18	34.3	93.7	25.09	34.2	72.8	42.32	34.4	120.0
May	35.36	35.8	98.8	41.49	37.2	110.5	32.01	36.9	86.7	32.75	35.1	92.9	25.11	34.5	73.0	41.58	34.6	116.8
June	35.77	36.0	99.4	41.35	37.2	110.4	31.54	36.8	85.7	33.55	36.4	91.6	24.91	34.3	72.6	41.87	35.0	118.2
July	36.50	35.8	102.0	40.17	36.5	109.8	31.24	36.3	86.2	33.79	36.0	93.8	26.56	36.2	73.5	43.81	34.8	124.1
August	36.57	35.2	103.8	38.66	35.1	109.0	30.74	36.0	85.2	*31.51	*34.5	*91.4	25.54	35.4	72.2	45.49	34.6	128.5
September	37.64	36.0	104.6	41.06	36.8	110.6	32.38	36.9	87.8	33.05	35.5	93.2	25.59	34.6	74.0	45.78	35.0	127.9
October	38.78	36.9	105.1	42.78	37.9	112.0	33.42	37.8	88.5	35.00	36.9	94.9	25.15	33.7	74.5	46.91	35.8	127.9
November	37.09	36.4	101.9	42.24	37.5	111.6	33.75	38.0	88.9	35.09	36.5	96.1	24.90	34.1	72.8	43.82	35.3	121.7
December	39.00	37.1	105.2	43.11	37.7	113.6	35.12	38.1	91.8	35.56	37.3	95.3	24.32	34.1	71.2	46.76	36.2	127.0

[1] See footnote, p. 54.

[32] New series; comparable January data are $20.80.

[33] New series; comparable January data are $41.13 and 108.4 cents.

*New series; comparable July data are $32.42, 35.1 hours, and 92.3 cents.

TABLE C–1: Average earnings and hours in manufacturing and nonmanufacturing industries, 1932–47[1]—Continued

MANUFACTURING—Continued

Period	Apparel and other finished textile products—Continued																	
	Corsets and allied garments			Millinery			Handkerchiefs			Curtains, draperies, and bedspreads			Housefurnishings, other than curtains, etc.			Textile bags		
	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings
			Cents			Cents			Cents			Cents			Cents			Cents
1932	$14.91	......	......	$17.60	......	......	......	......	......	......	......	......	......	......	......	......	......	......
1933	14.16	......	......	16.22	......	......	......	......	......	......	......	......	......	......	......	......	......	......
1934	15.46	......	......	19.60	......	......	......	......	......	......	......	......	......	......	......	......	......	......
1935	15.15	32.8	45.6	20.80	......	......	......	......	......	......	......	......	......	......	......	......	......	......
1936	15.78	35.0	44.6	20.46	......	......	......	......	......	......	......	......	......	......	......	......	......	......
1937	15.95	34.4	46.0	21.25	......	......	......	......	......	......	......	......	......	......	......	......	......	......
1938	16.19	35.1	46.1	21.73	......	......	......	......	......	......	......	......	......	......	......	......	......	......
1939	17.15	37.5	45.6	22.19	33.8	63.6	......	......	......	......	......	......	......	......	......	......	......	......
1940	17.17	35.7	47.5	24.07	34.1	66.6	......	......	......	......	......	......	......	......	......	......	......	......
1941	19.40	37.9	50.8	25.35	30.7	70.0	......	......	......	......	......	......	......	......	......	......	......	......
1942	23.21	38.6	58.3	29.18	31.2	73.8	......	......	......	......	......	......	......	......	......	......	......	......
1943	27.13	41.0	66.3	32.60	32.9	84.9	$21.21	38.2	55.6	$21.95	38.5	56.8	$30.15	42.5	71.7	$26.10	42.0	62.5
1944	29.75	40.9	72.9	36.46	32.5	92.5	23.35	37.7	61.9	25.53	37.8	67.2	31.90	41.6	76.9	28.52	41.7	68.7
1945	30.64	39.7	77.4	44.82	36.9	116.1	24.52	36.7	66.9	27.02	36.3	73.7	31.58	39.8	79.3	29.92	41.1	72.8
1946	33.65	38.7	87.1	46.61	36.4	122.8	28.08	36.3	77.5	28.08	36.1	78.0	33.97	38.4	88.0	31.68	39.7	79.8
1947	35.66	38.1	93.8	47.58	35.5	128.5	31.09	36.2	85.9	29.33	35.1	83.6	37.18	38.2	96.7	35.56	38.4	92.1
1945: January	30.31	40.1	75.7	45.34	38.8	112.0	24.27	37.6	64.5	26.94	36.7	73.3	32.50	41.1	79.2	30.77	42.4	72.7
February	30.77	40.7	75.7	51.75	40.6	119.3	24.84	38.2	64.9	26.64	36.7	72.7	33.59	41.8	80.4	30.37	42.2	72.0
March	30.92	40.4	76.8	52.25	40.3	120.8	24.89	37.8	65.8	27.58	37.3	73.6	32.70	40.7	80.4	30.51	42.3	72.1
April	30.59	39.8	77.0	43.52	36.0	114.5	24.37	37.0	65.7	27.58	37.2	73.5	33.68	41.9	80.4	30.54	42.4	72.0
May	30.51	39.5	77.3	34.02	30.9	106.8	25.11	37.4	66.9	28.10	37.1	75.0	31.94	39.3	81.2	29.96	41.1	72.9
June	31.48	40.7	77.5	39.17	34.3	109.4	25.03	37.5	66.7	28.69	37.0	76.7	32.10	40.5	79.1	30.12	41.3	73.0
July	29.99	40.1	74.9	44.74	37.1	116.2	24.21	36.1	66.8	26.84	37.0	72.4	31.22	39.4	78.9	30.00	41.1	73.0
August	28.92	37.2	77.9	43.16	35.0	118.3	24.20	35.5	68.2	25.83	35.3	73.1	29.56	37.2	79.2	28.28	39.3	71.9
September	30.71	39.1	78.7	48.35	38.3	121.1	23.93	35.3	67.8	25.79	35.5	72.3	29.57	38.8	75.8	30.29	40.8	74.2
October	31.17	39.5	79.1	49.10	38.5	121.7	24.41	36.2	68.1	26.42	35.8	73.0	30.12	38.9	76.9	29.49	40.3	73.3
November	31.38	39.8	78.9	40.68	34.7	113.7	24.35	35.5	68.6	26.47	34.7	74.6	30.23	38.6	77.8	29.39	39.9	73.6
December	30.82	39.0	79.2	42.82	36.2	114.0	24.73	35.9	68.8	27.29	36.1	74.1	30.19	37.9	79.0	29.51	40.1	73.6
1946: January	32.10	38.9	82.6	49.05	38.7	121.4	24.47	35.0	70.4	26.98	36.2	73.8	31.50	38.5	81.5	29.16	39.6	73.6
February	32.58	38.7	84.3	48.33	37.7	123.6	26.98	37.0	73.1	[34]26.03	35.5	[34]72.7	31.22	38.3	81.1	30.12	40.0	75.4
March	33.85	39.9	84.9	52.46	39.2	126.2	27.28	36.9	74.2	27.41	36.9	74.2	33.69	39.0	86.1	31.02	40.3	77.0
April	33.89	39.7	85.5	47.08	37.3	120.5	27.18	36.4	75.0	27.91	36.5	76.4	34.57	39.5	87.2	30.91	39.4	78.4
May	33.10	38.4	86.4	38.11	32.8	113.9	27.61	36.8	75.3	28.21	36.7	77.7	33.76	38.3	88.1	31.26	39.5	79.1
June	33.67	38.7	87.4	42.37	34.4	118.8	27.26	36.0	75.8	28.45	37.3	76.6	31.94	36.5	86.8	32.03	39.5	81.0
July	32.68	37.8	86.7	47.58	36.7	123.5	26.43	34.7	76.4	27.64	36.1	77.0	34.12	38.2	88.9	30.06	37.1	†80.6
August	[35]32.99	38.3	[35]85.8	49.04	37.2	125.4	28.61	36.4	78.9	27.58	35.5	78.4	35.38	38.7	91.1	31.53	37.6	83.1
September	33.72	38.2	88.5	50.81	37.3	129.2	28.36	35.0	81.2	28.31	35.8	79.9	36.36	38.9	93.6	32.48	38.5	84.8
October	35.02	38.7	90.7	47.73	36.4	127.3	29.44	36.0	81.9	29.45	36.5	81.7	33.06	36.4	90.3	33.02	39.0	85.2
November	35.29	38.4	91.9	39.98	32.3	119.6	30.89	37.0	83.7	29.52	36.1	82.3	35.91	39.4	90.5	33.29	38.6	86.0
December	35.39	38.6	91.7	42.91	34.5	119.5	31.83	38.2	83.6	28.88	35.0	82.8	35.85	39.5	90.5	34.78	39.7	86.5
1947: January	35.21	37.8	93.0	48.40	36.6	125.6	28.95	35.3	82.1	28.57	34.6	82.5	34.85	38.1	91.0	35.92	39.7	89.1
February	*35.38	38.8	*91.8	53.73	38.9	131.7	30.60	36.5	84.1	28.51	33.8	84.5	34.91	37.5	92.6	35.13	39.0	88.4
March	35.29	38.7	92.0	51.76	37.5	131.8	31.03	36.5	85.4	28.72	33.8	84.9	34.97	37.2	93.5	34.60	38.2	89.5
April	35.18	38.3	92.7	42.94	33.6	124.1	29.36	34.2	85.7	26.90	31.5	84.8	35.67	37.6	94.4	35.76	38.6	90.8
May	35.33	38.4	92.2	40.44	32.5	121.4	31.24	36.4	85.8	27.55	32.5	84.7	37.36	37.9	98.1	34.06	37.0	90.6
June	35.72	38.0	94.1	43.62	32.5	127.1	29.94	35.2	85.1	26.72	31.4	84.9	37.87	38.1	98.9	**34.02	37.1	91.8
July	34.95	37.5	93.5	48.58	36.2	129.8	31.13	36.3	85.7	29.09	36.1	81.6	36.44	38.4	94.5	35.48	38.3	92.5
August	34.80	36.7	94.2	49.52	36.3	131.4	30.40	35.5	85.7	28.93	36.1	81.1	37.74	38.6	97.7	35.34	37.8	93.6
September	35.75	37.5	95.4	49.74	35.8	134.0	31.85	36.7	86.7	30.64	37.3	83.0	38.33	38.2	99.6	35.86	38.1	94.1
October	36.76	38.5	95.6	53.20	38.2	133.7	32.57	37.5	86.8	31.55	37.5	84.4	38.72	38.3	100.4	36.76	38.9	94.4
November	36.80	38.6	95.5	39.14	31.3	121.3	33.31	37.7	88.4	31.26	37.2	83.9	38.03	38.3	98.3	37.25	38.9	95.8
December	36.89	39.0	94.8	46.03	35.0	125.6	32.55	37.0	88.1	31.28	37.1	84.3	41.34	40.5	101.2	37.60	39.5	95.3

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[1] See footnote, p. 54.

[34] New series; comparable January data are $26.50 and 73.1 cents.

[35] New series; comparable July data are $32.21 and 85.2 cents.

†New series; comparable June data are 82.0 cents.

*New series; comparable January data are $34.41 and 91.5 cents.

**New series; comparable May data are $33.53.

TABLE C–1: Average earnings and hours in manufacturing and nonmanufacturing industries, 1932–47[1]—Continued

MANUFACTURING—Continued

Period	Leather and leather products																	
	Total: Leather and leather products			Leather			Boots and shoe cut stock and findings			Boots and shoes			Leather gloves and mittens			Trunks and suitcases		
	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings
			Cents			Cents			Cents			Cents			Cents			Cents
1932	......	......	......	$19.03	42.0	42.9	......	......	......	$14.99	......	......	......	......	......	......	......	......
1933	......	......	......	19.06	41.1	44.6	......	......	......	15.41	......	......	......	......	......	......	......	......
1934	......	......	......	20.17	36.8	53.7	......	......	......	17.21	......	......	......	......	......	......	......	......
1935	......	......	......	21.47	38.2	56.2	......	......	......	17.90	35.5	51.2	......	......	......	......	......	......
1936	......	......	......	21.99	39.2	56.1	......	......	......	17.47	35.6	49.8	......	......	......	......	......	......
1937	......	......	......	23.90	38.8	61.7	......	......	......	18.38	36.1	51.5	......	......	......	......	......	......
1938	......	......	......	23.52	37.3	63.2	......	......	......	17.02	34.3	49.7	......	......	......	......	......	......
1939	$19.13	36.2	52.8	24.43	38.7	63.4	......	......	......	17.83	35.7	50.3	......	......	......	......	......	......
1940	19.07	34.7	54.9	24.27	37.6	64.7	......	......	......	17.85	34.2	52.6	......	......	......	......	......	......
1941	22.95	38.3	60.0	28.31	40.0	70.8	......	......	......	21.72	37.8	57.8	......	......	......	......	......	......
1942	26.49	38.8	68.2	33.39	41.0	81.3	......	......	......	25.25	38.2	65.6	......	......	......	......	......	......
1943	29.83	39.9	74.8	37.41	42.7	87.9	$29.86	41.1	73.3	28.18	39.2	71.7	$26.68	38.4	70.2	$31.05	41.5	73.7
1944	33.07	41.3	80.1	42.46	45.2	93.9	33.39	42.8	79.2	31.15	40.4	76.8	29.67	38.3	78.1	33.41	41.0	80.5
1945	35.05	41.1	85.3	44.45	45.3	98.2	34.45	41.6	83.5	33.43	40.4	82.3	30.08	36.9	81.7	35.28	41.0	85.2
1946	37.27	39.0	95.5	44.59	41.0	108.8	36.30	39.7	91.7	36.16	38.6	93.0	31.95	36.5	88.0	38.71	39.6	97.3
1947	40.73	38.7	105.4	50.96	40.8	124.6	38.78	38.4	102.1	39.11	38.3	102.0	32.49	35.5	91.5	42.74	39.8	107.2
1945: January	34.66	41.8	82.9	43.93	45.5	96.5	35.01	42.9	82.6	33.00	41.2	79.8	29.62	37.7	79.5	34.13	41.5	81.1
February	35.23	42.2	83.5	44.69	46.3	96.9	34.69	42.6	82.6	33.56	41.5	80.7	29.89	37.5	79.8	34.71	42.7	80.7
March	36.00	42.5	84.8	45.45	46.5	97.7	35.58	43.0	83.8	34.46	41.8	82.0	31.03	38.2	81.4	35.15	41.9	82.6
April	35.73	42.0	85.2	45.21	46.4	97.5	35.94	43.6	83.7	34.06	41.1	82.4	30.74	37.6	82.0	35.62	41.5	84.8
May	34.69	40.4	85.9	45.02	46.1	97.9	34.84	41.7	84.1	32.72	39.2	83.0	30.50	36.6	83.6	35.80	40.8	86.0
June	36.12	42.1	85.7	45.11	46.2	97.6	35.64	42.8	84.3	34.74	41.5	83.2	31.04	37.8	82.0	35.24	41.0	84.1
July	35.47	41.7	85.1	44.91	46.1	97.7	34.69	42.2	82.8	34.00	41.1	82.3	30.39	36.8	82.4	33.62	40.0	84.0
August	33.62	39.3	85.7	43.18	44.1	97.9	33.04	39.9	83.3	32.24	38.5	83.2	27.48	34.2	80.2	32.68	39.0	83.4
September	34.62	40.6	85.3	44.13	45.1	98.1	33.44	40.7	82.5	32.95	39.9	82.1	30.43	36.7	82.9	34.15	39.1	87.4
October	34.82	40.9	85.2	44.50	45.0	99.2	33.09	40.2	82.8	32.86	40.2	81.7	30.17	37.1	81.4	37.34	41.6	89.3
November	33.93	39.6	85.7	42.23	42.2	100.1	32.20	39.2	82.9	32.37	39.2	82.1	29.22	36.0	81.9	37.88	41.3	90.4
December	35.74	40.6	88.1	44.76	44.1	101.3	34.93	40.4	86.9	34.13	39.9	84.8	30.04	36.7	82.8	37.64	41.1	90.4
1946: January	36.03	39.9	90.4	44.06	42.8	103.0	35.85	40.9	88.2	34.71	39.2	87.7	30.78	36.9	83.8	36.35	40.0	90.5
February	36.69	40.4	90.7	43.49	42.6	102.2	35.99	40.7	89.0	35.83	40.2	88.5	30.56	37.3	82.4	35.98	39.6	90.2
March	37.37	40.8	91.7	43.70	42.6	102.8	35.95	40.5	89.2	36.67	40.6	89.6	31.49	37.4	84.7	37.44	40.3	92.3
April	37.58	40.5	92.8	44.20	41.9	105.5	35.93	40.4	[36]89.2	36.97	40.5	90.4	30.54	35.7	85.4	37.81	40.0	94.6
May	37.35	39.6	94.2	42.92	40.2	106.7	36.00	40.1	90.2	36.77	39.6	92.1	31.46	36.0	87.8	38.55	40.3	95.1
June	37.34	39.3	95.0	44.51	40.6	109.3	36.24	40.3	90.5	36.14	39.0	92.3	32.26	36.5	88.6	39.04	39.7	97.5
July	36.46	38.2	95.4	44.08	40.1	110.2	35.86	39.8	90.4	35.38	37.8	92.7	32.14	36.5	88.3	36.57	37.1	98.3
August	36.74	37.8	97.2	45.08	40.3	112.0	37.69	40.2	94.0	35.17	36.9	94.5	32.33	36.7	88.3	38.96	39.5	98.3
September	37.49	38.2	98.2	44.60	39.5	112.9	36.48	39.0	93.8	36.18	37.9	95.5	33.68	37.0	91.9	39.56	39.3	100.2
October	37.07	37.5	98.7	44.78	39.7	112.9	36.24	38.7	93.6	35.65	36.9	96.0	33.48	36.9	91.5	40.85	40.0	102.0
November	37.24	37.1	100.4	45.98	40.2	114.4	35.78	37.4	96.1	35.76	36.3	97.8	32.69	35.7	92.3	40.62	39.7	102.0
December	39.83	39.1	101.8	47.71	41.6	115.0	37.32	38.7	97.0	38.65	38.8	99.5	32.16	35.5	91.0	41.70	40.1	103.4
1947: January	40.18	39.3	102.3	48.49	41.3	117.4	37.84	38.8	98.0	39.05	39.1	99.5	32.10	35.0	92.2	40.36	38.7	104.0
February	40.29	39.5	102.1	49.65	41.6	119.3	37.79	38.8	98.4	38.96	39.2	98.9	31.38	35.1	89.6	41.60	39.9	103.8
March	40.11	39.0	102.8	49.88	41.4	120.4	37.87	38.1	99.9	38.91	38.8	99.9	31.52	35.0	90.0	40.87	39.5	103.6
April	39.44	38.3	102.9	49.14	40.7	120.4	37.07	37.8	99.4	37.96	38.0	99.8	31.17	35.0	89.0	41.22	39.1	105.3
May	39.45	38.1	103.5	49.65	40.7	122.0	37.32	37.7	100.6	37.78	37.8	100.0	31.38	34.6	90.8	40.35	38.5	104.6
June	40.12	38.1	105.3	50.44	40.5	124.1	38.62	38.1	102.5	38.30	37.7	102.0	31.42	35.0	90.7	42.34	39.6	106.6
July	40.30	38.2	105.5	51.11	40.4	126.1	39.06	38.4	103.1	38.49	37.8	101.8	32.42	35.6	91.4	40.62	38.4	105.6
August	40.25	38.1	105.7	51.19	40.0	127.7	39.86	39.1	103.4	38.32	37.7	101.8	32.33	35.7	91.2	42.09	39.4	106.7
September	41.89	39.1	107.2	52.66	41.0	128.3	40.14	39.2	103.2	40.12	38.8	103.5	33.45	36.3	92.7	43.07	39.5	109.5
October	42.18	39.0	108.2	52.52	40.7	128.7	39.19	38.3	103.7	40.41	38.7	104.6	34.43	36.4	94.5	46.15	40.9	111.4
November	41.93	38.3	109.5	52.82	40.6	129.7	38.92	37.2	106.0	39.98	37.8	105.9	33.88	36.3	93.4	47.61	42.2	112.9
December	42.67	39.1	109.2	53.65	41.3	130.0	41.36	39.3	106.3	40.87	38.7	105.6	33.91	36.3	93.1	45.53	40.9	110.9

[1] See footnote, p. 54.

[36] New series; comparable March data are 88.3 cents.

TABLE C-1: Average earnings and hours in manufacturing and nonmanufacturing industries, 1932–47[1]—Continued

MANUFACTURING—Continued

Period	Food																	
	Total: Food			Slaughtering and meat packing			Butter			Condensed and evaporated milk			Ice cream			Flour		
	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings
			Cents			Cents			Cents			Cents			Cents			Cents
1932	......	......	......	$21.61	46.3	46.5	$22.87	......	......	......	......	......	$28.07	51.8	54.1	$22.01	47.9	45.3
1933	......	......	......	20.00	43.3	46.2	20.58	......	......	......	......	......	25.06	47.6	52.3	20.34	43.4	46.0
1934	......	......	......	21.93	40.8	52.8	20.54	......	......	......	......	......	24.84	44.1	56.5	20.81	38.6	53.5
1935	......	......	......	22.84	40.4	55.9	20.70	......	......	......	......	......	25.59	45.4	55.5	21.68	39.4	54.8
1936	......	......	......	23.89	42.2	56.5	21.38	47.3	44.3	......	......	......	26.56	47.4	55.5	23.60	43.8	53.6
1937	......	......	......	27.27	41.0	66.5	22.24	47.9	46.6	......	......	......	28.25	47.9	58.5	25.59	44.3	57.1
1938	......	......	......	28.10	41.0	68.8	22.70	47.0	48.3	......	......	......	28.83	46.6	61.2	26.12	43.7	59.3
1939	$24.43	40.3	60.7	27.85	40.6	68.6	22.60	46.7	48.4	......	......	......	29.24	46.2	62.6	25.80	42.3	60.5
1940	24.58	39.9	61.6	27.60	40.2	68.6	22.71	46.2	48.6	......	......	......	29.47	45.5	64.0	25.42	41.4	61.1
1941	26.30	40.4	65.1	29.35	39.6	74.1	23.95	45.9	51.6	......	......	......	30.31	45.6	65.7	27.66	42.8	63.9
1942	30.04	41.5	72.4	33.02	40.9	80.8	27.13	46.4	57.9	......	......	......	32.81	46.1	69.8	32.49	45.0	72.0
1943	35.24	44.1	79.9	40.43	46.5	87.2	30.82	46.9	65.0	$33.61	48.5	68.6	35.85	46.3	74.2	39.01	48.8	80.1
1944	38.48	45.4	84.9	45.42	49.5	92.1	33.99	47.6	70.9	36.69	49.8	73.7	38.44	46.5	79.4	41.50	49.3	84.3
1945	39.51	44.9	88.1	44.57	47.5	94.1	35.86	47.1	75.3	39.03	50.4	77.4	40.64	47.0	83.1	44.08	49.5	89.2
1946	42.67	43.3	98.6	45.71	42.6	107.3	39.69	46.5	85.1	42.51	47.8	89.0	44.80	47.2	91.9	48.20	48.4	99.6
1947	48.27	43.0	112.4	55.31	44.5	124.5	44.67	46.6	95.6	48.78	47.0	103.8	48.99	46.0	103.2	56.18	49.1	114.6
1945: January	39.51	45.6	86.7	47.18	51.1	92.7	34.85	46.6	73.8	37.03	48.9	75.7	39.85	46.3	82.3	43.30	50.0	86.7
February	38.69	44.9	86.1	42.80	46.8	91.7	35.19	46.5	74.2	37.40	[37]50.0	[37]74.8	40.00	46.2	82.2	43.21	49.6	[38]87.0
March	38.94	45.1	86.4	42.92	46.3	92.9	34.71	46.1	73.2	38.51	50.6	76.1	40.23	46.8	82.5	43.33	49.7	87.3
April	39.15	45.0	86.9	42.55	45.9	92.9	35.82	47.3	73.8	39.33	51.2	76.8	40.54	47.2	82.7	44.22	50.1	88.4
May	38.96	44.5	87.4	42.74	45.7	93.7	35.04	46.7	74.1	39.93	51.5	77.5	39.17	45.2	82.6	43.78	49.5	88.5
June	40.01	45.6	87.7	45.68	48.0	95.3	36.36	48.6	73.6	41.24	53.7	76.8	39.88	46.8	82.2	44.59	50.5	88.5
July	39.98	45.8	87.4	45.08	47.7	94.6	37.10	48.9	75.3	41.18	53.3	77.2	41.15	49.1	81.4	45.26	50.9	89.0
August	38.16	43.3	88.2	41.57	44.4	94.0	36.71	48.4	75.3	39.97	52.0	76.8	40.19	47.8	81.7	43.18	48.6	89.1
September	39.36	44.7	88.0	45.81	48.0	95.8	36.37	47.2	76.4	39.35	49.7	79.1	41.81	48.0	83.8	44.49	49.4	90.1
October	39.50	44.1	89.5	44.54	46.9	95.4	35.69	46.5	76.6	37.94	47.6	79.7	41.04	46.8	84.5	45.23	48.8	92.8
November	40.31	44.4	90.8	45.78	47.6	96.4	35.74	45.9	77.8	37.48	47.4	79.1	41.72	47.0	85.1	43.12	47.9	90.2
December	41.49	45.3	91.5	47.51	50.1	95.1	36.47	45.7	79.6	37.39	46.5	80.5	41.89	46.7	86.1	44.98	49.0	91.9
1946: January	41.37	44.9	92.1	46.68	48.7	96.1	37.20	46.1	80.6	38.72	46.7	82.9	41.82	46.8	86.3	45.58	49.4	92.4
February	40.93	44.3	92.4	43.23	46.1	93.9	37.06	45.9	80.2	39.31	47.6	82.5	42.24	47.0	86.7	48.33	50.7	95.5
March	40.47	42.9	94.3	42.56	40.6	105.1	37.81	46.4	81.0	40.38	47.6	84.9	42.87	47.6	87.4	44.56	47.7	93.6
April	40.76	42.8	95.2	42.77	40.1	107.2	38.14	46.6	81.4	41.74	48.0	86.9	41.86	47.0	86.0	43.30	46.4	93.3
May	40.70	42.4	96.1	43.99	40.6	108.7	38.68	46.6	82.3	42.60	48.7	87.6	43.03	47.1	89.1	41.88	45.3	92.5
June	41.09	42.3	97.2	43.05	39.3	109.5	39.65	47.0	83.1	44.19	49.9	88.5	44.06	47.4	90.6	44.33	46.6	95.2
July	43.22	43.8	98.6	48.05	43.0	111.5	40.71	47.4	85.6	43.48	48.8	89.1	45.67	48.3	92.3	48.63	48.8	99.7
August	44.34	43.7	101.5	48.37	43.4	111.6	40.67	46.4	87.5	43.55	48.0	90.8	45.71	47.6	93.[illegible]	50.37	49.3	102.4
September	43.59	43.0	101.3	41.11	35.9	114.4	41.38	46.7	88.2	43.95	47.6	92.4	46.48	46.8	95.6	52.21	49.1	106.4
October	43.85	42.4	103.5	43.06	37.5	114.7	41.39	46.5	89.2	43.41	46.7	92.9	47.54	47.6	96.8	52.45	48.8	107.6
November	44.84	42.9	104.6	51.15	44.9	113.7	40.09	44.7	89.5	43.16	46.3	93.3	46.86	46.0	97.6	51.77	48.2	107.5
December	46.93	44.4	105.8	51.73	46.4	111.9	42.29	46.9	90.7	44.50	46.5	95.7	48.84	46.6	100.4	54.61	50.3	108.7
1947: January	47.31	43.6	108.4	57.20	47.5	120.6	42.24	[39]46.2	[39]91.9	46.32	46.6	99.5	48.79	46.8	100.5	55.18	49.9	110.6
February	46.40	42.7	108.8	52.82	44.3	119.3	42.44	45.8	92.6	46.64	46.2	101.0	48.04	46.2	99.7	53.08	48.9	108.7
March	46.05	42.3	108.8	49.87	41.9	119.1	43.00	45.5	93.5	47.04	46.2	101.9	47.58	45.7	100.8	53.77	49.3	109.3
April	46.20	42.1	109.7	50.22	41.8	120.4	43.47	46.8	93.2	48.16	46.8	103.0	47.32	46.0	100.2	52.44	47.5	110.5
May	47.71	43.0	111.0	53.37	44.0	121.4	43.91	46.3	94.8	49.52	48.3	102.6	47.36	45.8	100.9	51.82	47.8	108.5
June	48.27	43.2	111.9	54.[illegible]0	44.5	122.2	45.60	47.4	95.9	50.57	48.7	103.9	48.81	46.7	102.1	55.55	49.8	111.5
July	48.40	43.2	112.1	56.82	44.5	128.2	44.75	47.0	95.5	50.18	48.1	104.4	49.62	46.7	103.4	57.71	50.5	114.5
August	49.45	43.4	114.0	54.33	43.0	126.7	46.20	47.7	96.4	49.21	47.2	104.2	50.84	46.9	105.2	59.69	50.1	119.3
September	49.04	43.4	112.9	55.31	43.4	127.6	45.65	47.4	96.1	49.66	46.9	105.9	50.12	45.7	105.9	59.91	49.9	120.1
October	49.61	42.8	115.9	54.98	43.2	127.3	45.58	46.3	98.1	49.24	46.5	105.8	49.86	45.5	106.4	59.01	49.0	120.3
November	49.90	42.5	117.3	61.31	46.9	130.5	46.05	46.1	99.5	48.54	45.7	106.2	49.40	44.3	107.2	59.15	48.6	121.8
December	50.93	43.3	117.5	61.57	47.7	129.1	46.98	46.5	100.4	49.32	45.9	107.4	49.87	44.8	107.3	56.45	47.6	118.7

[1] See footnote, p. 54.

[37] New series; comparable January data are 49.6 hours and 74.6 cents.

[38] New series; comparable January data are 87.5 cents.

[39] New series; comparable December 1946 data are 47.5 hours and 88.8 cents.

TABLE C–1: Average earnings and hours in manufacturing and nonmanufacturing industries, 1932–47[1]—Continued

MANUFACTURING—Continued

Period	Food—Continued																	
	Cereal preparations			Baking			Sugar refining, cane			Sugar, beet			Confectionery			Beverages, nonalcoholic		
	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings
			Cents			Cents			Cents			Cents			Cents			Cents
1932	.....	.....	.....	$23.12	.....	.....	$25.58	.....	.....	$19.53		.....	$14.90			.....	.....	.....
1933	.....	.....	.....	21.66	.....	.....	22.83	.....	.....	19.26	49.0	42.6	13.65	37.2	36.6	.....	.....	.....
1934	.....	.....	.....	21.80	40.5	53.1	21.28	37.5	54.9	18.75	40.5	48.0	15.44	36.3	41.8	.....	.....	.....
1935	.....	.....	.....	21.70	40.5	53.4	22.04	38.5	56.8	20.57	42.1	49.8	15.98	36.7	43.6	.....	.....	.....
1936	.....	.....	.....	22.98	42.3	54.4	22.71	38.8	57.9	21.38	43.8	49.5	16.38	39.5	41.8	.....	.....	.....
1937	.....	.....	.....	24.98	42.6	59.0	26.18	41.0	62.9	23.91	42.6	57.4	17.76	39.3	45.4	.....	.....	.....
1938	.....	.....	.....	25.47	42.0	61.1	24.02	39.1	61.3	25.08	44.0	57.8	17.88	37.9	47.6	.....	.....	.....
1939	.....	.....	.....	25.70	41.7	62.1	23.91	37.6	63.6	24.68	42.9	58.5	18.64	38.1	49.2	$24.21	43.6	55.6
1940	.....	.....	.....	26.32	41.4	63.8	24.25	37.6	64.6	26.07	43.1	61.4	19.16	38.1	50.5	24.73	43.1	57.4
1941	.....	.....	.....	27.73	41.8	66.5	26.40	39.4	67.0	27.86	41.0	68.1	20.82	38.9	53.8	27.39	43.4	63.2
1942	.....	.....	.....	31.04	42.8	72.6	28.60	38.0	74.5	33.67	43.5	77.9	23.67	40.0	59.6	29.23	42.5	69.0
1943	$41.91	45.4	92.2	35.46	44.6	79.7	34.82	43.0	81.1	34.38	39.9	86.1	27.30	41.4	66.4	32.04	43.4	74.3
1944	44.25	46.4	95.3	38.04	45.4	83.9	38.48	45.6	84.4	34.94	39.5	88.5	30.19	41.9	72.3	34.71	43.8	79.5
1945	46.12	46.4	99.5	39.50	45.6	86.7	38.02	44.3	85.8	33.18	40.8	93.6	31.35	41.0	76.5	35.66	43.4	82.1
1946	45.08	41.6	108.3	43.35	44.7	97.2	38.49	39.6	97.2	44.81	43.4	103.1	34.54	39.9	84.9	38.67	43.4	88.9
1947	51.07	40.9	124 7	45.75	42 5	107.9	48 54	43.4	111.9	50 42	43.2	116 7	39 58	39 9	99 3	44 51	44 1	101.0
1945: January	45.85	47.5	96.6	38.57	45.2	84.8	40.32	47.2	85.5	33.70	34.5	97.7	30.79	41.4	75.2	34.15	42.4	80.4
February	46.35	47.4	97.7	[40]38.18	45.2	[40]84.3	38.94	46.0	84.7	37.65	38.2	98.6	31.12	41.8	[41]74.6	34.44	42.7	80.4
March	47.45	48.0	98.8	38.51	45.5	84.6	40.81	47.7	85.5	38.69	39.5	98.0	31.23	41.5	75.3	34.90	43.4	80.2
April	47.00	48.1	97.7	38.87	45.5	85.3	40.33	46.5	86.6	40.37	39.9	101.2	31.29	41.0	76.5	35.08	43.6	80.4
May	46.01	46.7	98.5	38.82	45.2	85.8	38.78	45.6	85.0	37.86	39.1	96.8	31.37	40.8	76.9	35.48	43.5	81.5
June	47.08	47.5	99.0	39.37	45.8	86.1	37.41	43.5	85.9	39.25	39.3	99.9	31.85	41.7	76.4	35.92	44.3	81.4
July	46.15	47.2	97.8	40.27	46.3	87.1	37.20	43.3	85.8	39.47	37.9	104.2	30.75	40.6	75.9	37.50	45.3	82.8
August	45.20	45.4	99.5	39.66	45.5	87.4	36.32	41.9	86.7	37.87	38.4	98.7	30.18	39.4	76.6	35.83	43.3	83.2
September	48.83	48.4	100.9	39.83	45.7	87.4	37.62	43.6	86.4	37.45	36.7	102.0	31.79	40.9	77.8	36.85	44.0	83.9
October	45.47	44.7	101.7	40.21	45.8	88.1	35.39	41.2	85.9	34.93	38.2	91.4	32.21	40.4	[42]77 4	35.95	42.8	84.0
November	44.18	42.9	102.9	41.37	45.8	90.1	34.56	40.9	84.5	[43]40.17	[43]45.8	87.8	32.83	40.9	78.3	35.89	42.6	83.7
December	43.78	42.4	103.3	41.28	45.7	90.4	36.83	42.2	87.7	39.63	43.5	91.1	33.60	41.3	79.4	35.87	42.6	83.3
1946: January	41.60	40.8	102.0	40.95	45.4	90.4	35.49	39.9	88.9	39.95	40.9	97.6	33.21	40.3	80.2	35.90	42.1	84.2
February	42.92	41.4	103.7	41.15	45.1	91.3	33.45	37.6	89.0	38.94	38.8	100.3	32.65	40.0	79 9	36.24	42.0	84.9
March	44.17	42.4	104.2	41.49	45.1	92.0	36.10	40.2	89.9	38.97	39.1	99.6	32.41	39.8	79.8	36.75	42.7	84 6
April	43.66	41.8	104.5	41.74	45.0	93.0	36.68	40.1	91.6	39.44	39.4	100.1	31.00	40.7	81.7	37.35	43.2	85.5
May	41.92	40.0	104.7	41.14	44.2	93.1	38.63	40.3	95.9	39.12	38.8	100.9	32.54	38.8	82.3	37.47	42.6	87.0
June	45.52	42.8	106.4	41.42	43.9	94.5	38.59	39.4	97.9	38.39	37.4	102.5	34.85	39.5	86.0	38.73	43.6	88.3
July	43.85	41.5	105.8	43.81	44.8	98.0	39.97	39.3	101.8	40.67	37.3	109.1	33.76	38.6	85.4	40.52	44.7	90.2
August	46.27	42.7	108.3	44.63	45.0	99.4	39.27	39.1	100.4	40.76	38.3	106.5	35.43	39.7	86.6	40.45	44.2	91.1
September	47.15	42.4	111.2	44.60	44.5	100.3	38.35	37.9	101.2	48.87	42.8	114.1	36.14	40.0	87.3	39.87	43.9	90.4
October	48.28	42.0	114.9	45.45	43.6	104.2	37.40	37.4	100.1	40.86	40.5	100.9	35.04	39.5	87.4	39.30	42.4	91 8
November	47.12	40.7	115.7	45.01	44.0	101.5	40.07	40.8	98.2	49.59	48.6	102.1	36.79	39.8	90.5	39.66	42.4	92 8
December	47.81	40.9	117.0	47.55	45.3	105.1	45.62	44.6	102.4	54.35	52.1	104.4	38.19	41.4	90.2	41.37	43.2	94.9
1947: January	48.48	40.5	119.6	46.32	43.9	105.6	38.83	38.8	100.1	44.34	40.5	109.5	37.06	39.8	[44]93.0	41.13	42.7	95.9
February	49.13	41.5	118.4	45.80	43.2	106.0	41.53	39.5	105.2	47.24	40.5	116.9	37.75	39.9	94.9	40.85	42.3	96.5
March	50.03	41.4	120.8	45.17	43.0	105.7	44.40	41.6	106.7	41.79	37.4	119.8	37.87	39.8	95.1	41.25	42 0	97.4
April	48.26	39.6	121.8	45.26	42.5	106.5	47.92	43.7	109.7	41.46	38.6	115.1	37.60	38.9	96.7	42.50	43.1	98.3
May	49.77	40.4	123.2	*41.84	*42.5	*105.6	41.35	41.3	107.5	43.79	38.9	112.5	38.77	39.8	97.6	43.10	43.6	98.5
June	50 79	40 8	124.4	45.50	42.6	106 7	52.14	45.6	114 2	47.38	40 8	116 2	39 34	39 3	100.4	44 48	44 2	100 4
July	53 83	43.2	124 6	45 81	42 7	107 4	50 33	45 5	110 5	46 34	39 2	118 4	37 66	37 8	99 8	45 98	45 0	102 0
August	54 32	42 4	128 1	45 52	41 9	109 1	51 89	46 3	112 1	50 88	41 7	122 0	38 39	38 8	99 3	74 89	46 6	103 6
September	51 28	40.5	126 5	46 14	41 9	110 4	50 87	44 0	115 6	51 55	40 8	126 3	41 20	40 4	102 1	47 91	46 0	104 1
October	50 54	39.7	127.3	46 85	41 9	111 5	53 03	45 3	116.8	50 59	44 8	113 0	42 24	41 1	102 9	45 85	44 3	103 9
November	52 05	40 3	129.1	46 26	41 6	111.5	56 39	46 0	122 4	56 47	48 2	117 2	42 24	40 8	103 6	44 60	44 3	104.2
December	54 13	40 8	132 8	47 43	42 3	111 9	48.24	41 2	117 1	53 87	46 1	116 8	42 96	41.5	103 5	45.22	43 7	103.2

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[1] See footoote, p. 54.

[40] New series; comparable January data are $38.02 and 83.9 cents.

[41] New series; comparable January data are 74.4 cents.

[42] New series; comparable September data are 76.0 cents.

[43] New series; comparable October data are $34.28 and 37.6 hours.

[44] New series; comparable December 1946 data are 91.8 cents.

*New series; comparable April data are $43.62, 41.9 hours, and 103.9 cents.

TABLE C–1: Average earnings and hours in manufacturing and nonmanufacturing industries, 1932–47[1]—Continued

MANUFACTURING—Continued

Period	Food—Continued						Tobacco manufactures											
	Malt liquors			Canning and preserving			Total: Tobacco manufactures			Cigarettes			Cigars			Tobacco (chewing and smoking and snuff)		
	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings
			Cents			Cents			Cents			Cents			Cents			Cents
1932	......	......	......	$12.48	......	......	......	......	......	......	......	......	......	......	......	$13.85	......	......
1933	......	......	......	11.35	......	......	......	......	......	......	......	......	......	......	......	13.46	38.8	34.2
1934	......	......	......	12.64	......	......	......	......	......	......	......	......	......	......	......	13.70	34.5	39.0
1935	......	......	......	13.72	35.9	38.3	......	......	......	......	......	......	......	......	......	15.03	34.9	43.2
1936	......	......	......	14.14	36.5	39.3	......	......	......	......	......	......	......	......	......	15.81	35.7	44.4
1937	......	......	......	16.76	37.9	45.7	......	......	......	......	......	......	......	......	......	17.67	36.2	49.1
1938	......	......	......	15.86	36.0	45.4	......	......	......	......	......	......	......	......	......	17.64	35.1	50.5
1939	$35.01	38.3	91.6	16.77	37.0	46.4	$16.84	35.4	47.6	$20.88	37.2	56.1	$14.59	34.7	41.9	17.53	34.1	51.4
1940	35.88	38.3	94.0	16.61	36.3	46.5	17.84	36.1	49.4	21.97	37.2	59.0	15.46	35.9	43.0	18.61	34.9	53.5
1941	38.12	40.6	96.4	19.60	38.1	52.4	19.27	37.0	52.0	24.17	38.4	63.0	16.54	36.5	45.1	20.15	35.9	56.5
1942	41.68	41.2	101.2	23.62	38.6	62.0	22.46	38.7	58.0	27.50	39.7	69.2	19.20	38.2	50.3	23.32	37.9	61.7
1943	47.10	44.7	105.7	27.50	38.9	71.5	26.32	40.9	64.3	29.46	41.4	71.1	23.95	40.6	59.0	25.30	39.9	63.5
1944	51.28	46.0	111.6	30.57	40.1	76.9	29.94	42.4	70.6	32.37	42.7	75.8	28.12	42.3	66.5	27.23	40.8	66.8
1945	53.12	45.6	116.3	32.07	39.9	80.8	31.79	41.7	76.4	34.42	42.4	81.2	29.95	41.2	72.5	28.91	40.6	71.3
1946	54.31	42.3	128.3	37.92	41.0	92.9	34.25	39.5	86.8	38.36	40.5	94.7	31.80	39.0	81.3	30.23	37.6	80.3
1947	63.34	43.3	146.0	41.20	39.7	104.2	36.67	38.6	95.1	42.13	39.7	106.1	32.53	37.8	85.9	35.08	37.9	92.5
1945: January	50.29	44.5	113.3	31.69	40.1	79.6	31.93	43.4	73.6	35.07	44.8	78.2	29.67	41.9	69.7	29.68	42.9	69.2
February	51.15	44.8	113.9	32.05	40.7	79.4	31.71	43.0	73.7	34.43	44.0	78.2	29.87	42.3	69.9	28.82	41.6	69.3
March	51.45	44.9	114.2	32.28	41.3	78.8	31.80	42.9	74.1	34.73	44.1	78.7	29.87	42.2	70.1	28.82	41.4	69.6
April	52.92	45.9	115.0	32.10	40.9	79.1	31.28	42.3	74.0	33.93	43.2	78.6	29.21	41.5	70.2	28.85	41.7	69.2
May	52.03	45.1	114.9	31.72	39.4	81.1	31.04	41.6	74.7	33.05	41.8	79.1	29.78	41.7	71.4	27.91	40.3	69.2
June	54.20	46.7	115.9	32.29	40.4	79.7	32.36	42.8	75.7	35.18	43.6	80.7	30.31	42.3	71.6	28.90	41.1	70.3
July	55.53	47.2	117.4	32.63	42.0	78.2	30.73	41.0	74.9	34.53	42.8	80.7	27.18	39.2	69.1	28.28	40.1	70.5
August	53.13	45.3	116.9	30.11	36.9	82.3	29.85	39.0	76.5	33.55	41.1	81.7	26.49	37.1	71.0	28.30	37.9	74.6
September	56.03	47.5	117.8	32.24	40.8	79.5	33.21	42.3	78.6	35.77	43.1	83.0	31.40	41.6	75.4	30.11	41.6	72.4
October	53.09	45.6	116.3	32.71	39.3	83.7	33.35	42.0	79.3	35.44	42.3	83.8	32.13	42.3	76.1	29.35	39.9	73.6
November	53.08	44.6	119.1	31.56	37.9	83.4	32.65	40.4	80.7	34.69	40.5	85.6	31.65	40.8	77.4	28.64	38.6	74.2
December	54.23	44.9	120.8	33.87	40.1	84.9	31.53	39.1	80.6	32.57	37.3	87.2	31.21	40.7	76.4	29.31	39.4	74.4
1946: January	53.06	43.9	120.9	33.86	40.2	84.6	32.36	39.3	82.4	36.13	40.3	89.7	30.27	39.0	77.1	27.28	36.5	74.8
February	54.55	44.3	123.2	33.18	39.5	84.4	31.98	38.5	83.2	35.50	38.7	91.7	30.01	38.5	77.6	27.49	37.1	74.1
March	49.50	40.5	122.0	33.71	39.6	85.9	32.95	39.7	83.0	36.71	40.8	90.1	30.79	39.4	77.9	28.18	37.3	75.5
April	48.98	40.2	121.8	35.48	40.2	88.5	32.48	39.2	83.0	36.06	40.4	89.2	30.51	38.7	78.5	27.56	35.9	76.8
May	51.17	41.2	124.1	34.64	39.2	88.7	33.52	39.5	84.8	37.86	41.2	91.9	30.71	38.5	79.4	29.15	37.4	77.9
June	52.27	41.3	126.6	35.78	40.0	89.8	33.83	40.0	84.6	37.78	41.4	91.2	31.25	39.2	79.6	29.86	37.8	79.0
July	54.21	42.0	129.1	38.89	43.2	90.4	33.24	39.1	85.1	36.66	40.1	91.5	31.05	38.6	80.3	29.45	37.1	79.4
August	56.36	42.5	132.4	41.12	42.3	97.6	34.16	38.6	88.5	37.93	38.9	97.5	31.50	38.6	81.4	31.28	37.4	83.7
September	57.45	42.7	134.4	41.50	43.5	96.0	35.25	39.5	89.3	39.25	40.3	97.4	32.69	39.0	83.4	31.87	38.0	83.9
October	56.57	42.5	133.0	40.82	41.7	98.3	36.47	40.3	90.5	41.08	41.6	98.8	33.48	39.6	84.4	32.66	38.7	84.4
November	56.68	42.5	133.3	35.28	37.3	95.0	36.66	39.7	92.4	41.74	41.1	101.5	33.27	38.6	85.7	33.58	39.2	85.7
December	59.74	43.7	136.7	37.93	38.8	98.2	38.12	40.2	94.7	43.03	40.9	105.3	34.85	39.9	87.1	34.25	39.1	87.7
1947: January	57.23	41.9	136.6	36.55	37.6	97.5	36.74	39.2	93.8	41.36	39.7	104.1	33.80	39.0	86.2	33.16	37.6	88.3
February	56.88	41.3	137.5	36.82	37.0	99.7	35.44	37.8	93.7	40.76	39.1	101.3	31.98	37.2	85.6	32.03	36.0	89.9
March	57.83	41.8	138.1	37.40	37.7	99.5	35.21	37.5	93.9	40.23	38.7	103.9	31.72	36.7	85.9	32.79	36.3	90.3
April	59.30	42.7	138.7	38.50	38.0	101.8	34.84	36.7	94.8	38.78	36.8	105.4	31.69	36.6	86.0	33.86	37.4	90.7
May	61.55	43.8	140.3	39.39	38.3	103.4	34.46	36.3	94.8	38.33	36.1	106.1	32.03	37.4	85.3	38.21	31.6	94.0
June	64.57	44.4	145.1	39.37	37.8	104.5	36.30	38.2	95.0	41.67	39.4	105.7	32.08	37.4	85.4	34.49	36.9	93.7
July	67.52	45.1	149.3	39.96	39.9	100.3	37.74	39.6	95.3	44.67	42.2	106.0	31.25	37.4	84.7	38.21	39.9	95.8
August	68.98	45.3	152.3	45.88	42.6	108.3	37.26	39.2	95.1	43.74	41.2	106.1	32.00	37.3	85.3	37.13	40.1	92.8
September	69.54	45.2	153.9	43.69	42.8	102.5	37.33	39.2	95.2	43.36	40.7	106.6	32.42	37.7	85.7	38.39	41.2	93.3
October	66.10	43.5	151.7	44.75	40.9	110.0	37.90	39.7	95.4	43.92	41.3	106.3	33.21	38.3	86.3	37.78	40.6	93.1
November	64.03	42.1	152.3	37.94	35.9	106.2	37.67	39.4	95.6	43.15	40.6	106.3	33.69	38.6	86.8	36.10	38.5	93.9
December	63.54	42.1	151.1	41.14	37.7	109.3	39.16	39.9	98.3	45.45	40.6	111.9	34.24	39.3	86.8	37.16	39.1	95.0

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[1] See footnote, p. 54.

TABLE C–1: Average earnings and hours in manufacturing and nonmanufacturing industries, 1932–47[1]—Continued

MANUFACTURING—Continued

Period	Paper and allied products															Printing, publishing, and allied industries		
	Total: Paper and allied products			Paper and pulp			Envelopes			Paper bags			Paper boxes			Total: Printing, publishing and allied industries		
	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings
			Cents			Cents			Cents			Cents			Cents			Cents
1932	......	......	......	$18.79	41.2	45.2	......	......	......	......	......	......	$18.33	......	......	......	......	......
1933	......	......	......	17.97	40.6	44.3	......	......	......	......	......	......	17.15	......	......	......	......	......
1934	......	......	......	18.74	36.4	51.5	......	......	......	......	......	......	18.16	36.6	49.6	......	......	......
1935	......	......	......	20.56	38.9	52.9	......	......	......	......	......	......	18.92	38.1	49.7	......	......	......
1936	......	......	......	22.33	41.6	53.7	......	......	......	......	......	......	19.55	40.9	48.1	......	......	......
1937	......	......	......	24.75	41.0	60.4	......	......	......	......	......	......	20.57	40.4	51.5	......	......	......
1938	......	......	......	23.57	38.1	61.9	......	......	......	......	......	......	20.72	38.4	54.4	......	......	......
1939	$23.72	40.1	59.2	24.92	40.3	62.0	......	......	......	......	......	......	21.78	40.2	54.7	$32.42	37.4	86.6
1940	24.48	39.9	61.3	26.13	40.5	64.6	......	......	......	......	......	......	21.92	39.2	56.2	33.11	37.5	88.2
1941	27.75	42.0	66.0	30.08	42.7	70.5	......	......	......	......	......	......	25.01	41.5	60.7	34.60	38.4	90.0
1942	31.29	42.1	74.3	34.21	43.0	79.7	......	......	......	......	......	......	27.58	41.1	67.5	36.67	38.5	95.2
1943	36.02	45.2	79.8	39.36	46.3	85.0	$33.98	44.4	76.6	$31.85	43.9	72.8	32.27	43.9	73.6	40.25	40.1	100.4
1944	38.95	46.0	84.6	42.41	48.0	88.3	36.62	45.0	81.4	33.73	44.3	76.5	34.55	43.7	79.3	44.13	41.0	107.6
1945	40.50	45.9	88.3	43.85	48.0	91.3	37.82	44.5	85.1	35.75	43.4	82.8	36.39	43.5	83.8	47.22	41.4	114.0
1946	43.47	43.4	100.1	46.54	44.3	104.9	41.32	42.9	96.2	37.11	40.9	91.1	40.26	42.6	94.7	52.43	40.9	128.3
1947	50.15	43.1	116.4	54.56	44.4	122.7	45.58	42.3	108.7	41.72	39.4	106.0	45.55	41.9	109.0	59.77	40.1	149.1
1945: January	40.18	46.2	86.9	43.19	48.1	89.7	37.92	45.3	84.3	35.67	44.1	81.4	35.82	43.9	81.7	46.03	41.5	110.9
February	40.05	46.3	86.5	43.03	48.2	89.1	37.82	45.0	84.0	35.50	43.9	81.4	36.06	44.0	82.0	45.74	41.0	111.5
March	40.35	46.3	87.1	43.60	48.5	89.9	37.66	44.6	84.4	36.34	44.5	82.0	36.01	43.6	82.5	46.61	41.6	112.1
April	40.63	46.5	87.4	43.95	48.8	90.1	38.04	44.9	84.8	35.84	43.8	82.3	36.30	43.7	83.1	46.52	41.2	112.9
May	39.77	45.4	87.6	43.14	47.8	90.2	37.88	44.5	85.2	34.60	42.2	82.3	35.48	42.6	83.3	46.63	41.21	13.3
June	40.74	46.4	87.9	44.30	48.8	90.6	38.04	44.8	84.9	35.07	42.9	82.0	36.35	43.4	83.7	46.93	41.6	112.8
July	40.78	46.3	88.1	44.26	48.5	91.3	37.44	44.6	83.9	36.49	44.3	82.9	36.70	43.9	83.7	46.62	41.5	112.3
August	38.69	44.0	88.0	41.86	45.9	91.1	36.44	43.4	84.0	33.48	41.3	81.2	34.40	41.4	83.2	46.60	40.7	114.4
September	40.96	45.9	89.3	44.46	47.8	93.0	38.12	44.9	84.9	36.28	43.5	84.1	36.86	43.6	84.4	48.89	42.2	115.8
October	41.10	45.8	89.7	44.86	48.2	93.1	37.81	43.7	86.6	36.65	43.6	84.7	37.18	43.7	85.1	48.01	41.6	115.5
November	41.23	45.7	90.2	44.81	47.9	93.5	38.37	44.1	87.0	36.47	43.5	84.4	37.44	43.6	85.9	48.83	41.7	117.1
December	41.46	45.6	91.0	44.67	47.2	94.5	38.34	43.6	88.0	36.26	43.3	84.1	37.91	44.1	86.1	49.28	41.5	118.8
1946: January	41.17	44.3	92.8	44.08	45.5	96.9	39.09	43.6	89.6	35.80	41.4	86.7	37.55	43.2	86.9	49.36	41.1	120.0
February	41.15	43.9	93.7	44.34	45.2	98.2	38.47	43.0	89.5	35.26	41.0	86.3	37.34	42.7	87.6	49.80	40.8	122.1
March	41.97	43.9	95.7	44.80	44.7	100.1	40.52	43.7	92.7	36.18	41.3	87.9	38.67	43.0	90.0	50.93	41.2	123.5
April	42.03	43.5	96.6	44.87	44.4	101.0	40.47	43.1	93.1	35.73	40.8	87.9	39.07	42.8	91.4	51.09	41.0	124.8
May	42.10	42.9	98.3	45.20	43.8	103.0	40.87	42.5	96.1	34.86	40.3	86.8	38.85	42.0	92.7	51.10	40.4	126.6
June	42.74	43.0	99.3	45.34	43.7	103.8	41.82	43.1	96.9	36.54	40.9	89.7	39.94	42.4	94.4	51.73	40.5	127.8
July	43.12	42.8	100.7	46.06	43.8	105.3	40.61	42.5	95.6	37.42	41.3	91.1	39.93	41.9	95.3	51.79	40.2	128.7
August	44.26	43.4	102.0	47.56	44.4	107.0	41.61	42.7	97.5	37.17	40.9	91.1	41.21	42.6	96.8	53.01	40.8	129.9
September	44.57	43.0	103.7	47.55	43.8	108.5	41.60	42.6	97.6	37.89	40.9	93.1	41.53	42.2	98.5	53.96	41.0	131.5
October	45.61	43.4	105.0	49.05	44.5	110.2	42.15	42.6	98.1	38.98	40.8	96.0	42.02	42.5	99.0	54.28	41.0	132.5
November	46.08	43.3	106.4	49.37	44.4	111.1	43.98	42.6	103.1	38.78	40.1	97.0	42.74	42.4	100.9	55.11	41.0	134.3
December	46.87	43.7	107.1	49.92	44.6	111.9	44.51	43.0	103.5	39.96	40.7	98.3	43.61	43.2	101.2	57.03	41.5	137.4
1947: January	47.05	43.2	108.8	50.18	44.2	113.4	44.68	42.8	104.3	40.52	40.2	100.9	43.58	42.3	103.0	56.60	41.0	138.1
February	47.42	43.2	109.8	50.98	44.3	114.9	[45]44.43	42.6	105.6	39.93	39.9	100.1	43.58	42.0	103.9	56.34	40.1	141.5
March	47.92	43.2	110.9	51.27	44.3	115.7	44.69	42.7	106.4	40.43	40.3	100.6	44.10	42.1	105.5	58.19	40.3	144.3
April	48.20	43.0	112.1	52.07	44.4	117.3	44.94	42.8	106.3	39.69	39.5	100.7	43.98	41.5	106.0	58.69	40.1	146.2
May	48.79	43.1	113.3	52.84	44.7	118.2	45.25	43.0	106.5	40.42	39.1	103.6	44.30	41.2	107.7	59.55	40.1	148.6
June	49.95	42.9	116.5	54.83	44.5	123.1	45.96	43.0	107.8	41.69	39.6	105.4	44.87	41.3	108.8	59.76	39.9	149.9
July	51.06	42.9	119.0	56.36	44.5	126.6	44.72	42.1	107.4	42.30	38.8	109.4	45.44	41.4	109.9	59.37	39.6	149.8
August	50.72	42.4	119.6	56.30	44.1	127.6	44.96	41.0	110.7	41.89	38.4	109.3	44.92	40.8	110.4	59.48	39.4	150.8
September	51.99	42.9	121.0	57.14	44.5	128.3	47.02	42.2	112.5	42.05	38.2	110.2	46.53	41.6	112.2	61.61	40.2	153.4
October	52.22	43.0	121.5	57.10	44.4	128.7	46.97	42.1	112.8	43.67	39.3	111.3	47.37	42.1	112.7	61.62	40.0	154.0
November	52.80	43.2	122.2	57.40	44.4	129.2	46.52	41.9	112.0	43.17	39.0	110.6	48.66	42.7	114.3	62.30	40.0	155.6
December	53.69	43.8	122.6	58.21	44.9	129.5	47.35	42.2	112.2	45.29	40.7	111.3	49.44	43.3	114.4	63.37	40.4	156.8

[1] See footnote, p. 54.

[45] New series; comparable January data are $44.12.

TABLE C–1: Average earnings and hours in manufacturing and nonmanufacturing industries, 1932–47[1]—Continued

MANUFACTURING—Continued

Period	Printing, publishing, and allied industries—Continued									Chemicals and allied products								
	Newspapers and periodicals			Printing, book and job			Lithographing			Total: Chemicals and allied products			Paints, varnishes, and colors			Drugs, medicines, and insecticides		
	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings
			Cents			Cents			Cents			Cents			Cents			Cents
1932	$35.13	......	......	$27.86	......	......	......	......	......	......	......	......	$22.73	40.8	55.7	......	......	......
1933	31.18	......	......	25.14	......	......	......	......	......	......	......	......	20.95	40.5	51.2	......	......	......
1934	32.32	37.3	84.5	26.12	36.1	72.5	......	......	......	......	......	......	21.40	38.1	55.7	......	......	......
1935	33.11	36.8	89.2	27.48	37.4	73.7	......	......	......	......	......	......	23.32	39.8	58.6	......	......	......
1936	35.15	37.0	92.2	28.41	38.6	74.2	......	......	......	......	......	......	25.12	41.9	60.0	......	......	......
1937	36.85	37.0	96.2	30.05	39.4	77.3	......	......	......	......	......	......	27.59	41.2	67.0	......	......	......
1938	37.13	36.3	98.7	29.55	37.5	79.8	......	......	......	......	......	......	27.21	39.1	69.7	......	......	......
1939	37.58	36.1	100.4	30.30	38.3	80.4	......	......	......	$25.59	39.5	64.9	28.48	40.5	70.4	$24.16	39.7	59.2
1940	38.22	35.9	103.3	30.78	38.5	81.1	......	......	......	26.80	39.7	67.6	29.26	40.6	72.2	24.36	39.5	60.6
1941	39.45	35.9	107.0	32.45	39.9	82.3	......	......	......	30.15	40.8	73.9	32.35	41.6	77.9	26.28	40.4	64.0
1942	41.27	36.0	112.5	34.36	39.9	86.6	......	......	......	36.36	42.8	84.8	35.92	41.8	86.1	28.95	40.5	71.3
1943	44.89	37.2	118.7	37.92	41.4	91.5	$41.30	42.8	96.9	41.53	45.3	91.6	42.31	45.8	92.6	33.50	43.6	76.8
1944	48.34	38.2	124.7	42.65	42.3	100.3	45.69	44.3	103.3	43.58	45.7	95.3	45.76	47.4	96.7	34.80	43.2	80.9
1945	51.21	38.8	130.0	45.55	42.8	107.1	49.69	44.6	111.5	43.99	44.5	98.9	46.83	46.7	100.5	36.18	42.4	85.5
1946	57.41	38.6	146.0	50.48	42.0	120.7	53.24	43.1	123.5	44.34	41.2	107.7	46.79	42.5	110.2	38.85	40.2	96.6
1947	66.98	38.7	170.2	56.90	40.8	140.3	59.05	41.7	141.8	50.59	41.2	122.8	52.80	42.2	125.3	44.65	40.2	111.0
1945: January	49.20	38.3	126.4	45.10	43.2	104.8	47.18	44.7	106.5	44.41	45.7	97.2	46.86	47.2	99.6	36.17	43.2	83.6
February	49.39	38.2	127.1	44.40	42.5	104.9	[46]48.11	44.3	[46]108.6	44.27	45.5	97.2	47.29	47.6	99.5	36.48	43.4	84.2
March	50.15	38.7	127.5	45.18	43.1	105.8	48.86	44.9	108.9	44.78	45.9	97.5	47.51	47.7	99.3	36.44	43.6	83.8
April	50.60	38.7	128.8	44.97	42.6	106.2	48.40	44.3	109.4	44.77	45.7	98.0	47.91	47.8	99.8	35.89	42.7	84.3
May	51.09	39.0	129.1	44.65	42.1	106.4	49.36	44.6	110.6	45.26	45.7	99.0	47.30	47.3	100.3	36.69	43.3	85.0
June	50.53	38.7	128.7	45.18	42.9	105.8	50.13	45.2	110.8	45.24	45.4	99.7	48.54	48.3	100.8	36.78	43.2	85.4
July	50.64	38.6	129.2	45.00	42.9	105.2	48.57	44.4	109.3	45.03	45.1	99.9	48.06	48.2	99.8	35.40	41.9	84.4
August	53.13	39.7	131.7	43.44	41.0	106.3	47.13	42.9	109.9	43.53	43.4	100.3	46.34	46.6	99.8	35.25	41.3	85.6
September	52.54	39.5	130.9	47.39	43.7	109.2	50.62	44.7	113.2	43.01	43.4	99.2	46.23	45.8	101.1	36.53	41.9	87.2
October	52.19	39.1	131.6	45.90	42.9	107.9	51.46	44.7	115.1	42.95	43.3	99.1	45.59	45.4	100.6	36.54	41.7	86.7
November	52.26	38.5	133.4	47.25	43.3	109.8	52.65	45.3	116.1	42.10	42.5	99.1	45.56	44.7	102.1	35.84	40.9	88.5
December	52.70	38.5	134.6	47.92	43.0	111.8	52.38	44.7	117.2	42.55	42.5	100.1	45.53	44.2	103.2	36.40	40.8	89.3
1946: January	52.95	38.0	136.4	48.18	42.9	113.0	52.01	43.7	119.0	42.61	42.0	101.5	45.17	43.5	104.0	36.28	39.6	91.9
February	53.67	38.4	137.9	48.30	42.0	115.5	50.09	42.4	118.2	42.53	41.7	102.1	45.49	43.4	105.0	37.63	40.9	92.2
March	54.86	38.6	140.0	49.51	42.7	116.6	51.03	43.0	118.6	42.94	41.6	103.3	45.89	43.1	106.6	38.29	40.9	93.8
April	55.63	38.4	142.3	49.18	42.2	117.1	51.94	43.5	119.5	43.28	41.4	104.5	46.56	43.4	107.5	37.83	40.7	93.1
May	56.07	38.1	144.3	48.77	41.4	118.6	51.92	43.2	120.1	43.31	40.7	106.4	45.94	42.4	108.6	38.13	40.4	94.5
June	56.08	37.9	144.9	49.82	41.6	120.3	53.03	43.4	122.1	43.95	40.5	108.4	47.10	42.9	109.9	38.26	40.2	95.3
July	56.62	37.9	145.9	50.03	41.5	121.2	51.80	41.8	124.1	44.67	40.7	109.8	46.62	42.2	110.9	38.42	39.7	97.0
August	58.09	38.7	147.5	50.83	41.8	122.0	53.97	43.3	124.6	44.91	40.8	110.2	47.41	42.6	111.4	38.91	39.8	97.9
September	60.04	39.4	149.5	51.50	42.0	123.2	53.99	42.9	125.8	45.41	40.9	111.0	46.52	41.4	112.4	39.05	39.5	98.7
October	60.28	39.3	151.1	51.50	41.7	123.8	55.08	43.4	127.0	45.50	41.3	110.2	47.07	41.6	113.4	39.91	40.2	99.0
November	61.11	39.3	152.8	52.60	41.9	125.9	55.76	42.9	129.9	45.88	41.3	111.2	48.16	41.8	115.4	41.06	40.2	101.9
December	62.95	39.3	156.9	54.98	42.7	129.5	57.55	44.1	130.6	47.14	41.6	113.3	49.17	42.2	116.6	42.01	40.6	103.5
1947: January	62.08	38.9	157.5	54.19	42.0	129.7	57.54	43.5	132.3	47.39	41.5	114.3	49.69	42.1	118.1	41.86	40.4	103.6
February	63.00	38.6	160.7	54.07	40.8	133.6	56.55	42.6	132.6	48.17	41.4	116.5	50.34	42.3	119.2	43.15	41.1	105.2
March	64.25	38.8	162.6	55.67	41.1	136.4	58.47	41.8	139.8	48.60	41.3	117.7	51.63	42.5	121.6	42.86	41.1	104.4
April	65.29	38.9	165.1	56.13	40.7	138.6	58.80	41.8	140.8	48.93	41.0	119.2	51.81	42.5	122.2	42.80	40.6	105.3
May	67.10	38.9	169.9	56.41	40.6	139.7	57.73	41.2	140.3	49.80	41.1	121.0	52.36	42.5	123.6	43.19	40.3	107.2
June	67.16	38.4	171.9	56.81	40.6	140.6	58.31	41.3	141.1	50.59	41.1	123.2	52.81	42.5	124.4	43.49	39.9	109.1
July	66.53	38.2	171.3	56.77	40.5	140.8	57.55	40.5	142.1	51.00	40.9	124.7	53.37	42.3	126.3	43.50	39.1	111.4
August	67.74	38.5	173.6	55.95	40.0	140.6	57.56	40.1	143.6	51.27	40.9	125.2	53.76	42.1	127.9	45.68	49.9	114.4
September	69.40	39.0	175.3	58.32	40.8	143.6	60.51	41.2	146.7	51.81	41.0	126.3	53.55	41.8	128.4	46.43	39.5	117.5
October	69.18	38.7	175.8	58.63	40.7	145.1	60.16	41.1	146.2	52.67	41.4	127.3	53.93	41.9	129.0	47.90	40.4	118.5
November	69.78	38.6	177.6	59.35	40.7	146.9	62.19	42.4	146.7	53.15	41.3	128.7	55.66	41.9	131.6	47.35	40.0	118.3
December	71.45	39.1	179.1	60.22	41.1	147.9	62.91	42.3	148.6	53.73	41.5	129.3	55.11	42.0	131.4	47.90	40.4	118.5

[1] See footnote, p. 54.

[46] New series; comparable January data are $48.59 and 108.7 cents.

TABLE C–1: Average earnings and hours in manufacturing and nonmanufacturing industries, 1932–47[1]—Continued

MANUFACTURING—Continued

Period	Chemicals and allied products—Continued																	
	Soap			Rayon and allied products			Chemicals, not elsewhere classified			Explosives and safety fuses			Ammunition, small-arms			Cottonseed oil		
	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings
			Cents			Cents			Cents			Cents			Cents			Cents
1932	$20.64	44.7	46.2	$17.32	43.5	39.8	$24.66	......	......	......	......	......	......	......	......	$11.18	......	......
1933	18.94	40.5	46.9	17.01	41.2	42.0	23.42	41.0	56.6	......	......	......	......	......	......	9.70	......	......
1934	20.70	38.0	54.5	18.59	37.0	50.4	23.80	38.6	61.6	......	......	......	......	......	......	9.99	43.5	22.9
1935	22.53	38.0	59.3	19.48	37.9	51.4	25.29	39.7	63.6	......	......	......	......	......	......	10.14	44.7	22.8
1936	23.69	39.4	60.1	20.52	38.6	53.2	26.54	40.6	65.3	......	......	......	......	......	......	10.75	49.1	22.0
1937	27.10	39.8	68.2	23.76	38.5	61.7	30.13	39.9	75.5	......	......	......	......	......	......	12.41	52.2	23.9
1938	27.65	39.0	70.8	22.78	35.3	64.5	29.86	38.0	78.6	......	......	......	......	......	......	12.90	49.1	26.0
1939	28.11	39.8	70.7	24.52	37.9	64.6	31.30	40.0	78.4	$29.99	38.8	77.3	$22.68	39.0	61.2	13.70	44.3	30.2
1940	28.45	39.8	71.5	26.38	39.0	67.6	32.17	40.0	80.4	31.79	39.2	81.0	23.58	40.1	60.2	15.10	43.7	33.5
1941	32.05	40.7	78.6	28.59	39.2	72.9	35.97	41.0	87.9	37.10	42.1	87.9	30.29	42.7	70.8	15.86	43.7	35.4
1942	35.96	41.0	87.8	32.42	39.6	81.9	41.52	41.8	99.4	44.59	45.6	97.8	38.85	45.8	84.8	19.01	47.5	39.9
1943	42.53	45.0	94.5	36.57	41.9	87.4	48.75	45.8	106.4	47.29	46.6	101.5	42.35	46.1	91.8	23.42	50.2	46.5
1944	47.56	47.9	99.3	38.81	42.9	90.5	51.65	46.7	110.5	47.02	46.0	102.1	45.11	46.5	97.0	27.14	51.6	52.6
1945	48.30	47.5	101.8	39.79	42.1	94.4	52.64	46.0	114.5	46.84	44.1	106.1	44.57	44.9	99.2	29.02	51.3	56.6
1946	47.65	41.7	114.4	41.32	39.1	105.8	51.55	41.3	124.8	48.53	39.9	121.6	43.59	39.8	109.5	31.58	50.0	63.1
1947	57.94	43.2	134.1	48.32	39.4	122.6	57.03	40.9	139.3	54.51	40.3	135.4	50.23	42.0	119.7	36.59	51.1	71.6
1945: January	48.59	48.0	101.3	39.51	43.1	91.7	53.31	46.9	113.6	47.25	45.1	104.7	46.05	46.9	98.3	28.70	53.4	53.7
February	49.11	48.7	100.9	38.72	42.1	92.0	53.63	47.3	113.4	46.41	44.4	104.6	44.96	46.0	97.7	28.64	52.4	54.6
March	49.44	48.7	101.6	39.18	42.6	92.0	53.78	47.3	113.7	47.63	45.3	105.1	45.51	46.3	98.3	28.45	51.5	55.3
April	48.44	48.1	100.6	40.19	43.3	92.8	53.83	47.3	113.9	47.18	44.9	105.0	45.12	45.8	98.6	28.88	51.5	56.1
May	48.15	47.8	100.7	40.66	43.2	94.0	54.03	47.3	114.1	47.91	45.6	105.0	46.57	46.5	100.1	28.57	50.2	56.9
June	48.21	48.1	100.3	40.71	43.2	94.2	54.23	47.2	114.9	46.92	44.5	105.5	45.55	45.8	99.4	28.89	48.7	59.2
July	47.70	48.1	99.3	40.46	43.0	94.1	54.11	47.1	114.9	48.00	44.9	106.9	44.29	44.8	98.9	27.54	47.1	58.5
August	47.90	47.6	100.6	40.33	42.3	95.3	53.96	46.5	116.0	44.83	42.3	105.9	37.38	38.2	97.8	26.09	45.0	58.5
September	49.83	48.0	103.7	39.28	41.1	95.5	51.46	44.8	114.8	42.12	39.8	105.8	40.18	38.9	103.2	28.92	50.6	57.2
October	47.85	46.9	102.0	39.61	41.0	96.6	50.03	43.8	114.3	47.06	40.9	115.1	43.94	40.7	107.9	30.60	54.6	56.1
November	46.17	44.4	103.9	39.21	41.0	95.5	49.25	42.8	114.8	45.15	38.9	116.2	41.80	39.6	105.5	30.92	53.0	58.3
December	48.20	45.2	106.6	39.64	40.0	99.1	49.56	42.8	115.9	48.90	41.7	117.4	42.32	40.8	103.8	29.94	52.3	57.2
1946: January	48.17	45.2	106.5	39.23	39.2	100.0	50.05	42.4	118.0	46.96	40.2	117.4	42.89	41.4	103.7	29.76	51.5	57.7
February	46.76	43.3	108.0	39.13	39.1	100.1	49.91	41.7	119.8	47.18	40.1	117.7	43.97	42.4	103.6	29.26	49.4	59.3
March	46.43	41.6	111.5	39.53	38.9	101.6	50.25	41.5	121.1	47.73	40.2	118.8	44.01	40.2	109.6	29.73	49.7	59.8
April	46.35	41.1	112.7	40.18	39.4	102.0	50.58	41.5	122.0	47.43	39.6	119.6	42.76	39.1	109.4	29.53	48.6	60.7
May	46.01	40.5	113.5	40.43	39.4	102.5	50.29	40.7	123.4	46.71	38.8	120.5	40.67	37.2	109.4	29.78	47.5	62.7
June	47.60	40.9	116.4	40.09	38.3	104.7	50.69	40.8	124.3	48.53	39.1	123.2	42.10	37.7	111.5	29.42	46.0	64.0
July	47.08	41.0	114.8	41.08	38.6	106.5	52.09	41.5	125.6	47.96	38.9	123.3	42.65	38.6	110.6	29.65	47.0	63.1
August	47.22	40.7	115.9	42.62	39.1	108.9	51.81	41.1	126.0	48.37	39.1	123.7	39.53	38.7	102.3	30.84	46.9	65.7
September	47.30	40.5	116.7	43.55	39.3	110.7	52.61	41.1	128.1	50.98	41.3	123.3	44.05	39.1	112.7	31.93	49.9	64.0
October	47.85	41.0	116.6	42.98	39.2	109.7	52.87	41.4	127.8	50.26	40.7	123.4	45.80	40.4	113.3	33.47	51.9	64.5
November	48.08	40.8	117.9	43.31	39.1	110.7	52.96	41.1	128.8	49.53	39.8	124.3	46.98	40.9	114.8	35.14	52.6	66.8
December	52.93	43.3	122.2	43.76	39.2	111.7	54.15	41.2	131.6	51.68	40.7	127.0	47.38	41.2	115.0	36.49	53.6	68.1
1947: January	53.08	42.8	124.1	44.14	39.5	111.7	54.77	41.3	132.7	53.08	41.0	129.5	48.14	41.5	116.1	35.91	52.2	68.8
February	53.46	43.1	124.0	47.31	39.3	120.5	55.10	41.0	134.2	50.07	39.4	126.9	48.55	41.4	117.2	35.77	51.7	69.2
March	54.12	42.5	127.2	47.92	39.2	122.1	55.33	40.9	135.1	50.60	39.0	129.9	48.27	41.6	116.1	35.69	50.3	70.9
April	54.78	42.8	128.1	48.59	39.4	123.3	55.45	40.8	135.9	49.57	37.4	132.5	48.24	41.4	116.4	33.88	48.0	70.6
May	55.19	42.2	130.9	48.37	39.5	122.4	56.35	41.0	137.5	53.31	40.2	132.6	49.12	41.2	119.2	35.29	40.2	71.8
June	57.98	43.3	133.8	48.63	39.6	122.9	56.80	40.9	139.0	54.77	40.4	135.7	49.62	41.8	118.6	35.83	48.6	73.7
July	56.30	42.0	134.0	48.69	39.6	123.0	57.73	41.1	140.4	56.47	41.2	137.1	50.42	41.6	121.3	35.29	48.3	73.0
August	59.04	43.0	137.4	49.04	40.0	122.6	57.44	40.7	141.0	57.08	41.9	136.1	44.96	41.0	109.8	35.76	48.9	73.2
September	62.05	44.0	140.1	49.74	39.6	125.7	57.98	40.5	143.2	57.39	41.6	138.1	52.69	42.1	125.0	36.30	51.0	71.2
October	61.58	43.5	141.4	48.71	39.0	124.9	58.46	40.8	143.2	56.65	40.5	140.0	53.13	42.9	123.9	38.84	53.8	72.2
November	62.66	44.1	142.0	49.07	39.2	125.2	59.21	40.9	144.8	58.20	40.7	143.0	53.30	43.1	123.8	38.47	52.6	73.1
December	65.01	44.7	145.6	49.73	39.2	126.8	60.07	41.2	145.7	57.36	40.0	143.3	53.85	43.3	124.3	38.68	52.9	73.1

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[1] See footnote, p. 54.

TABLE C-1: Average earnings and hours in manufacturing and nonmanufacturing industries, 1932-47[1]—Continued

MANUFACTURING—Continued

Period	Chemicals and allied products—Cont.			Products of petroleum and coal												Rubber products		
	Fertilizers			Total: Products of petroleum and coal			Petroleum refining			Coke and byproducts			Roofing materials			Total: Rubber products		
	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings
			Cents			Cents			Cents			Cents			Cents			Cents
1932	$11.80	......	......	......	......	......	$28.22	41.8	63.8	......	......	......	......	......	......	......	......	......
1933	10.39	40.0	26.5	......	......	......	26.46	37.9	65.5	......	......	......	......	......	......	......	......	......
1934	10.97	32.6	33.6	......	......	......	26.72	34.9	75.0	......	......	......	......	......	......	......	......	......
1935	11.00	33.6	32.7	......	......	......	27.81	35.0	80.1	......	......	......	......	......	......	......	......	......
1936	12.77	38.5	33.2	......	......	......	29.36	35.8	82.7	......	......	......	......	......	......	......	......	......
1937	15.05	40.1	37.8	......	......	......	33.72	36.0	94.5	......	......	......	......	......	......	......	......	......
1938	14.86	37.1	40.1	......	......	......	34.91	35.9	97.8	......	......	......	......	......	......	......	......	......
1939	14.71	35.8	41.2	$32.62	36.5	89.4	34.97	36.1	97.4	......	......	......	......	......	......	$27.84	36.9	75.4
1940	15.07	35.4	43.0	32.82	37.0	88.7	34.98	36.1	97.4	......	......	......	......	......	......	28.24	36.9	76.6
1941	17.28	36.8	47.2	35.96	37.8	95.0	38.02	37.0	103.4	......	......	......	......	......	......	32.49	39.5	82.2
1942	21.27	38.9	54.6	41.56	39.6	104.9	43.99	39.1	112.8	......	......	......	......	......	......	38.37	41.6	92.1
1943	26.69	43.3	61.7	50.17	44.5	112.7	53.49	44.5	120.1	$42.91	43.4	99.1	$43.16	47.5	90.8	45.94	45.0	102.1
1944	30.01	44.4	67.6	55.19	46.7	118.1	58.18	46.6	125.0	47.95	46.4	103.3	45.95	48.8	94.1	49.80	45.5	109.5
1945	32.13	45.1	71.3	55.86	46.2	121.0	58.39	45.9	127.6	48.93	46.2	106.0	46.67	48.1	97.0	49.54	44.0	112.5
1946	32.92	42.1	78.2	53.79	40.4	133.3	56.81	40.1	141.5	45.49	39.1	116.1	48.30	44.6	108.3	50.32	40.2	125.4
1947	35.98	41.4	86.9	59.32	40.5	146.4	62.14	40.2	154.5	51.99	39.5	131.6	56.00	44.7	125.3	55.97	39.7	140.9
1945: January	30.58	45.0	67.9	56.20	46.6	120.6	58.55	46.2	127.1	50.63	47.4	106.7	46.19	48.5	95.2	54.49	47.3	115.1
February	31.12	46.3	67.5	56.58	47.3	119.6	59.14	47.1	126.1	49.79	47.5	104.8	47.04	49.1	95.7	54.40	47.3	114.9
March	32.79	48.4	67.8	56.65	47.4	119.5	59.43	47.3	126.0	49.51	47.5	104.1	46.72	48.7	95.9	50.62	45.3	111.7
April	33.07	48.2	68.6	58.06	48.3	120.2	61.26	48.4	126.8	48.72	47.3	103.8	48.50	49.9	97.3	51.93	45.7	113.6
May	32.02	45.9	69.7	57.24	47.5	120.4	59.80	47.5	126.5	50.64	47.8	106.0	46.82	48.2	97.1	50.09	44.2	113.2
June	32.42	45.3	71.6	57.72	47.8	120.7	59.89	47.6	126.6	49.53	46.4	107.9	48.28	49.7	97.2	51.45	45.2	114.0
July	33.66	46.2	72.9	58.01	47.7	121.7	60.57	47.3	127.7	52.65	48.2	109.3	47.56	49.2	96.6	51.81	45.5	113.8
August	32.51	43.6	74.5	57.28	46.9	122.2	59.77	46.9	128.0	51.48	46.9	109.7	45.55	46.6	97.7	46.76	41.8	111.9
September	33.75	44.9	75.0	54.70	44.9	121.7	57.37	44.8	128.1	48.82	45.2	108.6	44.12	45.2	97.6	47.20	43.0	109.8
October	32.94	44.0	74.9	51.33	42.6	120.4	53.03	42.1	128.5	42.30	41.9	100.9	46.76	48.3	96.7	45.57	41.4	110.0
November	30.87	41.6	74.2	53.54	44.0	121.7	56.21	43.6	128.7	45.74	43.8	104.5	45.96	46.8	98.2	44.68	40.2	111.2
December	30.24	41.9	72.2	53.05	42.9	123.6	55.42	42.1	131.5	46.47	44.1	105.4	46.64	47.3	98.5	45.48	40.9	111.3
1946: January	29.88	41.2	72.5	52.06	41.7	124.9	54.59	40.9	133.0	45.45	42.5	106.0	47.00	46.6	100.9	46.71	41.7	112.1
February	30.68	42.9	71.6	53.45	41.6	128.6	56.25	40.8	136.9	46.68	43.2	108.3	45.86	45.7	100.4	46.05	40.8	112.9
March	31.93	44.4	71.9	53.30	40.8	130.7	55.86	40.3	138.3	47.93	41.0	117.0	44.49	44.3	100.5	46.46	40.8	113.8
April	31.87	43.6	73.1	53.27	40.0	133.2	56.61	39.8	142.0	43.51	37.9	114.8	47.04	45.3	103.9	49.67	40.3	123.2
May	31.74	41.7	76.2	52.80	39.3	134.2	56.49	39.8	141.9	40.71	34.8	116.9	46.66	44.1	105.8	49.82	39.4	126.6
June	32.58	41.7	78.1	53.34	39.6	134.7	56.46	39.5	143.1	43.65	37.5	116.1	48.42	44.8	108.1	50.45	39.3	128.3
July	34.11	42.7	79.8	54.19	40.0	135.5	57.02	39.7	143.7	46.65	38.9	119.5	48.06	44.5	108.0	50.60	39.2	129.2
August	35.09	42.1	83.4	54.36	40.3	134.7	57.10	40.0	142.7	46.77	39.6	117.6	49.61	44.5	111.4	51.03	39.4	129.5
September	35.62	42.3	84.2	55.25	40.4	136.8	58.35	40.2	145.3	47.07	39.4	119.1	48.82	43.6	112.0	53.69	40.6	132.3
October	33.87	41.0	82.7	54.38	40.4	134.7	57.32	40.2	142.8	46.34	39.2	117.7	49.46	44.2	112.0	51.74	39.4	131.3
November	32.97	40.1	82.1	54.50	40.3	135.1	57.11	40.0	142.9	46.64	39.5	117.7	51.10	44.4	115.0	52.93	40.0	132.2
December	34.64	42.1	82.4	54.55	40.0	136.2	57.80	40.4	143.4	43.56	36.7	119.1	50.92	44.1	115.6	54.63	41.1	133.1
1947: January	33.44	41.3	81.0	55.24	40.2	137.2	57.74	39.9	144.7	48.11	39.5	121.2	51.99	44.6	116.7	54.03	40.6	133.0
February	33.44	41.4	80.8	55.39	40.1	138.2	57.75	39.8	145.1	48.88	39.6	123.1	52.59	44.0	119.6	54.06	40.6	133.1
March	34.42	42.3	81.4	56.53	40.2	140.8	59.15	39.8	148.8	48.95	39.6	123.1	53.14	44.6	119.3	52.97	39.8	133.0
April	35.30	42.3	83.5	57.41	40.5	141.8	60.24	40.1	150.1	49.87	40.3	123.2	54.21	44.7	121.1	55.23	39.5	139.7
May	36.76	42.9	85.7	57.92	40.0	144.8	60.01	39.5	152.0	52.64	39.7	132.3	55.40	45.1	122.9	55.30	39.0	141.6
June	36.41	41.8	87.1	59.64	40.7	146.4	62.17	40.6	153.2	53.83	39.8	134.5	54.87	43.9	125.1	55.49	39.1	141.9
July	37.04	41.8	88.6	60.57	40.5	149.5	64.12	40.7	157.0	51.34	37.8	136.4	56.09	44.5	126.0	55.74	38.6	144.5
August	37.17	40.9	90.8	60.62	40.6	149.4	63.12	40.3	156.7	54.15	39.8	136.3	57.17	44.6	128.2	55.92	38.7	144.5
September	38.85	41.8	93.0	61.84	41.0	150.9	64.75	40.7	159.1	53.08	38.6	138.1	57.56	44.7	128.7	57.76	39.9	144.7
October	36.85	40.5	90.9	60.94	40.5	150.5	63.51	39.9	159.3	53.83	39.9	135.0	58.88	45.2	130.2	57.62	40.1	143.8
November	35.53	39.2	90.7	62.54	41.2	151.8	65.86	41.0	160.7	54.06	39.8	135.9	58.74	45.4	130.6	57.99	39.9	145.4
December	36.56	40.7	89.7	63.21	40.8	155.1	66.32	40.3	164.7	54.37	39.7	137.1	60.60	45.5	133.1	59.47	40.9	145.4

[1] Ses footnote, p. 54.

TABLE C–1: Average earnings and hours in manufacturing and nonmanufacturing industries, 1932–47[1]—Continued

MANUFACTURING—Continued

Period	Rubber products —Continued									Miscellaneous industries								
	Rubber tires and inner tubes			Rubber boots and shoes			Rubber goods, other			Total: Miscellaneous industries			Instruments (professional and scientific), and fire-control equipment			Pianos, organs, and parts		
	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings
			Cents			Cents			Cents			Cents			Cents			Cents
1932	$20.61	32.5	62.5	$17.14	......	......	$18.22	38.1	46.9	......	......	......	......	......	......	......	......	......
1933	20.53	31.6	64.2	17.45	......	......	17.19	37.9	45.5	......	......	......	......	......	......	......	......	......
1934	23.65	30.7	77.9	17.58	34.3	49.4	18.39	35.3	51.3	......	......	......	......	......	......	......	......	......
1935	27.01	32.3	84.2	18.93	36.2	52.3	19.65	37.5	52.7	......	......	......	......	......	......	......	......	......
1936	30.72	35.4	87.3	20.20	38.6	52.3	21.39	40.3	53.5	......	......	......	......	......	......	......	......	......
1937	30.08	31.8	95.0	22.64	38.3	59.0	22.99	39.1	59.2	......	......	......	......	......	......	......	......	......
1938	28.11	29.6	94.8	20.41	33.9	60.2	21.66	36.5	59.7	......	......	......	......	......	......	......	......	......
1939	33.36	35.0	95.7	22.80	37.5	60.7	23.34	38.9	60.5	$24.48	39.2	62.4	......	......	......	......	......	......
1940	33.55	34.8	96.7	23.64	38.3	61.7	23.80	38.7	62.1	24.85	39.0	63.7	......	......	......	......	......	......
1941	38.28	37.3	102.8	28.66	41.7	68.8	27.87	41.0	68.4	27.83	41.5	67.1	$37.57	46.9	80.1	......	......	......
1942	45.01	40.9	110.4	32.37	42.0	77.0	33.40	42.5	78.9	34.08	43.9	77.6	45.76	50.1	91.5	......	......	......
1943	53.68	45.3	118.7	37.81	44.5	84.9	39.16	44.8	87.6	40.67	46.1	88.3	51.42	50.9	101.0	$45.73	48.0	95.5
1944	57.84	46.1	125.6	40.29	44.4	90.7	41.97	44.9	93.6	43.79	45.8	95.7	55.06	49.7	111.0	46.08	46.1	100.2
1945	56.32	44.0	127.9	41.82	44.6	93.7	42.81	44.2	97.0	43.11	44.0	98.0	54.10	46.9	115.5	44.58	44.3	101.0
1946	55.30	38.6	142.6	43.35	41.6	104.3	45.34	42.1	107.7	43.18	41.4	104.4	49.28	40.4	121.1	45.41	41.6	109.5
1947	62.02	38.5	160.4	44.43	41.5	116.7	49.48	41.0	120.6	47.27	40.5	116.8	53.81	39.8	133.3	52.92	41.6	127.8
1945: January	64.29	49.0	131.7	41.09	44.3	92.7	44.25	45.8	96.6	45.43	45.7	99.3	57.90	50.0	115.9	47.53	46.4	103.0
February	64.04	48.7	131.4	42.59	45.5	93.6	44.42	45.9	96.7	45.43	46.0	98.8	57.31	49.8	115.2	46.11	45.0	102.9
March	57.29	45.3	126.0	41.42	44.0	94.1	44.26	45.6	97.1	45.65	46.1	99.1	57.36	49.9	115.1	46.62	45.5	102.8
April	59.75	46.3	129.4	43.07	45.6	94.5	43.63	45.1	96.8	45.49	45.8	99.3	57.67	49.8	115.9	46.77	45.7	102.6
May	57.32	44.6	128.4	41.32	43.6	94.8	42.68	43.9	97.3	44.40	44.8	99.2	54.11	47.1	114.8	46.37	45.2	103.0
June	59.20	45.3	130.7	42.60	45.5	93.7	43.37	44.9	96.7	44.83	45.2	99.2	56.02	47.5	118.2	47.81	46.5	103.3
July	59.59	46.0	129.6	42.70	45.4	94.1	43.62	44.8	97.4	43.24	44.0	98.3	51.12	44.0	116.5	47.19	45.8	103.6
August	52.81	41.5	126.9	41.43	44.3	93.7	40.02	41.3	96.9	40.72	41.8	97.5	51.39	44.4	116.2	41.34	40.8	101.7
September	53.59	43.1	124.3	41.97	44.8	93.6	40.62	42.4	95.7	40.10	42.2	95.1	45.77	40.6	112.1	39.71	41.4	96.5
October	49.48	40.1	123.1	40.94	44.4	92.1	41.74	43.0	96.6	40.16	42.0	95.7	46.52	41.3	111.9	38.53	40.6	95.4
November	47.78	38.1	124.9	41.75	44.7	93.4	41.06	42.1	97.5	40.43	41.9	96.5	46.60	41.2	112.5	38.93	41.3	94.6
December	48.54	38.7	124.7	40.79	43.4	94.0	42.39	43.4	97.7	41.49	42.1	98.5	47.53	41.4	114.3	42.06	43.8	96.4
1946: January	50.29	39.9	125.5	41.72	44.2	94.5	42.91	43.7	98.2	41.45	41.8	99.1	47.56	41.4	113.9	40.74	41.9	97.6
February	49.21	38.7	126.6	41.69	43.9	95.1	42.65	43.2	98.8	41.17	41.8	98.5	46.13	40.2	113.2	39.66	40.3	98.7
March	49.72	38.7	127.5	41.94	44.0	95.3	43.27	43.3	100.0	42.05	42.1	99.9	48.65	40.7	118.4	41.47	41.6	100.2
April	54.77	38.6	141.4	43.75	42.1	103.9	43.45	42.6	102.4	42.39	41.8	101.5	48.51	40.4	119.8	44.67	42.1	106.1
May	54.72	37.7	144.6	44.19	41.5	106.6	44.01	41.5	106.2	42.08	40.9	102.8	48.18	40.0	121.4	44.14	41.1	107.4
June	54.82	37.4	146.1	44.98	41.8	107.6	45.44	41.7	109.1	42.93	41.2	104.2	49.57	40.6	121.1	45.77	42.0	109.1
July	56.11	38.0	147.2	42.98	39.6	108.5	44.93	40.8	110.2	42.42	40.5	104.8	49.06	39.9	122.9	44.04	40.6	108.6
August	55.42	37.4	147.4	44.45	41.2	107.8	46.85	41.8	112.0	43.40	41.0	105.7	49.74	40.2	123.3	46.11	41.3	112.1
September	59.89	39.6	150.7	45.27	41.5	109.1	47.01	41.8	112.5	44.25	41.1	107.6	50.43	40.3	124.3	47.73	42.2	113.4
October	57.38	38.2	149.2	38.93	37.3	104.3	47.00	41.6	113.0	45.04	41.4	108.8	51.23	40.6	125.2	48.31	42.0	115.1
November	58.87	39.0	150.3	43.80	40.4	108.3	46.74	41.4	113.0	45.08	41.1	109.8	51.01	40.1	125.8	50.95	42.8	119.5
December	60.46	39.8	151.3	45.93	42.0	109.3	48.68	42.6	114.3	45.85	41.6	110.3	52.20	40.7	126.9	47.65	40.5	118.0
1947: January	59.78	39.5	151.1	46.06	41.9	109.9	48.12	42.0	114.6	45.98	41.1	112.0	52.00	40.1	127.3	53.37	42.5	125.9
February	59.90	39.3	151.7	45.83	42.0	109.2	48.27	42.1	114.7	46.06	41.0	112.3	51.50	39.7	127.9	53.20	42.3	126.2
March	58.05	38.2	151.2	44.91	41.2	109.0	48.23	41.8	115.4	46.71	41.0	113.9	51.95	39.8	128.6	51.42	41.0	125.7
April	61.64	38.2	160.8	47.03	40.8	115.2	48.53	41.0	118.4	46.35	40.6	114.2	52.10	39.5	130.1	51.53	41.4	125.1
May	61.12	37.6	162.2	48.59	40.6	119.6	48.81	40.6	120.1	46.50	40.3	115.4	51.81	38.9	131.3	52.92	41.4	128.5
June	61.35	37.7	161.5	49.62	41.4	119.8	48.95	40.5	120.9	47.00	40.3	116.7	54.15	39.5	135.1	52.71	41.3	127.7
July	62.06	37.9	164.0	48.46	40.5	118.7	48.22	39.1	123.2	46.37	39.4	117.8	53.55	40.1	135.0	51.57	40.8	126.9
August	62.15	37.8	164.0	47.23	39.9	118.3	49.17	39.7	123.7	46.32	39.3	117.7	54.27	39.9	135.3	50.88	40.7	125.9
September	64.75	38.9	166.1	49.92	41.8	119.4	50.40	40.9	123.4	47.91	40.2	119.1	55.00	39.8	136.1	53.81	41.9	129.5
October	63.78	38.7	164.7	51.28	42.4	121.1	51.13	41.4	123.2	48.74	40.6	120.0	55.67	39.9	137.5	52.64	40.8	130.1
November	64.86	38.9	166.1	49.26	40.6	121.3	51.27	41.0	125.2	49.14	40.7	120.7	56.06	40.0	136.9	54.24	41.6	131.8
December	65.74	39.5	165.8	54.72	44.5	123.1	52.93	41.8	126.1	50.21	41.2	121.9	57.99	40.8	139.1	56.25	42.9	132.6

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[1] See footnote, p. 54.

Table C–1: Average earnings and hours in manufacturing and nonmanufacturing industries, 1932–47[1]—Continued

NONMANUFACTURING

Period	Coal mining						Metal mining											
	Anthracite			Bituminous coal			Total: Metal mining			Iron			Copper			Lead and zinc		
	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings
			Cents			Cents			Cents			Cents			Cents			Cents
1932	$24.99	30.3	82.5	$13.91	27.2	52.0	......	......	......	......	......	......	......	......	......	......	......	......
1933	25.74	31.4	81.8	14.47	29.5	50.1	......	......	......	......	......	......	......	......	......	......	......	......
1934	27.35	33.2	82.6	18.10	27.0	67.3	......	......	......	......	......	......	......	......	......	......	......	......
1935	25.98	31.7	82.3	19.58	26.4	74.5	......	......	......	......	......	......	......	......	......	......	......	......
1936	25.63	30.8	83.3	22.71	28.8	79.4	......	......	......	......	......	......	......	......	......	......	......	......
1937	25.19	28.8	87.3	23.84	27.9	85.6	......	......	......	......	......	......	......	......	......	......	......	......
1938	23.76	25.3	92.2	20.80	23.5	87.8	......	......	......	......	......	......	......	......	......	......	......	......
1939	25.67	27.7	92.3	23.88	27.1	88.6	$28.93	40.9	70.8	$26.36	35.7	73.8	$28.08	41.9	67.9	$26.39	38.7	68.3
1940	24.94	27.2	92.4	24.71	28.1	88.3	30.24	41.4	73.0	28.84	38.5	74.9	29.95	41.7	72.7	28.22	39.4	71.7
1941	27.41	28.1	97.1	30.86	31.1	99.3	33.24	41.7	79.8	34.30	40.6	84.2	33.17	42.3	79.2	31.83	40.0	79.6
1942	33.85	33.7	98.9	35.02	32.9	105.9	38.72	43.6	88.8	37.21	42.1	88.4	40.84	45.2	90.4	39.31	43.3	90.7
1943	40.04	37.5	106.9	41.62	36.6	113.9	43.27	44.3	97.6	40.42	42.8	94.4	46.15	45.8	100.7	43.40	44.0	98.6
1944	47.93	40.7	117.8	51.27	43.4	118.6	44.55	44.2	100.7	41.77	43.3	96.4	46.24	45.2	102.4	46.27	44.2	104.7
1945	48.98	39.2	125.2	52.25	42.3	124.0	45.86	44.0	104.2	44.44	43.7	101.7	46.64	44.7	104.4	47.90	44.3	108.2
1946	57.15	38.3	149.4	58.03	41.6	140.1	46.86	40.5	115.6	43.88	37.7	116.5	49.49	42.8	115.7	48.92	41.7	117.3
1947	62.70	37.4	167.0	66.86	40.6	163.3	54.74	41.9	130.7	52.16	40.1	130.1	58.17	44.4	130.9	55.13	41.3	133.4
1945: January	44.81	38.9	115.4	54.11	44.9	120.4	45.01	44.0	102.3	40.46	41.7	97.0	47.34	44.8	105.6	48.16	45.5	105.9
February	48.68	41.7	116.4	53.89	45.1	119.0	46.60	45.0	103.5	45.46	45.4	100.2	47.05	44.9	104.8	48.48	45.0	107.7
March	48.76	41.4	117.9	52.26	43.8	119.7	46.92	45.0	104.2	47.03	45.6	103.1	46.71	45.1	103.6	48.26	44.7	107.9
April	44.92	38.9	115.3	43.45	36.8	118.4	47.35	45.5	104.0	46.29	45.8	101.2	48.38	46.2	104.8	48.49	44.8	108.2
May	38.10	36.4	103.9	53.75	42.4	125.6	46.69	45.0	103.8	46.32	45.9	101.0	47.56	45.3	105.0	47.46	44.2	107.2
June	47.48	41.1	117.0	59.11	46.2	128.5	47.43	45.4	104.5	47.01	46.4	101.3	48.68	45.6	106.8	48.00	44.5	107.8
July	47.47	39.4	121.9	50.66	40.8	125.4	45.65	43.9	103.9	44.28	43.8	101.0	47.17	44.9	105.0	46.90	43.5	107.7
August	49.29	37.1	132.7	49.90	40.1	124.9	43.98	42.0	104.8	44.38	42.2	105.3	41.97	41.2	101.9	46.92	42.9	109.4
September	49.85	37.0	134.5	52.73	42.3	126.1	45.33	43.0	105.5	44.20	42.4	104.4	45.70	43.8	104.3	47.53	43.5	109.4
October	56.45	41.2	136.8	39.09	32.2	124.2	46.17	44.3	104.3	45.91	44.9	102.3	46.17	44.8	103.0	48.06	44.1	108.9
November	47.75	35.8	133.3	56.29	44.9	126.3	45.09	43.0	104.8	42.89	41.7	102.9	45.92	44.3	103.6	48.27	44.1	109.5
December	54.62	39.6	138.0	58.09	45.7	128.1	44.14	42.0	105.1	40.00	39.0	102.6	46.34	44.4	104.4	48.00	43.7	109.9
1946: January	48.63	36.4	133.9	54.16	43.3	125.9	43.66	42.1	103.6	39.55	39.9	99.2	45.07	43.6	103.4	47.89	43.9	109.2
February	56.84	41.2	137.6	57.37	45.5	126.5	38.99	36.8	105.9	21.00	20.5	102.4	45.90	44.1	104.0	48.74	44.3	110.0
March	56.10	41.0	137.6	58.30	45.9	127.4	44.12	41.0	107.1	37.13	33.6	110.6	45.65	43.8	104.2	48.95	44.6	109.6
April	52.08	38.6	135.2	30.15	26.4	123.9	45.93	42.0	109.0	43.10	38.3	111.8	44.05	42.7	103.1	50.24	44.9	111.8
May	57.47	41.7	138.2	34.20	27.3	132.1	44.44	39.2	113.3	37.94	32.9	115.4	47.90	42.7	112.1	48.25	42.3	114.0
June	59.58	38.2	155.9	64.44	43.4	147.4	48.13	40.8	118.0	47.41	39.8	119.2	48.96	41.6	117.8	48.13	40.9	117.8
July	49.53	31.7	156.2	52.27	36.0	145.7	47.70	39.6	120.5	48.10	40.2	119.8	50.47	41.2	122.5	43.60	36.2	120.4
August	60.65	37.9	159.8	62.84	42.8	146.6	49.59	40.9	121.2	48.03	40.2	119.4	52.13	42.4	123.1	48.70	39.9	121.9
September	60.67	37.7	161.1	61.65	41.8	148.0	49.53	40.6	122.1	48.45	39.8	121.9	51.09	41.9	122.1	49.47	40.3	122.7
October	61.82	39.2	159.3	62.49	42.9	146.0	49.63	41.0	121.0	48.06	40.3	119.3	51.66	42.3	122.0	49.23	40.2	122.4
November	56.57	35.7	158.2	61.54	41.7	147.7	48.59	39.9	121.9	46.36	38.4	120.7	50.71	41.7	121.7	48.63	39.5	123.2
December	65.82	40.9	161.5	69.56	46.7	149.1	52.04	42.2	123.2	47.89	39.7	120.7	55.46	45.1	122.9	53.69	42.3	126.8
1947: January	62.40	39.1	159.4	69.54	46.7	149.1	50.65	41.2	122.9	46.18	39.1	118.1	54.38	44.0	123.7	52.43	40.9	128.3
February	57.42	35.1	163.7	65.30	43.6	149.1	52.01	42.0	123.8	48.71	40.5	120.3	54.94	44.3	124.1	53.19	41.4	128.6
March	64.84	39.8	163.2	64.90	43.7	148.4	51.63	41.6	124.1	48.54	40.2	120.8	54.58	44.1	123.6	52.62	40.6	129.5
April	49.89	32.3	154.5	54.14	36.4	148.3	51.68	41.8	123.7	48.00	39.9	120.2	54.53	44.1	123.7	53.91	41.8	129.0
May	59.15	37.2	159.3	65.51	44.3	147.0	53.96	42.2	127.8	52.62	40.9	128.6	56.41	44.5	126.9	54.22	41.8	129.6
June	62.39	39.2	159.6	67.09	43.7	148.9	56.37	42.6	132.3	55.68	40.9	136.2	59.09	45.3	130.5	55.45	42.3	131.2
July	58.10	37.0	157.5	54.87	31.8	174.0	54.04	41.2	131.1	52.86	39.2	134.8	57.79	44.7	129.4	52.81	40.5	130.4
August	68.51	38.5	178.0	70.23	39.1	178.7	56.09	41.4	135.4	54.09	40.0	135.2	60.01	43.8	136.9	54.75	39.8	137.6
September	67.37	38.2	176.5	71.19	39.1	181.9	57.01	41.6	137.0	54.12	39.6	136.8	61.57	44.2	139.3	56.67	41.0	138.3
October	71.40	40.0	178.4	71.91	39.9	179.8	57.39	42.3	135.6	55.11	40.7	135.5	60.78	44.8	135.7	57.48	41.5	138.6
November	63.43	36.2	175.4	71.77	38.5	185.1	57.55	41.7	138.0	54.83	39.9	137.6	60.49	44.0	137.5	58.58	41.4	141.6
December	67.42	38.4	175.6	75.22	41.2	182.6	58.11	42.7	136.0	54.26	40.3	134.6	62.39	45.5	137.0	60.83	43.3	140.6

[1] See footnote, p. 54.

TABLE C–1: Average earnings and hours in manufacturing and nonmanufacturing industries, 1932–47[1]—Continued

NONMANUFACTURING—Continued

Period	Nonmetallic mining						Public utilities											
	Quarrying and nonmetallic mining			Crude petroleum production			Telephone			Telegraph[47]			Electric light and power			Class I steam railroads[48]		
	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings
			Cents			Cents			Cents			Cents			Cents			Cents
1932	$15.99	37.0	44.3	$30.01	....	....	....	....	....	....	....	....	$30.78	44.0	69.6	$23.34	38.9	60.0
1933	14.64	36.3	41.0	27.51	....	....	....	....	....	....	....	....	29.23	42.0	69.3	23.09	38.8	59.5
1934	15.69	33.3	47.4	27.48	....	....	....	....	....	....	....	....	29.98	38.8	77.5	24.32	40.4	60.2
1935	16.68	34.9	47.5	28.88	36.1	78.5	....	....	....	....	....	....	31.07	39.3	79.0	26.76	41.1	65.1
1936	19.69	41.4	47.5	29.93	38.2	76.8	....	....	....	....	....	....	32.22	40.1	80.3	28.01	42.5	65.9
1937	22.20	41.6	53.3	33.24	39.7	82.7	$29.81	38.8	77.4	....	....	....	34.22	40.3	85.3	29.20	43.2	67.6
1938	21.00	38.6	54.3	34.12	39.7	84.4	31.53	38.9	81.6	....	....	....	34.15	39.9	85.8	30.26	42.5	71.2
1939	21.61	39.2	55.0	34.09	38.3	87.3	31.94	39.1	82.2	....	....	....	34.38	39.6	86.9	30.99	43.4	71.4
1940	22.33	39.3	56.8	34.03	37.8	88.1	32.44	39.5	82.7	....	....	....	35.10	39.7	88.4	31.55	44.0	71.7
1941	26.25	41.8	62.8	36.37	37.9	93.4	32.74	40.1	82.0	....	....	....	36.54	39.8	92.0	34.25	45.6	75.1
1942	31.34	43.7	71.7	40.35	39.0	101.4	33.97	40.5	84.3	....	....	....	39.60	40.1	98.3	38.65	46.9	82.4
1943	36.23	46.0	78.9	47.85	42.6	110.0	36.30	41.9	87.0	....	....	....	44.16	41.6	105.3	43.68	48.7	89.7
1944	39.55	46.3	85.6	53.27	45.4	115.1	38.39	42.3	91.1	$36.89	45.9	80.4	48.04	43.1	110.7	46.06	49.1	93.8
1945	41.26	46.6	88.6	54.24	45.2	119.7	(49)	(49)	(49)	37.98	45.5	83.4	50.05	43.5	114.1	45.69	48.5	94.2
1946	45.06	45.4	99.3	52.98	40.5	130.8	44.04	39.4	112.4	40.87	44.2	92.4	52.04	41.6	125.6	[50]51.22	45.9	[50]111.6
1947	50.44	44.8	112.4	59.19	40.5	146.8	44.96	37.3	119.9	54.22	44.7	121.3	57.12	42.0	137.4	54.17	46.3	117.0
1945: January	38.73	44.6	86.8	54.59	45.7	117.1	39.49	42.4	93.4	37.14	45.0	82.6	48.90	43.4	111.6	47.07	49.6	94.9
February	39.27	45.5	86.0	54.93	46.4	[51]118.3	39.75	42.5	93.8	37.23	44.7	83.2	49.76	44.0	112.2	47.72	49.5	96.4
March	40.26	46.5	86.8	54.31	46.2	117.5	40.60	42.8	95.1	37.20	44.7	83.2	49.77	44.2	112.3	46.71	49.8	93.8
April	41.98	48.0	87.4	53.89	45.2	119.1	[52]37.50	[52]40.6	[52]92.6	37.33	44.8	83.3	50.18	43.6	114.5	46.35	49.1	94.4
May	41.52	47.2	87.9	54.08	46.1	117.2	37.91	41.1	92.6	38.35	45.7	83.9	50.26	44.5	113.2	46.10	49.1	93.9
June	42.38	48.2	87.9	54.84	46.3	118.4	38.87	41.4	94.1	38.49	46.2	83.3	50.59	44.4	113.6	46.51	49.8	93.4
July	42.91	48.0	89.5	54.40	45.0	120.9	39.36	41.8	94.4	37.98	46.0	82.6	50.34	43.4	114.6	45.74	48.5	94.3
August	41.25	46.6	88.5	55.51	46.8	118.7	42.96	44.1	97.7	43.44	48.2	90.1	50.71	44.3	113.9	45.29	48.7	93.0
September	41.91	46.5	90.0	55.41	45.4	122.2	39.62	41.5	95.9	37.87	45.9	82.5	49.91	43.0	114.9	44.08	46.6	94.6
October	42.63	47.2	90.2	53.01	44.4	118.9	40.54	41.9	97.2	37.34	45.4	82.2	49.09	43.3	112.7	44.50	48.0	92.7
November	41.79	46.1	90.9	54.40	43.9	123.1	42.02	42.1	100.2	36.89	45.0	82.0	50.37	42.7	116.2	44.27	47.0	94.2
December	40.07	44.2	90.8	51.70	41.0	125.1	41.44	41.1	101.1	36.61	44.5	82.2	50.49	42.0	118.6	43.79	46.0	95.2
1946: January	39.25	43.3	90.7	51.89	41.1	125.7	41.19	40.1	103.0	35.78	44.0	81.3	50.32	42.7	117.7	43.48	46.3	93.9
February	40.25	44.1	91.3	52.45	40.7	128.4	44.37	40.7	109.5	36.73	44.1	83.3	50.63	42.4	119.5	44.03	46.2	95.3
March	41.91	45.1	93.0	53.20	40.8	130.8	43.76	40.2	110.5	37.22	43.7	85.1	50.75	41.6	122.2	43.15	46.2	93.4
April	44.37	46.3	95.9	52.51	40.7	129.3	44.09	39.5	113.1	38.79	43.8	88.6	50.82	41.6	121.9	47.94	45.7	104.9
May	42.83	44.3	96.7	52.41	40.7	128.7	44.82	39.4	114.3	40.04	44.2	90.5	51.03	41.3	123.6	46.57	43.4	107.3
June	45.32	45.7	99.4	52.23	39.5	132.2	44.93	39.3	114.7	40.39	44.5	90.8	52.07	40.9	127.5	51.23	45.7	112.1
July	45.51	45.4	100.4	52.97	40.4	131.1	44.82	39.7	113.5	41.15	45.2	91.0	51.96	41.5	125.8	52.01	46.4	112.1
August	47.11	46.5	101.6	53.42	40.9	130.7	44.19	39.3	112.9	41.31	45.4	91.0	52.27	41.6	126.0	52.68	47.2	111.6
September	47.97	46.1	104.2	53.19	39.9	133.4	44.10	38.5	114.8	40.98	44.8	91.4	52.78	41.0	129.1	51.51	45.3	113.7
October	48.28	46.1	104.7	53.72	41.2	130.8	44.30	39.1	113.7	47.37	44.4	106.7	53.18	41.9	128.4	52.88	47.3	111.8
November	47.40	45.4	104.5	54.25	40.4	133.4	44.40	39.3	113.1	46.25	43.5	106.3	53.61	41.6	130.2	51.71	45.8	112.9
December	48.07	45.8	105.2	53.15	39.5	134.6	42.98	38.0	113.2	45.94	43.2	106.2	54.58	41.4	133.7	50.76	44.8	113.3
1947: January	45.55	43.1	105.8	56.02	41.3	135.5	43.37	38.4	113.2	46.83	43.8	106.9	54.11	41.9	131.3	52.70	46.6	113.1
February	45.31	42.8	106.2	55.86	40.3	139.0	43.31	38.0	114.1	51.23	44.0	116.4	55.37	41.6	135.2	51.10	47.0	115.1
March	46.41	43.5	106.9	56.25	39.6	142.1	42.51	37.9	112.4	50.91	43.7	116.4	51.43	41.0	134.1	52.43	46.4	113.0
April	48.67	41.5	108.0	58.74	40.8	144.4	[53]32.26	[53]26.9	117.4	59.27	47.3	125.2	55.90	42.2	134.3	52.03	46.5	111.9
May	49.86	45.6	108.2	58.71	40.5	141.8	[53]38.13	[53]31.5	118.9	57.17	46.0	124.2	55.90	41.6	135.8	51.30	45.8	112.0
June	50.92	45.6	112.1	61.46	41.9	147.5	45.58	37.5	121.8	55.36	44.8	123.6	57.84	42.2	138.8	51.72	46.1	112.2
July	51.26	45.2	112.9	60.01	40.6	148.1	46.51	38.4	121.1	54.88	44.8	122.6	56.99	42.1	137.4	51.16	45.8	111.7
August	52.99	46.1	114.6	59.54	40.1	148.6	46.92	38.7	121.5	55.01	44.8	122.8	57.97	42.4	137.8	51.68	46.1	112.1
September	53.45	46.1	115.6	61.37	40.3	151.0	48.02	39.1	123.0	54.95	44.5	123.4	58.29	42.0	139.0	57.47	46.2	124.4
October	54.44	46.4	116.9	60.51	40.0	149.4	48.77	39.3	124.1	54.92	44.8	122.7	58.44	42.1	139.2	58.44	47.4	123.3
November	53.05	44.6	117.8	62.94	40.9	155.4	49.44	39.5	125.4	55.10	44.0	125.3	60.33	42.4	142.8	58.38	45.5	128.3
December	52.39	44.4	117.6	60.90	39.5	154.3	47.83	39.0	122.9	55.14	43.9	125.7	59.01	42.2	141.4	59.02	46.4	127.2

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[1] See footnote, p. 54.

[47] Data relate to all land-line employees except those compensated on a commission basis. Excludes general and divisional headquarters personnel, trainees in school, and messengers.

[48] Source: U.S. Interstate Commerce Commission. The averages are those of employees classified and reported to the Commission on an hourly basis (excluding most of the executive, professional, and supervisory employees). The count of employees used in computing weekly hours and weekly earnings is the number on the pay rolls during the month. Hourly earnings were computed by dividing total pay rolls by total man-hours paid for.

Figures of hours and earnings for class I steam railroads comparable to those beginning in 1932 are available also for the years 1921 to 1931. Those are given below. The averages for 1921 to 1927 include hourly rated employees of class I switching and terminal companies but the averages are virtually identical with the averages when these companies are excluded.

Year	Average weekly earnings	Average weekly hours	Average hourly earnings (cents)
1921 (July-Dec.)	$25.87	43.4	59.6
1922	26.70	45.4	58.8
1923	26.65	45.4	58.7
1924	26.37	44.1	59.8
1925	26.91	44.4	60.6
1925	27.12	44.9	60.4
1927	27.43	44.6	61.5
1928	27.71	44.4	62.4
1929	28.49	44.8	63.6
1930	27.76	43.1	64.4
1931	26.76	41.1	65.1

[49] Average for year not available because new series was started in April.

[50] The annual average includes retroactive payments not appearing in the monthly averages.

[51] New series; comparable January data are 118.4 cents.

[52] On previously published basis, April averages would be $40.72, 42.9 hours, and 95.2 cents.

[53] Data reflect work stoppages in April and May.

Table C–1: Average earnings and hours in manufacturing and nonmanufacturing industries, 1932–47[1]—Continued

NONMANUFACTURING—Continued

Period	Public utilities—Cont.			Trade														
	Street railways and busses			Wholesale trade			Total: Retail trade			Food			General merchandise			Apparel		
	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings
			Cents			Cents			Cents			Cents			Cents			Cents
1932	$28.56	46.9	59.1	$27.72	......	......	$20.71	......	......	......	......	......	$19.11	......	......	......	......	......
1933	26.56	45.4	57.7	26.11	......	......	19.18	......	......	......	......	......	17.57	......	......	......	......	......
1934	27.41	45.2	60.0	26.37	......	......	19.86	41.5	52.8	......	......	......	17.21	38.1	47.0	......	......	......
1935	28.31	45.3	61.6	26.93	41.3	64.8	19.96	41.8	52.1	......	......	......	17.02	39.0	46.6	......	......	......
1936	30.03	46.3	63.8	28.53	42.6	66.7	20.68	43.5	52.2	......	......	......	17.51	40.8	46.0	......	......	......
1937	31.48	45.9	67.6	29.94	42.8	69.8	21.73	43.3	55.1	......	......	......	18.49	39.8	50.3	......	......	......
1938	32.23	44.9	70.7	29.48	42.2	70.0	21.14	42.6	54.3	......	......	......	17.82	39.4	48.1	......	......	......
1939	33.13	45.9	71.4	29.85	41.7	71.5	21.17	43.0	53.6	$23.37	43.9	52.5	17.80	38.8	45.4	$21.23	38.8	54.3
1940	33.75	46.1	72.2	30.39	41.2	73.9	21.17	42.9	54.2	23.62	43.6	53.2	17.81	38.7	45.8	21.16	38.3	54.8
1941	35.42	46.5	75.2	32.32	41.0	79.3	21.94	42.5	56.8	24.45	42.8	55.7	18.58	38.7	47.3	22.04	38.2	57.7
1942	39.85	48.0	81.8	35.56	41.3	86.0	23.24	41.6	61.4	26.35	41.6	62.0	19.67	38.0	51.2	23.69	37.6	63.1
1943	44.32	49.5	88.0	39.40	42.2	93.3	24.88	40.5	67.0	28.87	41.0	66.8	20.67	36.7	55.3	25.87	37.0	70.0
1944	47.64	50.4	93.3	42.29	42.9	98.5	26.58	40.3	72.4	30.87	40.7	71.9	21.89	36.6	59.5	28.06	36.9	76.1
1945	50.50	51.4	97.4	44.07	42.7	102.9	28.31	40.3	77.3	33.40	40.9	77.3	23.38	36.5	63.5	29.93	37.0	82.2
1946	53.08	48.5	107.1	48.06	41.8	114.4	32.55	40.5	87.8	38.94	41.1	91.0	27.26	36.6	73.0	33.93	37.1	92.3
1947	57.74	47.0	122.5	52.40	41.2	125.8	36.67	40.2	99.1	43.79	40.4	105.2	31.28	36.3	84.1	37.02	37.0	99.9
1945: January	50.04	51.6	96.2	43.15	42.7	100.6	26.99	39.6	75.1	31.49	39.9	74.6	22.31	35.9	61.6	29.07	36.9	79.3
February	50.28	51.5	96.5	43.45	42.8	101.3	27.32	39.7	75.6	31.44	39.9	75.2	22.52	36.1	61.8	28.77	36.5	79.0
March	49.63	51.2	95.6	43.51	42.9	101.6	27.21	39.7	75.2	31.76	40.0	74.6	22.37	35.7	62.3	29.03	36.4	80.3
April	49.69	51.0	96.8	44.51	43.2	103.1	27.69	39.9	76.3	32.19	40.2	75.2	22.83	35.4	63.4	29.05	36.4	81.0
May	50.36	51.7	96.5	43.83	42.9	101.8	27.56	39.4	76.4	32.19	40.1	75.5	22.63	35.0	63.4	28.90	36.2	81.0
June	51.34	52.2	97.0	44.13	42.8	102.7	28.46	40.7	76.9	33.59	41.8	76.1	23.60	36.7	63.8	29.73	37.2	82.0
July	51.21	51.6	97.9	44.92	43.1	103.7	29.40	41.9	77.3	34.89	43.0	76.5	24.09	38.4	63.6	31.55	38.5	82.9
August	51.59	52.3	97.4	43.27	42.4	101.3	29.01	41.2	77.3	34.68	42.6	77.3	23.91	38.0	63.4	29.99	37.3	82.2
September	50.54	51.3	98.3	43.85	42.4	102.5	28.95	40.7	78.3	34.20	41.2	79.0	23.89	37.3	63.8	30.05	37.5	82.7
October	50.40	50.9	98.2	44.60	42.6	104.5	29.17	40.3	79.3	34.34	40.9	79.8	24.12	36.8	64.8	30.92	37.3	84.8
November	49.85	50.3	98.1	44.94	42.3	105.6	28.88	40.0	80.0	34.89	40.6	81.8	23.81	36.4	65.0	30.96	37.0	85.1
December	51.22	50.7	101.3	44.71	42.0	105.8	29.12	40.1	79.6	35.38	40.7	82.3	24.33	36.2	64.8	31.03	37.0	85.0
1946: January	49.74	49.2	100.7	45.14	41.8	107.0	30.54	40.5	82.8	36.23	40.7	84.2	25.05	36.7	68.2	31.83	37.5	87.2
February	50.29	49.2	101.1	46.07	41.9	109.5	30.77	40.5	83.5	36.36	40.5	85.8	25.37	36.8	68.2	32.00	37.6	87.1
March	49.91	49.4	100.1	46.31	41.9	110.1	31.12	40.5	84.1	36.76	40.7	86.8	25.75	36.8	69.0	32.40	37.1	87.9
April	50.71	49.0	102.5	47.13	41.8	112.1	31.40	40.4	85.1	37.53	40.6	87.7	26.14	36.8	70.5	33.47	36.9	91.0
May	51.85	49.2	104.9	47.48	41.7	113.5	31.45	40.3	85.9	37.93	40.9	88.6	25.97	36.0	71.8	32.99	36.8	90.3
June	52.46	49.3	105.3	47.88	41.4	114.6	32.93	40.9	87.6	39.41	41.8	90.3	27.80	36.9	73.4	34.10	37.3	92.1
July	54.60	48.4	109.7	48.06	41.4	115.5	33.64	41.3	88.8	40.20	42.3	92.1	28.22	37.5	74.2	34.27	37.4	92.6
August	55.35	48.6	109.9	48.14	41.7	114.8	33.81	41.3	89.3	40.38	42.7	92.4	28.63	37.6	74.7	34.93	37.5	92.5
September	54.50	47.5	111.0	49.54	41.8	117.9	33.76	40.8	90.8	40.08	41.0	94.0	28.57	36.7	75.6	35.26	37.2	95.4
October	55.62	47.7	113.0	49.44	41.9	117.2	33.19	40.1	90.7	40.16	41.0	94.3	27.65	35.7	75.7	34.98	36.5	96.0
November	54.64	47.3	112.5	49.80	41.6	118.6	33.04	39.7	91.7	40.42	40.3	97.2	27.63	35.5	76.0	34.74	36.4	96.2
December	55.26	47.9	114.2	51.20	42.3	120.2	34.06	40.3	91.9	41.55	40.8	98.1	29.33	36.4	76.5	35.52	36.9	96.8
1947: January	55.98	47.7	116.5	50.05	41.5	119.7	35.02	39.9	95.3	41.50	40.1	101.2	29.75	35.9	81.1	35.89	36.9	95.7
February	56.70	48.0	117.4	50.87	40.8	123.0	35.27	40.1	95.7	42.04	40.4	101.9	29.98	36.1	80.9	35.85	37.3	95.6
March	56.82	47.8	118.4	50.80	40.8	123.1	35.31	40.0	96.0	41.67	40.1	102.2	29.91	36.0	80.9	35.99	36.8	97.5
April	56.94	47.8	119.0	51.13	41.2	122.9	35.93	40.0	97.4	42.39	40.0	102.9	30.60	36.1	82.3	37.07	36.8	99.9
May	56.99	47.6	119.5	51.57	41.2	124.1	36.50	40.0	98.5	43.29	40.0	104.9	31.24	36.0	84.2	36.98	36.9	99.7
June	57.71	47.4	121.2	52.88	41.6	126.2	37.82	40.8	99.6	44.57	41.0	105.7	32.41	37.2	84.8	37.86	37.2	100.9
July	57.65	46.3	123.1	52.22	41.1	125.7	37.99	41.1	100.3	45.07	41.6	106.2	32.59	37.6	85.5	37.82	37.3	99.8
August	58.00	46.6	124.1	52.05	41.1	125.8	38.14	41.0	100.3	45.37	42.1	104.3	32.50	37.2	85.9	36.74	37.1	99.4
September	58.57	46.1	126.5	53.65	41.2	128.1	37.06	40.0	101.2	44.15	40.1	105.1	31.85	36.3	85.4	37.02	36.9	101.1
October	58.69	45.7	126.5	53.68	41.3	128.9	36.74	40.0	101.3	44.08	40.2	105.8	31.59	36.1	86.0	37.20	36.8	102.3
November	58.27	45.4	127.6	54.70	41.4	131.4	37.14	39.5	102.5	44.92	39.6	108.6	31.15	35.5	85.6	37.40	36.5	102.7
December	60.11	46.8	128.8	54.97	41.6	130.0	37.36	39.7	101.6	44.74	39.9	107.9	31.87	36.0	85.3	38.18	37.2	102.4

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[1] See footnote, p. 54.

TABLE C–1: Average earnings and hours in manufacturing and nonmanufacturing industries, 1932–47[1]—Continued

NONMANUFACTURING—Continued

Period	Trade—Continued									Service								
	Furniture and housefurnishings			Automotive			Lumber and building materials			Hotels (year-round)[54]			Power laundries			Cleaning and dyeing		
	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings
			Cents			Cents			Cents			Cents			Cents			Cents
1932	......	......	......	......	......	......	......	......	......	$14.25	......	......	$16.25	......	......	$18.86	......	......
1933	......	......	......	......	......	......	......	......	......	12.79	......	......	14.74	......	......	16.78	......	......
1934	......	......	......	......	......	......	......	......	......	13.17	47.2	27.3	15.03	39.4	37.7	17.90	40.4	44.3
1935	......	......	......	......	......	......	......	......	......	13.57	47.8	27.9	15.55	40.7	36.6	18.27	41.7	43.7
1936	......	......	......	......	......	......	......	......	......	13.97	48.3	28.7	16.06	42.5	37.4	18.65	42.8	44.2
1937	......	......	......	......	......	......	......	......	......	14.78	47.7	30.8	16.82	42.9	39.1	19.72	42.7	47.0
1938	......	......	......	......	......	......	......	......	......	14.93	46.8	31.5	17.15	42.0	41.1	19.93	41.8	48.3
1939	$28.62	44.5	66.0	$27.07	47.6	57.1	$26.22	42.7	61.9	15.25	46.6	32.4	17.69	42.7	41.7	19.96	41.8	49.0
1940	28.96	44.4	67.2	28.17	47.4	59.3	26.39	42.5	62.6	15.52	46.3	33.2	18.10	43.0	42.2	20.44	42.9	48.9
1941	29.79	44.3	69.9	30.40	47.1	65.5	27.97	42.7	66.2	16.09	45.6	34.8	19.00	43.3	44.1	21.70	43.6	50.9
1942	32.01	44.3	74.9	32.07	47.7	68.1	31.05	42.6	74.2	17.62	45.3	38.6	20.90	43.3	48.6	24.14	43.4	57.3
1943	34.80	44.1	80.9	37.14	47.3	79.5	34.46	43.0	81.7	20.21	44.7	45.1	23.90	44.0	54.9	27.98	44.2	64.9
1944	37.63	44.0	86.1	41.15	46.6	89.9	36.76	43.2	86.9	22.65	44.5	50.5	27.00	43.8	62.0	30.90	44.0	72.4
1945	39.80	43.8	92.0	43.67	46.2	95.6	38.60	43.1	90.9	24.53	44.2	55.0	28.61	43.4	66.0	32.94	43.3	77.0
1946	44.72	43.6	104.9	47.65	46.3	104.6	42.39	43.0	99.9	26.95	43.9	61.2	30.30	43.2	70.0	35.36	43.0	83.1
1947	49.50	42.6	117.6	51.06	45.5	113.9	47.01	42.8	110.5	29.65	44.5	66.1	32.77	42.5	76.9	36.99	41.8	89.7
1945: January	38.20	43.7	88.2	42.05	46.3	92.4	37.86	42.8	89.4	23.71	44.2	53.2	28.32	43.5	64.9	31.68	43.6	75.4
February	38.75	43.6	88.8	43.23	46.3	93.5	37.98	43.3	88.9	24.07	44.5	53.7	28.31	43.4	65.3	32.28	43.4	75.8
March	38.65	43.9	88.7	42.80	46.1	94.5	38.05	43.5	88.9	23.97	44.8	52.9	28.80	43.8	66.0	34.03	44.3	77.5
April	39.54	44.1	90.9	43.63	46.6	94.5	39.04	43.8	89.8	23.99	44.3	53.3	28.98	43.8	66.0	33.41	43.9	76.9
May	39.46	43.6	90.5	42.55	45.6	94.4	38.40	43.1	90.2	24.03	44.3	53.2	28.64	43.4	66.2	32.66	43.0	76.5
June	39.52	43.9	91.1	43.43	46.4	94.6	38.64	43.4	90.5	24.43	44.4	53.9	28.76	43.4	66.6	33.50	43.8	77.3
July	40.21	44.3	93.5	44.05	46.8	94.4	38.86	43.7	90.8	24.40	44.0	54.7	[55]28.69	44.0	[55]65.6	32.86	44.2	[56]75.0
August	39.49	43.5	92.3	42.58	45.7	94.5	37.66	42.0	90.3	24.37	43.7	55.5	27.68	42.4	64.9	31.14	41.5	74.6
September	39.74	44.0	92.7	44.82	46.9	96.9	39.24	43.4	92.0	24.79	43.4	56.7	28.59	43.4	66.1	33.00	43.1	77.8
October	41.12	44.0	93.9	44.20	45.9	98.4	39.31	43.2	92.6	25.08	44.2	56.5	28.74	43.2	66.2	34.05	43.5	79.4
November	40.88	43.9	94.7	44.74	45.8	99.1	38.46	42.1	92.7	25.54	44.2	57.5	28.64	42.7	67.3	32.75	42.4	78.6
December	41.69	43.5	97.0	45.33	46.2	98.7	39.57	42.8	94.1	25.94	44.4	58.5	29.18	43.3	67.6	33.30	43.0	78.9
1946: January	41.44	43.6	98.0	46.05	45.8	99.4	40.37	43.0	95.5	26.21	43.4	60.4	29.38	43.6	67.5	33.83	43.1	79.3
February	42.32	43.4	99.7	45.87	46.1	100.2	40.73	42.9	96.1	26.43	43.7	60.2	29.22	43.3	67.5	33.33	42.5	79.3
March	42.50	43.3	99.6	45.90	46.3	100.8	40.92	43.1	96.1	26.57	44.1	60.0	29.81	43.5	68.4	34.77	43.4	81.5
April	42.85	43.4	101.0	46.58	46.2	102.2	41.73	43.6	97.4	26.64	44.3	59.9	30.05	43.5	68.8	36.25	44.0	83.3
May	43.59	43.6	102.6	46.61	46.1	103.0	41.83	43.2	98.3	26.65	44.1	59.6	30.26	43.1	70.3	35.50	42.9	83.1
June	44.33	43.6	103.6	47.47	46.3	104.0	42.08	43.2	98.8	26.70	43.9	59.8	30.64	43.3	70.3	36.29	43.8	83.4
July	44.86	43.8	105.8	47.36	46.1	104.6	42.32	42.7	100.1	26.63	44.0	60.2	30.37	43.4	69.8	35.58	43.2	82.6
August	44.52	43.5	104.5	47.97	46.3	105.9	42.93	43.0	101.2	27.15	43.8	61.4	29.97	43.0	69.3	35.01	42.6	83.2
September	46.59	43.9	108.0	49.15	46.5	107.7	43.60	43.1	102.4	26.98	43.5	62.0	30.45	42.9	70.8	35.81	42.9	83.9
October	45.84	43.3	107.4	48.82	46.1	107.9	43.70	43.1	103.3	27.27	43.8	62.6	30.52	43.0	70.8	35.81	42.2	85.4
November	47.26	43.6	110.1	48.74	46.1	108.7	43.32	42.3	104.0	28.15	43.8	64.2	31.05	42.6	72.9	35.32	41.9	85.4
December	49.39	43.8	115.2	50.61	47.2	109.3	44.78	43.5	103.7	28.40	43.7	65.1	32.13	43.5	73.9	36.50	42.8	86.7
1947: January	45.86	42.2	112.5	49.01	45.7	109.2	44.30	43.0	104.3	28.62	43.8	64.8	32.46	43.3	74.5	36.29	42.3	87.4
February	45.85	41.9	111.6	49.69	45.7	109.8	45.31	43.0	106.1	28.91	44.3	65.4	31.78	42.5	74.8	34.93	41.1	86.1
March	46.96	42.1	115.2	49.58	45.4	110.8	45.74	43.3	106.8	29.09	44.7	64.2	32.18	42.4	75.9	36.41	42.0	87.6
April	47.82	42.4	117.0	50.45	45.5	112.5	45.70	42.8	107.8	29.41	44.9	64.2	32.37	42.8	75.7	36.77	41.9	88.8
May	49.01	42.5	119.6	50.54	45.6	112.4	46.32	42.9	109.0	29.23	45.0	64.3	32.45	42.7	75.6	37.70	42.6	89.4
June	50.20	43.2	120.2	52.25	46.0	114.1	47.43	43.3	110.4	29.85	45.2	65.0	33.21	42.8	76.7	38.10	42.9	89.8
July	49.51	43.0	119.9	50.59	45.4	114.6	46.46	42.5	110.5	29.36	44.9	65.2	32.95	42.6	76.9	37.34	42.1	89.9
August	49.41	42.6	119.4	51.50	45.5	115.2	48.49	43.0	112.2	29.50	45.0	66.0	32.79	42.2	77.1	35.86	40.8	89.2
September	50.23	42.6	121.5	51.55	45.3	115.9	48.24	42.3	113.5	29.86	44.1	67.2	33.44	42.4	78.6	37.67	41.9	91.1
October	51.43	42.4	124.3	52.37	45.7	116.5	48.70	42.9	113.6	30.45	44.0	68.4	32.97	42.3	78.7	37.70	41.5	91.9
November	52.13	42.5	125.5	52.62	45.3	117.4	47.65	42.1	113.9	30.54	44.4	68.7	32.86	41.7	78.6	37.23	40.9	92.5
December	53.79	43.2	128.8	52.71	45.5	116.8	49.03	42.7	114.3	30.89	44.1	69.3	33.88	42.6	79.7	37.70	41.5	92.1

[1] See footnote, p. 54.

[54] Money payments only; additional value of board, room, uniforms, and tips, not included.

[55] New series; comparable June data are $28.39 and 55.7 cents.

[56] New series; comparable June data are 75.7 cents.

TABLE C–1: Average earnings and hours in manufacturing and nonmanufacturing industries, 1932–47[1]—Continued

NONMANUFACTURING—Continued

Period	Finance						Private construction[57]											
	Security brokerage			Insurance			All types of contractors (building and non-building)			Building construction			General building[58]			Special building trades		
																All trades		
	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings
			Cents			Cents			Cents			Cents			Cents			Cents
1932	$35.64	......	......	$36.99	......	......	......	......	......	......	......	......	......	......	......	......	......	......
1933	33.83	......	......	34.29	......	......	......	......	......	......	......	......	......	......	......	......	......	......
1934	35.34	......	......	35.02	......	......	......	......	......	$22.97	28.9	79.5	......	......	......	......	......	......
1935	34.88	......	......	36.22	......	......	......	......	......	24.51	30.1	81.5	......	......	......	......	......	......
1936	37.28	......	......	37.99	......	......	......	......	......	27.01	32.8	82.4	......	......	......	......	......	......
1937	38.88	......	......	39.29	......	......	......	......	......	30.14	33.4	90.3	......	......	......	......	......	......
1938	35.24	......	......	36.30	......	......	......	......	......	29.19	32.1	90.8	......	......	......	......	......	......
1939	36.63	......	......	36.32	......	......	......	......	......	30.39	32.6	93.2	......	......	......	......	......	......
1940	37.46	......	......	36.55	......	......	......	......	......	31.70	33.1	95.8	$30.56	33.3	91.8	$33.11	32.7	101.2
1941	39.14	......	......	37.54	......	......	......	......	......	35.14	34.8	101.0	33.19	34.4	96.5	37.04	35.2	105.2
1942	41.38	......	......	38.37	......	......	......	......	......	41.80	36.4	114.8	39.29	35.8	109.8	43.94	37.0	118.9
1943	50.57	......	......	41.87	......	......	......	......	......	48.13	38.4	125.2	45.67	37.9	120.6	49.89	38.8	128.4
1944	54.38	......	......	44.87	......	......	......	......	......	52.18	39.6	131.9	49.35	39.1	126.2	54.18	39.9	135.8
1945	64.48	......	......	47.13	......	......	......	......	......	53.73	39.0	137.9	50.34	38.3	131.5	56.19	39.5	142.3
1946	66.26	......	......	50.94	......	......	......	......	......	56.24	38.1	147.8	53.33	37.6	141.9	59.52	38.6	154.4
1947	62.00	......	......	52.74	......	......	......	......	......	63.30	37.6	168.1	59.39	37.0	160.3	67.97	38.4	177.2
1945: January	60.33	......	......	46.81	......	......	......	......	......	52.98	38.8	136.4	50.05	38.2	131.0	55.24	39.2	140.1
February	64.03	......	......	45.81	......	......	......	......	......	52.89	39.1	135.2	50.26	38.9	129.2	54.60	39.2	139.2
March	64.57	......	......	47.39	......	......	......	......	......	54.49	40.0	136.3	52.01	39.9	130.3	56.21	40.0	140.6
April	62.25	......	......	47.11	......	......	......	......	......	54.42	40.0	136.1	51.21	39.3	130.4	56.68	40.4	140.1
May	66.40	......	......	46.71	......	......	......	......	......	53.64	39.3	136.6	51.03	39.2	130.4	55.34	39.2	141.0
June	66.15	......	......	47.66	......	......	......	......	......	55.50	40.4	137.4	52.48	40.0	131.2	57.68	40.6	141.9
July	64.23	......	......	48.11	......	......	......	......	......	55.57	40.1	138.7	51.50	39.0	132.1	58.44	40.8	143.2
August	59.10	......	......	46.73	......	......	......	......	......	55.79	40.3	138.3	52.17	39.5	131.9	58.28	40.8	143.0
September	60.69	......	......	46.73	......	......	......	......	......	52.94	38.1	138.8	48.56	36.9	131.7	56.17	39.0	143.9
October	65.83	......	......	46.88	......	......	......	......	......	53.87	38.7	139.2	49.84	37.6	132.7	57.11	39.6	144.3
November	68.46	......	......	46.96	......	......	......	......	......	51.64	37.1	139.1	48.77	36.5	133.6	53.90	37.5	143.7
December	71.39	......	......	48.64	......	......	......	......	......	51.79	37.1	139.5	47.92	35.8	133.7	54.83	38.1	144.1
1946: January	71.77	......	......	49.90	......	......	......	......	......	52.89	37.7	140.2	49.83	36.8	135.5	55.57	38.5	144.4
February	72.52	......	......	50.45	......	......	$52.74	37.5	140.6	53.04	37.3	142.2	50.80	36.8	137.9	55.37	37.8	146.5
March	68.24	......	......	51.09	......	......	52.74	37.8	139.5	52.87	37.5	141.1	50.40	37.0	136.2	55.58	38.0	146.3
April	67.75	......	......	51.11	......	......	53.99	38.5	140.2	54.29	38.2	142.3	51.73	37.8	136.8	57.16	38.6	148.2
May	68.77	......	......	51.27	......	......	53.34	37.8	141.1	53.63	37.5	143.1	50.43	36.7	137.4	57.31	38.4	149.3
June	67.39	......	......	51.51	......	......	54.92	38.6	142.3	55.23	38.2	144.4	52.39	37.9	138.4	58.64	38.7	151.5
July	64.04	......	......	50.76	......	......	56.16	38.6	145.4	56.25	38.2	147.3	53.01	37.7	140.8	60.09	38.8	154.7
August	62.61	......	......	49.87	......	......	56.61	38.7	146.2	56.67	38.2	148.2	53.66	37.8	141.9	60.34	38.7	155.8
September	63.50	......	......	50.63	......	......	58.39	39.3	148.5	58.49	38.7	151.0	55.64	38.4	145.0	61.87	39.2	158.0
October	62.24	......	......	51.20	......	......	58.93	39.2	150.5	59.20	38.8	152.6	56.39	38.5	146.3	62.39	39.1	159.6
November	62.00	......	......	51.24	......	......	57.38	37.6	152.7	57.65	37.2	154.9	54.68	36.8	148.5	61.11	37.7	162.2
December	63.78	......	......	52.25	......	......	59.92	38.8	154.5	60.32	38.4	156.9	56.73	38.0	149.5	64.53	40.0	165.5
1947: January	62.56	......	......	52.46	......	......	59.38	37.9	156.8	59.97	37.6	159.4	56.49	37.2	151.8	64.00	38.1	168.0
February	63.87	......	......	53.04	......	......	58.67	37.4	156.9	58.92	36.9	159.8	54.91	36.2	151.6	63.65	37.6	169.1
March	62.91	......	......	52.18	......	......	60.63	38.3	158.5	61.23	38.0	161.0	58.02	37.9	153.1	64.92	38.2	169.9
April	61.36	......	......	52.65	......	......	60.14	37.5	160.5	60.57	37.1	163.2	56.38	36.4	155.0	65.43	38.0	172.3
May	61.06	......	......	52.35	......	......	61.87	38.0	162.7	62.26	37.6	165.5	57.95	36.8	157.5	67.15	38.5	174.2
June	63.72	......	......	53.75	......	......	62.25	38.2	163.1	62.71	37.8	166.1	58.55	36.9	158.5	67.69	38.7	174.9
July	62.11	......	......	52.60	......	......	63.26	38.4	164.8	63.60	38.0	167.6	60.08	37.6	159.6	67.99	38.4	177.2
August	58.42	......	......	52.55	......	......	64.36	38.6	166.8	64.71	38.2	169.4	61.33	38.0	161.4	69.01	38.5	179.4
September	59.32	......	......	51.47	......	......	65.09	38.3	169.7	65.36	37.9	172.3	61.16	37.2	164.6	70.61	38.9	181.6
October	61.38	......	......	51.96	......	......	66.03	38.5	171.6	66.36	38.1	174.3	62.25	37.4	166.5	71.32	38.9	183.3
November	64.51	......	......	53.98	......	......	64.02	36.9	173.6	64.55	36.6	176.5	60.55	35.8	169.0	69.36	37.5	185.1
December	62.85	......	......	53.92	......	......	66.47	38.0	174.8	67.31	37.9	177.4	62.86	37.1	169.5	72.64	38.9	186.5

[1] See footnote, p. 54.

[57] Covers all employees engaged in privately financed construction at the site; ex-ludes employees of these private contractors engaged on publicly financed projects and ff-site workers who are covered by the totals in tables A–1 and A–2.

[58] Includes general contracting as well as general building maintenance and other special building data, 1934 through 1944.

TABLE C–1: Average earnings and hours in manufacturing and nonmanufacturing industries, 1932–47[1]—Continued

NONMANUFACTURING—Continued

Period	Private construction—Continued																	
	Special building trades—Continued																	
	Plumbing and heating			Painting and decorating			Electrical work			Masonry			Plastering and lathing			Carpentry		
	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings
			Cents			Cents			Cents			Cents			Cents			Cents
1940	$32.87	34.6	94.9	$33.05	32.5	101.6	$41.18	34.5	119.6	$29.47	29.8	98.8	$36.60	28.5	128.6	$31.23	33.0	94.7
1941	37.35	37.2	100.5	37.10	34.2	108.3	46.23	38.1	121.4	32.56	31.1	104.6	36.23	29.2	124.0	34.82	35.6	97.8
1942	44.02	38.9	113.3	42.14	35.6	118.5	57.87	41.1	140.9	36.27	32.1	113.0	38.96	29.7	131.0	38.69	35.9	107.9
1943	49.60	40.1	123.8	48.90	37.7	129.9	62.88	41.5	151.7	41.87	33.8	124.0	44.87	32.3	138.9	46.66	38.8	120.4
1944	53.82	41.0	131.3	53.38	39.1	136.7	64.19	42.2	152.2	45.08	34.1	132.4	52.23	35.0	149.3	50.91	39.6	128.5
1945	56.39	40.8	138.2	56.92	39.2	145.1	65.29	41.9	155.9	50.31	36.0	139.9	53.64	34.8	154.0	54.20	39.8	136.1
1946	60.92	39.6	153.7	58.66	37.5	156.4	68.44	40.7	168.3	55.42	37.2	149.0	62.04	36.8	168.8	50.60	39.0	142.6
1947	69.66	39.2	177.9	63.37	36.7	172.4	77.78	40.3	193.0	62.39	36.4	171.6	73.15	37.5	195.1	63.33	38.5	164 5
1945: January	56.12	41.4	135.6	52.93	37.9	139.8	66.69	42.7	156.2	39.84	29.4	135.7	51.24	33.7	151.9	50.87	38.3	132.7
February	55.58	41.1	135.1	52.58	38.1	138.0	63.49	40.8	155.6	44.19	32.6	135.4	49.96	33.9	147.5	50.53	38.5	131.2
March	55.77	41.0	136.1	54.95	39.4	139.6	67.73	43.6	155.5	48.89	36.2	135.2	54.27	35.0	155.0	53.64	39.7	135.3
April	55.74	41.0	136.0	56.68	40.7	139.2	66.48	42.5	156.5	50.91	37.5	135.9	52.33	35.0	149.4	54.60	40.2	135.9
May	54.31	39.8	136.3	55.62	39.4	141.2	65.53	41.8	156.6	47.56	35.5	134.0	51.58	34.4	149.9	54.79	40.7	134.7
June	56.34	41.2	136.6	60.20	41.2	146.3	66.80	42.8	156.0	52.58	38.5	136.7	53.59	35.2	152.3	56.15	41.4	135.5
July	57.61	41.7	138.3	60.16	40.8	147.4	68.01	44.1	154.3	57.01	39.4	144.9	53.69	35.0	153.5	56.60	40.7	139.0
August	57.47	41.4	138.9	59.35	39.7	149.7	67.87	44.5	152.6	54.74	38.2	143.2	54.20	34.9	155.2	53.89	40.1	134.5
September	57.45	40.8	141.0	57.53	39.3	146.4	61.66	40.1	153.9	52.08	36.7	141.9	53.73	34.4	156.0	54.39	40.2	135.3
October	58.40	41.2	141.7	57.57	39.0	147.7	63.70	40.3	158.1	53.73	38.3	140.3	56.04	36.5	153.7	56.68	40.4	140.3
November	55.41	39.2	141.3	55.45	37.5	148.0	62.15	39.7	156.5	48.04	33.9	141.8	53.22	33.8	157.6	54.26	39.4	137.8
December	55.74	40.3	138.2	56.94	38.1	149.6	65.22	40.9	159.4	45.14	31.9	141.5	55.70	35.3	157.7	53.08	38.4	138.4
1946: January	55.93	40.4	138.4	56.43	37.9	149.1	65.12	40.8	159.5	47.70	32.9	145.0	55.31	35.0	157.9	53.95	38.1	141.8
February	56.92	40.0	142.3	55.16	37.1	148.7	65.28	40.9	159.6	48.91	33.8	144.8	55.81	34.9	160.1	53.37	38.7	137.9
March	55.65	38.9	143.0	56.31	37.8	149.2	65.25	40.3	161.9	51.91	36.6	141.9	56.32	35.0	161.1	54.44	39.3	138.5
April	58.25	39.2	148.7	56.92	37.7	151.1	66.30	40.4	164.0	53.43	37.0	144.3	55.96	34.9	160.4	54.18	40.3	135.5
May	58.92	39.6	148.9	57.09	37.9	150.6	66.50	40.3	165.1	53.08	37.0	143.4	58.65	35.9	163.2	54.78	38.9	140.7
June	59.07	39.2	150.8	58.86	38.1	154.5	67.51	41.1	164.3	54.72	37.7	145.3	61.89	37.8	163.9	55.93	39.2	142.5
July	60.92	39.4	154.8	58.81	37.6	156.5	67.94	40.9	166.1	57.38	38.7	148.4	61.75	37.2	165.9	57.07	39.1	145.8
August	61.43	39.5	155.5	59.75	37.8	158.1	67.58	40.3	167.8	58.36	38.6	151.0	64.60	37.7	171.6	56.82	39.4	144.2
September	63.70	40.2	158.4	62.06	38.6	160.9	69.66	41.1	169.6	58.53	38.1	153.7	65.21	38.3	170.3	58.68	39.8	147.3
October	63.89	40.1	159.3	62.16	38.4	162.0	70.59	40.8	173.2	58.70	38.0	154.4	66.43	38.5	172.7	59.95	39.1	153.1
November	62.62	38.6	162.0	57.39	35.2	162.9	69.63	39.8	175.0	57.56	37.4	154.1	63.13	35.3	178.8	57.64	38.3	150.4
December	67.44	40.8	165.5	61.05	36.9	165.3	74.76	41.4	180.8	58.36	37.5	155.6	71.04	38.7	183.7	57.85	38.2	151.3
1947: January	67.16	39.9	168.1	58.83	35.9	163.7	73.85	40.2	183.8	56.49	34.9	161.8	69.81	37.9	184.2	58.20	37.7	154.4
February	66.65	39.3	169.4	58.75	36.3	161.9	74.95	40.8	183.6	52.41	32.4	161.9	66.84	36.3	184.0	57.69	37.8	152.8
March	66.89	39.2	170.5	60.10	37.1	161.9	75.75	40.5	187.2	57.37	35.1	163.7	69.15	37.9	182.2	62.98	39.6	159.1
April	67.37	38.7	173.9	60.87	36.6	166.2	76.31	40.5	188.5	57.36	34.6	165.6	72.40	38.2	189.4	61.01	37.9	161.1
May	68.24	38.7	176.1	63.77	37.3	171.2	76.73	40.4	189.9	62.01	37.2	166.8	74.95	38.9	192.6	62.67	38.9	161.2
June	67.73	38.9	173.9	63.52	37.4	169.7	77.81	40.6	191.7	63.54	37.2	170.6	73.67	38.2	192.7	62.29	38.3	162.5
July	68.63	38.7	177.4	63.52	36.9	172.2	77.17	39.7	194.6	63.26	37.3	169.7	73.14	37.5	195.0	61.97	37.7	164.5
August	69.60	38.9	179.1	66.32	37.4	177.4	76.96	39.3	196.0	65.89	38.2	172.7	75.61	38 0	199.2	65.99	39.5	167.0
September	71.19	39.1	181.9	66.13	37.4	176.7	79.92	40.3	198.5	66.68	38.1	175.2	7.605	38 1	199.5	65.75	39.0	168.4
October	71.98	39.2	183.6	67.29	37.6	179.2	81.87	40.8	200.6	67.19	37.7	178.1	76.60	37.4	201.9	66.55	38.9	171.0
November	71.90	38.4	187.2	63.56	35.0	181.8	79.64	39.9	199.5	65.39	36.0	181.7	73.27	35 3	207.5	66.50	38.4	173.3
December	76.61	40.6	188.7	65.33	36.0	181.2	81.20	40.6	200.0	66.69	36.3	183.6	76.63	36.5	210 0	64 04	37.8	171.8

See footnote, p. 54.

TABLE C–1: Average earnings and hours in manufacturing and nonmanufacturing industries, 1932–47[1]—Continued

NONMANUFACTURING—Continued

Period	Private construction—Continued																	
	Special building trades—Cont.						Nonbuilding construction											
	Roofing and sheet metal			Excavation and foundation			All nonbuilding			Highway and street[59]			Heavy construction			Other		
	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings
			Cents			Cents			Cents			Cents			Cents			Cents
1940	$28.07	31.8	88.3	$26.53	30.9	85.9	......	......	......	......	......	......	......	......	......	......	......	......
1941	32.04	34.1	93.9	28.16	33.2	84.9	......	......	......	......	......	......	......	......	......	......	......	......
1942	37.63	34.9	107.7	31.77	33.6	94.6	......	......	......	......	......	......	......	......	......	......	......	......
1943	43.17	36.8	117.3	39.09	35.6	109.9	......	......	......	......	......	......	......	......	......	......	......	......
1944	48.86	38.9	125.6	44.75	37.2	120.2	......	......	......	......	......	......	......	......	......	......	......	......
1945	50.83	37.4	135.9	48.81	37.8	129.2	......	......	......	......	......	......	......	......	......	......	......	......
1946	51.29	37.1	138.3	51.57	37.5	137.5	......	......	......	......	......	......	......	......	......	......	......	......
1947	57.81	36 7	157.7	60.12	37.8	159.0	......	......	......	......	......	......	......	......	......	......	......	......
1945: January	47.74	35.6	134.2	43.60	35.7	122.0	......	......	......	......	......	......	......	......	......	......	......	......
February	48.92	36.7	133.3	45.76	37.2	123.0	......	......	......	......	......	......	......	......	......	......	......	......
March	52.70	38.8	135.8	46.76	38.2	122.5	......	......	......	......	......	......	......	......	......	......	......	......
April	52.71	39.3	134.0	47.80	38.9	122.9	......	......	......	......	......	......	......	......	......	......	......	......
May	50.80	37.3	136.3	43.71	35.2	124.0	......	......	......	......	......	......	......	......	......	......	......	......
June	53.33	38.8	137.4	49.23	39.0	126.1	......	......	......	......	......	......	......	......	......	......	......	......
July	53.98	39.1	138.0	52.03	39.7	131.2	......	......	......	......	......	......	......	......	......	......	......	......
August	53.11	38.3	138.5	53.52	40.3	132.8	......	......	......	......	......	......	......	......	......	......	......	......
September	51.90	37.2	139.5	51.51	38.4	134.1	......	......	......	......	......	......	......	......	......	......	......	......
October	51.50	38.0	135.6	52.71	39.6	133.2	......	......	......	......	......	......	......	......	......	......	......	......
November	46.51	35.1	132.3	46.56	35.6	130.6	......	......	......	......	......	......	......	......	......	......	......	......
December	46.00	34.4	133.5	45.44	34.8	130.6	......	......	......	......	......	......	......	......	......	......	......	......
1946: January	49.57	36.4	136.1	47.06	35.6	132.2	......	......	......	......	......	......	......	......	......	......	......	......
February	48.45	35.7	135.6	45.97	35.2	130.6	$50.60	39.0	129.6	$51.98	39.5	131.6	$54.74	40.4	135.5	$49.27	40.3	122.4
March	48.76	36.5	133.5	48.70	36.9	131.9	51.92	39.9	130.0	49.88	39.4	126.5	55.94	41.0	136.3	48.21	38.9	124.0
April	49.61	37.5	132.5	52.41	39.0	134.5	52.14	40.6	128.3	51.88	40.9	127.0	54.39	40.6	133.9	48.24	40.5	119.2
May	48.61	36.7	132.5	50.50	37.6	134.2	51.74	39.5	130.8	49.58	39.3	126.1	53.53	39.5	135.7	50.50	40.0	126.4
June	50.53	37.4	135.0	52.46	38.6	136.1	53.25	40.5	131.3	53.37	41.0	130.3	53.05	39.6	133.8	53.52	42.0	127.5
July	53.11	38.1	139.3	55.28	38.8	142.3	55.68	41.0	135.7	53.93	41.0	131.5	56.81	40.7	139.6	55.12	41.9	131.5
August	53.30	37.7	141.4	54.21	38.3	141.6	56.24	41.6	135.3	54.39	40.9	133.1	58.21	42.1	138.2	53.40	40.9	130.5
September	54.06	38.3	141.2	54.88	38.4	143.1	57.90	42.2	137.2	55.71	42.0	132.7	59.86	42.6	140.7	54.46	41.3	131.7
October	54.33	37.5	144.8	51.85	37.9	136.9	57.59	41.0	140.3	54.41	40.9	133.0	59.56	41.0	145.3	55.02	41.3	133.1
November	50.95	36.1	141.3	52.10	36.4	143.1	56.13	39.2	143.3	53.24	39.0	136.6	57.41	39.0	147.0	54.96	39.8	138.1
December	52.84	36.4	145.0	54.94	37.9	145.0	58.02	40.5	143.4	55.19	39.9	138.3	59.11	40.3	146.6	57.44	41.4	138.7
1947: January	51.49	34.9	147.7	53.98	36.3	148.7	56.67	39.0	145.1	52.23	37.3	140.1	57.94	39.1	148.2	56.61	40.5	139.8
February	50.59	34.1	148.3	55.00	37.2	147.7	57.49	39.9	144.1	53.83	39.1	137.8	59.15	40.2	147.2	55.44	39.7	139.5
March	53.67	35.8	149.7	58.36	37.7	155.0	57.82	39.3	147.3	53.72	38.0	141.2	58.98	39.2	150.4	57.83	40.5	142.9
April	54.02	36 0	149.9	56.07	36.5	153.7	58.28	39.0	149.5	52.82	37.4	141.1	60.48	39.3	153.8	57.03	39.6	144.1
May	57.43	37.2	154.2	59.70	38.5	155.2	60.22	39.7	151.5	54.23	38.6	140.4	62 83	40.0	157.1	58.60	40.2	145.9
June	58.13	37.6	154.7	60.48	37.9	159.4	60.17	40.0	150.4	56.92	40.4	140.8	61.34	39.6	154.8	60.09	40.8	147.4
July	59.58	37.2	160.2	60 33	38.1	158.3	61.76	40.3	153.3	58.18	40.6	143.4	64.09	40.1	159.7	58.49	40.5	144.5
August	60.86	37.4	162.9	63.12	39.1	161.6	62.82	40.2	156.2	58.57	40.1	145.9	65.53	40.2	163.2	58.92	40.5	145.4
September	63.27	37.9	166.9	64.27	39.8	161.3	63.85	40.2	158.7	58.68	39.9	149.5	66.84	40.1	166.6	58.26	40.9	142.5
October	62.48	38.4	162.6	63.51	38.8	163.8	64.53	40.3	160.2	60.66	40.2	151.0	67.11	40.0	167.6	60.08	41.1	146.1
November	57.76	35.4	163.1	60.08	36.7	163.6	61.67	38.2	161.5	57.55	37.7	152.8	64.03	38.1	168.0	58.50	38.9	150.2
December	60.64	37.1	163.4	63.33	37.8	167.6	62.83	38.4	163.8	60.21	38.4	157.0	65.24	38.4	169.7	58.35	38.2	152.8

[1] See footnote, p. 54.

[59] Includes projects other than highway and street construction by contractors whose major activity is highway and street work.

Adjusted Hourly Earnings

Adjusted average hourly earnings of production workers in manufacturing industry for 1941–47 are computed by the Bureau of Labor Statistics from the gross average hourly earnings shown in table C–1. Gross average hourly earnings are affected by overtime payments, shift differentials, and production bonuses. In making this adjustment, the influence of overtime has been eliminated on the assumption that it is paid for at one-and-a-half times the straight-time rate for hours in excess of 40 a week. Although shift differential payments, production bonuses, overtime rates based on a workweek which is other than 40 hours, and the payment of double time for overtime, Sundays, or holidays also affect the estimated straight-time hourly earnings, these factors are of less importance in the aggregate, and no correction is made for them in the formula used. The adjustment method is described in the November 1942 issue of the Monthly Labor Review (p. 1053).

In table C–2, gross and adjusted average hourly earnings are shown for all manufacturing industries combined and for durable- and nondurable-goods industry divisions on the basis of the current distribution of total man-hours among industry groups.

In response to requests for summary information on general wage levels in United States industry, the Bureau of Labor Statistics has prepared estimates in six different years of the distribution of production workers in manufacturing industries by straight-time hourly earnings. Such estimates were made in 1941, 1942, 1943, 1945, 1946, and 1947 and are shown in table C–3.[1]

For 1941, 1942, and 1943, the basis of the estimates was the detailed wage-rate distribution in manufacturing industries that had been studied over a period of about 4 or 5 years preceding World War II. Each study yielded straight-time hourly earnings for individual wage earners in the form of a frequency distribution. Each distribution was then adjusted to reflect wage levels prevalent in a recent period (a common period being used in all cases): (1) by allowance for minimum wage regulations that had become effective between the date of the study and the period under consideration; and (2) by a percentage based on the relationship between the straight-time average hourly earnings for all factory wage earners in the industry at the time the particular study was made (plus any allowance for minimum wage regulation) and the estimated straight-time hourly earnings prevailing in the more recent period.

Estimated straight-time hourly earnings were derived from the Bureau of Labor Statistics monthly series of gross average hourly earnings (see table C–1), roughly adjusted to eliminate the influence of overtime and premiums for late shifts.[2] (The data in table C–2 were adjusted to eliminate premium overtime pay only.) The adjusted distributions were then classified according to major industry group, and were used to estimate the distribution of wage earners of the entire industry group; appropriate weighting and adjustments were made to compensate for other individual industries within the group for which no detailed information had been obtained. In turn, the major group distributions were weighted by estimated employment and combined to yield the estimated distribution for all manufacturing.

The summer of 1945 estimates were made by the same basic methods that were used in making those for 1943. Except for two major groups, lumber and machinery, for which more recent distributions were available, the same basic data were used.

The October 1946 and July 1947 estimates included a variety of new material that had become available from studies conducted in 1945, 1946, and 1947. However, the adjustment procedure was quite similar to that used in earlier estimates. The trend of urban wage rate studies (see tables C–5 and C–6) furnished additional information on both the extent and type of wage changes that had occurred between the time of the individual detailed studies and the date of the distribution. By utilizing these new materials together with the adjusted hourly earnings from the monthly series, it was possible to make adjustments more closely following the actual pattern of changes. For the industry groups in which substantial numbers of workers were in industries that had not been studied in recent years the same procedure was used as in the preparation of the 1945 estimates.

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[1] For more detailed information regarding these estimates, see Monthly Labor Review, June 1942, pp. 1278–1282; October 1943, pp. 637–649; September 1945, pp. 529–530; July 1947, pp. 47–49.

[2] Overtime payments were eliminated by the method described in the November 1942 issue of the Monthly Labor Review, Elimination of Overtime Payments from Gross Hourly Earnings. Shift premiums were estimated in only a few industries where they constitute a significant addition to earnings.

Straight-time average hourly earnings of employees of class I steam railroads that are shown in table C–4 for 1921–47 are compiled regularly by the Interstate Commerce Commission. Coverage extends to those employees who are paid on an hourly basis (excluding major executive, professional, and supervisory employees). Methods of computation are explained in the footnotes to the table.

TABLE C–2: Estimated average hourly earnings, gross and exclusive of overtime, of production workers in manufacturing industries, 1941–47[1]

In cents]

Period	All manufacturing		Durable goods		Nondurable goods	
	Gross	Excluding overtime	Gross	Excluding overtime	Gross	Excluding overtime
1941 average	72.9	70.2	80.8	77.0	64.0	62.5
1942 average	85.3	80.5	94.7	88.1	72.3	69.8
1943 average	96.1	89.4	105.9	97.6	80.3	76.3
1944 average	101.9	94.7	111.7	102.9	86.1	81.4
1945 average	102.3	[2]96.3	111.1	[2]104.2	90.4	[2]85.8
1946 average	108.4	104.9	115.6	112.2	101.2	97.8
1947 average	122.1	118.2	129.2	125.0	114.5	110.9
1945: January	104.6	97.0	114.4	105.3	89.1	84.0
February	104.3	96.8	113.9	104.8	89.2	84.2
March	104.4	96.9	113.9	104.9	89.6	84.5
April	104.4	97.1	113.8	105.0	89.9	85.0
May	104.2	97.6	113.4	105.5	90.3	85.8
June	103.8	96.9	113.0	104.8	90.4	85.4
July	103.3	96.9	112.7	105.2	90.2	85.4
August	102.4	([2])	111.3	([2])	90.9	([2])
September	98.7	94.6	107.2	103.3	90.3	86.1
October	98.5	94.5	106.3	102.1	90.9	87.0
November	99.0	95.1	106.4	102.4	91.8	87.9
December	99.4	95.4	106.6	102.5	92.7	88.7
1946: January	100.4	96.6	107.0	103.3	94.1	90.3
February	100.2	96.7	106.4	103.2	95.3	91.7
March	103.5	99.9	110.3	106.7	97.5	93.9
April	105.8	102.3	113.1	109.6	98.8	95.4
May	107.1	104.2	114.7	112.0	99.6	96.6
June	108.4	105.3	116.5	113.4	100.3	97.2
July	109.3	106.4	117.7	115.0	100.9	97.7
August	111.2	107.6	118.6	115.0	103.6	100.1
September	112.6	109.2	120.1	116.6	105.0	101.5
October	113.0	109.3	120.2	116.3	105.6	102.1
November	113.9	110.3	121.0	117.5	106.5	103.0
December	114.8	110.7	121.6	117.6	107.7	103.6
1947: January	116.1	112.2	122.4	118.6	109.4	105.5
February	117.0	113.3	122.9	119.2	110.7	107.0
March	118.0	114.2	123.6	119.6	111.9	108.3
April	118.6	115.1	124.3	120.5	112.2	109.0
May	120.7	117.0	127.8	123.8	113.0	109.6
June	122.6	118.7	130.3	126.1	114.0	110.5
July	123.0	119.5	130.5	127.0	115.0	111.6
August	123.6	120.1	131.2	127.5	115.8	112.4
September	124.9	120.9	133.1	128.9	116.5	112.7
October	125.8	121.6	133.7	129.2	117.5	113.7
November	126.8	122.7	134.6	130.2	118.5	114.7
December	127.8	122.8	135.4	129.9	119.6	115.2

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[1] In making the adjustment, work in excess of 40 hours per week is excluded; it is regarded as overtime paid for at time and one-half. The method of estimating average hourly earnings exclusive of overtime makes no allowance for special rates of pay for work done on major holidays. Data for the months of January, July, September, and November, therefore, may not be precisely comparable with data for the other months in which important holidays are seldom included in the reported pay period.

[2] Owing to the 2-day holiday in August 1945, in celebration of the Japanese surrender, that month's estimate was not released, and consequently the average for the year 1945 is for 11 months.

TABLE C–3: Estimated distribution of production workers in manufacturing industries, by straight-time hourly earnings, selected periods, 1941–47

Straight-time hourly earnings	Distribution of production workers											
	January 1941		January 1942		June 1943		Summer 1945		October 1946		July 1947	
	Number	Percent of total	Number	Percent of total	Number	Percent of total	Number	Percent of total	Number	Percent of total	Number	Percent of total
Total	9,580,000	100	10,450,000	100	13,820,000	100	12,200,000	100	12,000,000	100	12,276,000	100
Under 40 cents	1,580,000	17	710,000	7	220,000	2	(1)	(1)	(1)	(1)	(1)	(1)
40 and under 50 cents	1,390,000	14	1,340,000	13	1,050,000	8	330,000	3	110,000	1	50,000	(6)
50 and under 60 cents	1,450,000	15	1,010,000	10	1,640,000	12	1,230,000	10	510,000	4	343,000	3
Under 65 cents—Total	5,200,000	54	(2)	(2)	(2)	(2)	2,380,000	20	1,020,000	8	669,000	5
60 and under 70 cents	1,460,000	15	1,410,000	13	1,530,000	11	1,400,000	12	870,000	7	578,000	5
Under 75 cents—Total	(2)	(2)	(2)	(2)	(2)	(2)	3,850,000	32	2,100,000	18	1,280,000	10
70 and under 80 cents	1,140,000	12	1,500,000	14	1,700,000	12	1,400,000	12	1,250,000	10	705,000	6
80 and under 90 cents	870,000	9	1,370,000	13	1,820,000	13	1,460,000	12	1,240,000	10	1,149,000	9
90 and under 100 cents	620,000	6	1,100,000	11	1,580,000	11	1,450,000	12	1,320,000	11	1,186,000	10
100 and under 110 cents	460,000	5	830,000	8	1,230,000	9	1,230,000	10	1,310,000	11	1,372,000	11
110 and under 120 cents	280,000	3	570,000	5	960,000	7	1,010,000	8	1,160,000	10	1,309,000	11
120 and under 130 cents	[3]330,000	[3]4	[3]610,000	[3]6	930,000	7	920,000	7	1,010,000	8	1,086,000	9
130 and under 140 cents	...	...	...	...	470,000	3	620,000	5	850,000	7	983,000	8
140 and under 150 cents	...	...	...	...	320,000	2	410,000	3	700,000	6	875,000	7
150 and under 160 cents	...	...	...	...	[4]370,000	[4]3	280,000	2	480,000	4	662,000	5
160 and under 170 cents	...	...	...	...	...	...	[5]460,000	[5]4	320,000	3	494,000	4
170 and under 180 cents	...	...	...	...	...	...	...	...	220,000	2	366,000	3
180 and under 190 cents	...	...	...	...	...	...	...	...	190,000	2	255,000	2
190 and under 200 cents	...	...	...	...	...	...	...	...	140,000	1	191,000	2
200 cents and over	...	...	...	...	...	...	...	...	320,000	3	672,000	5

[1] Included in the "40 and under 50 cents" class; only a few workers received less than 40 cents.

[2] Not available.

[3] Includes workers earning $1.30 or more.

[4] Includes workers earning $1.60 or more.

[5] Includes workers earning $1.70 or more.

[6] Less than one-half of 1 percent.

NOTE: For more details see Monthly Labor Review, June 1942, pp. 1278–1282 October 1943, pp. 637–649; September 1945, pp. 529–530; July 1947, pp 47-49.

TABLE C-4: Straight-time average hourly earnings[1] of employees of class I steam railroads, 1921–47

Period	Straight-time average hourly earnings[2]	Period	Straight-time average hourly earnings[2]	Period	Straight-time average hourly earnings[2]	Period	Straight-time average hourly earnings[2]
1921[3] [4]	$0.580	1938	$0.703	July	$0.897	October	$1.083
1922[4]	.560	1939	.714	August	.889	November	1.092
1923[4]	.565	1940	.706	September	.905	December	1.095
1924[4]	.577	1941	.736	October	.892		
1925[4]	.584	1942	.804	November	.903	1947:	
1926[4]	.587	1943[5]	.862	December	.908	January	1.094
1927[4]	.598	1944[5]	.898			February	1.110
1928	.613	1945	.899	1946:		March	1.095
		1946	1.080	January	.902	April	1.090
1929	.625	1947	1.135	February	.917	May	1.089
1930	.635			March	.903	June	1.090
1931	.643	1945:		April	1.022	July	1.083
1932	.593	January	.899	May	1.044	August	1.086
1933	.587	February	.913	June	1.088	September	1.207
1934	.594	March	.894	July	1.085	October	1.200
1935	.643	April	.902	August	1.082	November	1.242
1936	.648	May	.898	September	1.098	December	1.233
1937	.666	June	.894				

[1] The averages cover employees classified and reported to the Interstate Commerce Commission on an hourly basis (excluding major executive, professional, and supervisory employees).

[2] To obtain the averages for 1921 to 1927, compensation for "straight-time actually worked" was divided by hours of "straight-time actually worked" as classified by the Interstate Commerce Commission. For 1928 to 1947, compensation for "straight-time paid for" was divided by hours of "straight-time paid for." The two methods give almost identical results.

[3] July—December.

[4] Including class I switching and terminal companies. The Interstate Commerce Commission published detailed data for the various groups of employees up to 1927 only for class 1 railroads including switching and terminal companies and thereafter only for these roads excluding switching and terminal companies. The exclusion of these companies makes virtually no difference in the averages for the industry as a whole.

[5] Customarily premium pay for overtime begins in railroad employments after 48 hours per week. Part of the increases in wages in 1943 and 1944 was "in lieu of claims for time and one-half pay for time worked over 40 hours per week."

Wage Rates

Urban Wage Rates

The index of urban wage rates was established by the Bureau of Labor Statistics in October 1943 to provide a dependable measure of changes in basic wage rates that is unaffected by such variables as premium pay for overtime and late-shift work, interindustry and interregional shifts of employment, changes in occupational structure, and changes in weekly hours of work. The index reflects the effect of general changes in occupational wage-rate levels, including individual wage adjustments in establishments that do not have formal rate structures. Changes in incentive earnings resulting from variations in output and changes in the prevalence of incentive pay also affect the index, as it has not been practicable to segregate these variables. Likewise, merit increases and automatic progressions within rate ranges—which are believed to be of minor importance—influence the series.

The series show the movement of wage rates (1) in manufacturing industry as a whole and for a selected group of nonmanufacturing industries; (2) in different manufacturing and nonmanufacturing industry groups; (3) in nine economic regions for all manufacturing and for total selected nonmanufacturing (discontinued after April 1945); and (4) in 28 selected cities each having 250,000 or more population, for both the manufacturing and total selected nonmanufacturing groups.

Although the survey was first made in October 1943, manufacturing figures were projected backward to include April 1943, October 1942 (beginning of the period of World War II wage stabilization), and January 1941 (base period of little steel formula); and nonmanufacturing figures to include April 1943.

The urban wage rate is the average of hourly wage rates (average hourly earnings, including straight-time pay of incentive workers) in selected occupations, exclusive of all premium pay for overtime and for work on second and third shifts. The series are described as urban because typically rural industries have little representation in the index.

Selected key occupational wage statistics gathered semiannually from about 6,600 identical establishments in 69 separate labor-market areas in the 48 States form the basis of the index. The 69 areas included in the constant sample were chosen because of the wide variety of their industries, the importance of their dominant industries in the respective regions, and the representative nature of the areas with respect to regional wage levels. Each area contains one or more cities of 25,000 population or larger. Together, they had about 40 percent of the Nation's population and 70 percent of the urban population when the series were established in the fall of 1943.

The manufacturing industries covered in each area—typically 10 to 15—were selected as characteristic of the area represented; for the most part they are the larger industries which tend to dominate the wage-movement pattern in their respective communities. In contrast, the same nonmanufacturing industries were included in the series for all areas. They include about 10 industries representing 5 broad groups: (1) finance, insurance, and real estate; (2) retail trade; (3) wholesale trade; (4) local public utilities; and (5) services.

Suitable weight is assigned to occupations, industries, and industry groups within the labor-market area and economic region, as well as to large and small cities within the region. By using constant weights, the influence of each occupation (and each sex within each occupation), industry, and area is held constant in all periods.

Wage-rate changes in an establishment are measured in terms of changes in selected key jobs. These jobs—usually 10 or 12 in number—are uniform within a given industry and are considered representative of the various sex and skill groups and wage levels characteristic of the industry. Office and clerical jobs are covered only in the occupations for nonmanufacturing industries.

Percentage changes in urban wage rates in manufacturing and nonmanufacturing industries by industry group are shown in table C–5 for selected periods between January 1941 and October 1947.

The percent of change in urban wage rates in manufacturing and in nonmanufacturing industries by area is given in table C–6 for specified periods between April 1943 and April 1947.

TABLE C-5: Percent of change in urban wage rates (manufacturing and selected nonmanufacturing industries), by industry group, selected periods, January 1941–October 1947[1]

Industry group	Percent of change from—											
	Jan. 1941 to Oct. 1942	Oct. 1942 to Apr. 1943	Apr. 1943 to Oct. 1943	Oct. 1943 to Apr. 1944	Apr. 1944 to Oct. 1944	Oct. 1944 to Apr. 1945	Apr. 1945 to Aug. 1945	Aug. 1945 to Oct. 1945	Oct. 1945 to Apr. 1946	Apr. 1946 to Oct. 1946	Oct. 1946 to Apr. 1947	Apr. 1947 to Oct. 1947[2]
All manufacturing industries	+17.0	+ 3.0	+ 3.8	+ 1.9	+ 2.2	+ 1.6	+ 0.7	+ 1.7	+ 9.8	+ 5.7	+ 5.2	+ 5.9
Food and kindred products	+13.6	+ 3.6	+ 3.2	+ 1.1	+ 1.9	+ 1.4	+ .9	+ 2.1	+ 7.8	+ 8.3	+ 6.9	+ 5.2
Tobacco manufactures	+15.7	+ 2.8	+ 1.1	+ 3.1	+ 1.7	+ 3.7	— .2	+ 5.5	+ 7.4	+ 8.9	+ 5.5	(3)
Textile-mill products	+24.2	+ 2.1	+ 2.7	+ 2.7	+ 2.3	+ 1.1	+ 1.1	+ 3.9	+12.3	+10.6	+ 9.3	+ 2.0
Apparel and allied products	+13.8	+ 5.6	— .2	+ 5.0	+ 7.6	+ 6.7	+ 1.5	+ 1.6	+11.0	+ 4.9	+ 2.2	+ 4.2
Lumber and timber basic products	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Furniture and finished lumber products	+16.2	— 3.0	+ 3.4	+ 1.8	+ 2.9	+ 1.0	+ 1.9	+ 3.7	+ 9.0	+12.7	+ 5.5	+ 6.3
Paper and allied products	+13.6	+ 2.4	+ 5.2	+ .2	+ 1.7	+ .4	+ 1.3	+ 1.9	+11.6	+ 8.6	+ 5.7	+ 8.4
Printing, publishing, and allied industries	+ 7.4	+ 1.9	+ 3.1	+ 1.6	+ 2.5	+ 2.1	+ 1.2	+ 2.3	+ 9.1	+ 7.5	+13.8	+ 5.4
Chemicals and allied products	+15.9	+ 2.8	+ 2.4	+ 1.3	+ 1.2	+ .8	+ 1.1	+ 3.9	+10.6	+ 6.9	+ 7.4	+ 5.4
Products of petroleum and coal	+18.0	+ 1.0	— .3	(3)	+ .3	+ .1	(3)	+ 5.7	+12.0	+ 1.7	+ 9.0	+ 7.3
Rubber products	+15.5	+ 2.8	+ 2.0	+ 2.5	+ 1.4	+ 2.0	0	+ .6	+15.2	+ .7	+ 8.4	+ 2.7
Leather and leather products	+20.3	+ 3.2	+ 4.5	+ 4.0	+ 4.2	+ 4.2	+ 1.4	+ 1.7	+12.9	+ 8.9	+ 2.6	+ 5.0
Stone, clay, and glass products	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Basic iron and steel	(4)	(4)	(4)	+ .7	— .6	+ .4	....	....	[5]+13.2	[2]+ .3	[2]+ 9.7	+ 4.3
Shipbuilding	(4)	(4)	+ .4	+ .4	+ .5	+ .8	+ .2	+ .2	+10.0	+ 5.0	[2]+ .7	+ 5.3
Metalworking (except basic iron and steel and shipbuilding)	+16.2	+ 3.4	+ 5.4	+ 1.9	+ 2.0	+ 1.2	+ .5	+ 1.5	+ 8.9	+ 4.7	+ 4.2	+ 7.2
Total, selected nonmanufacturing industries[6]	....	....	+ 6.4	+ 2.5	+ 4.2	+ 3.7	[7]+4.1	....	+ 5.7	+ 6.2	+ 6.4	....
Wholesale trade	....	....	+ 2.5	+ 2.0	+ 2.9	+ 1.5	[7]+4.1	....	+ 4.3	+ 7.4	+ 8.0	....
Retail trade	....	....	+ 9.2	+ 2.7	+ 5.7	+ 4.6	[7]+5.5	....	+ 6.8	+ 6.6	+ 6.6	....
Finance, insurance, and real estate	....	....	+ 3.9	+ 3.1	+ 1.6	+ 4.5	[7]+1.7	....	+ 4.1	+ 3.3	+ 6.1	....
Local utilities	....	....	+ 1.5	+ 1.1	+ .3	+ 1.5	[7]+ 2.3	....	+10.1	+ 1.8	+ 7.4	....
Service trades	....	....	+ 6.4	+ 2.4	+ 5.4	+ 3.2	[7]+ 2.8	....	+ 1.4	+ 6.7	+ 4.8	....

[1] Data for periods prior to April 1943 are estimated.

[2] Estimated.

[3] Less than a tenth of 1 percent.

[4] Representation inadequate to show percent of change.

[5] April 1945 to April 1946.

[6] The specific industries selected to represent these groups in the measurement of wage-rate changes were as follows: Wholesale trade—general-line wholesale groceries; retail trade—department stores, clothing stores, and groceries; finance, insurance, and real estate—banks and savings and loan associations; local utilities—electric light and power or gas companies; service trades—hotels, power laundries, and auto-repair shops.

[7] April 1945 to October 1945.

TABLE C–6: Percent of change in urban wage rates (manufacturing and selected nonmanufacturing industries), by industry group and area, selected periods, April 1943–April 1947

Urban area	Percent of change from—														
	Manufacturing industries								Selected nonmanufacturing industries						
	Apr. 1943 to Oct. 1943	Oct. 1943 to Apr. 1944	Apr. 1944 to Oct. 1944	Oct. 1944 to Apr. 1945	Apr. 1945 to Oct. 1945	Oct. 1945 to Apr. 1946	Apr. 1946 to Oct. 1946	Oct. 1946 to Apr. 1947	Apr. 1943 to Oct. 1943	Oct. 1943 to Apr. 1944	Apr. 1944 to Oct. 1944	Oct. 1944 to Apr. 1945	Apr. 1945 to Oct. 1945	Apr. 1945 to Apr. 1946	Apr. 1946 to Apr. 1947
Total, United States	+ 3.8	+ 1.9	+ 2.2	+ 1.6	+ 2.4	+12 4	+ 5.7	+ 5 2	+ 6 4	+ 2 5	+ 4 2	+ 3.7	+ 4.1	+10 0	+13.0
Atlanta	+ 3.6	+ 1.4	+ 2.7	+ 2.9	+ 4.9	(1)	(1)	+ 6 2	+ 9.8	+ 3 6	+ 6.3	+ 5 6	+ 1 3	+ 9 1	+11 2
Baltimore	+ 1 2	+ 1.6	+ 1.6	+ .5	(1)	+11.7	+ 4.8	+ 1.7	+ 6 0	+ 3.3	+ 2.7	+ 3.6	(1)	+14.6	+10 4
Birmingham	+ 1.9	+ 3.5	+ 1.2	+ 4.1	(1)	+11 7	[2]+ 3.4	[2]+ 8.2	+ 9.2	+ 2.6	+ 8.8	+ 2.2	(1)	+11 2	+13.2
Boston	+ 5.3	+ 1.6	+ 1.1	+ 3.7	+ 1.7	(1)	(1)	+ 3.7	+ 2 9	+ 2.8	+ 3.3	+ 4.1	+ 1.9	+12.5	+12.4
Buffalo	+ 9.3	+ 2.3	+ .5	+ 1.8	(1)	+12.7	+ 2.0	+ 4 2	+ 3.3	+ 1.0	+ 2 0	+ 2.0	(1)	+11.9	+12.9
Chicago	+ 3.1	+ 1.8	+ 3.0	+ 2.1	+ .3	(1)	(1)	+ 6.4	+ 8 8	+ 2 7	+ 6.3	+ 3.8	+ 2 6	+ 9 9	+13.9
Cleveland	+ 5 3	+ 1.2	+ 2.7	+ 1.0	(1)	+ 9.6	+ 5.0	+ 4 3	+ 7.0	+ 4.0	+ 3.5	+ 1.9	(1)	+ 4 7	+12.5
Dallas	+ 7.2	+ 1 9	+ 1.7	+ 2.4	+ 2.2	(1)	(1)	+ 7.9	+ 8 7	+12.1	+ .8	+ 2.1	+ 1.0	+14 4	+ 9.9
Denver	+ 4.1	+ 3.3	+ 1.8	— 2.1	+ 2.3	+15.0	+ 4.2	+10.4	+ 2.9	+ 2.2	+ 3 3	+ 4.9	+ 2.3	+ 8.4	+15 8
Detroit	+ 5.9	+ .2	+ .3	0	— .4	(1)	(1)	+ .9	+15.2	+ .8	+ 5.5	+ 2.5	+ 3.4	+10 6	+ 8.4
Houston	+ 1.6	+ .2	+ .8	+ .1	(1)	+15.5	+ 2 1	+ 2.8	+13.5	+ 2.5	+ 3.2	+ 1.7	(1)	+ 6.9	+13.9
Indianapolis	+ 3.6	+ .9	+ 1.4	+ .6	(1)	+12.2	+ 6.1	+ 3.4	+ 4 0	+ 3.2	+ 2.1	— .3	(1)	+11.7	+12.6
Kansas City	+ 1.4	+ 1.7	+ 1.7	+ 3.1	+ .9	(1)	(1)	+11.0	+ 8 6	+ 2.9	+ 1.1	+ 5.7	+ 5.5	+13.3	+12.4
Los Angeles	+ 6.8	+ 1.5	+ 1.1	+ 1.2	+ 1.1	+12.7	+ 6.0	+ 4.9	+ 5.0	+ 1.3	+ 3 0	+ 2.5	+ 7.6	+17.0	+18.5
Louisville	+ 1.4	+ 3.9	+ 3.3	+ 1.3	(1)	+10.0	+ 4.6	+ 8.3	+ 7.4	+ 7.8	+ 2.6	+ 4.0	(1)	+ 6 3	+16.2
Memphis	+ 3.8	+ 2.5	+ 2.0	+ 6 0	(1)	(1)	(1)	+10.1	+11.6	+ .7	+ 8.7	+ .7	(1)	+ 9.2	+10 7
Milwaukee	+ 2.7	+ .3	+ 3.1	+ 1.5	(1)	(1)	(1)	+ 2.4	+ 9.8	+ 1 2	+ 4 6	+ 3.5	(1)	+11.3	+10.2
Minneapolis	+ 2.8	+ .9	+ 1.2	+ 1.6	(1)	+ 7.4	+ 8.2	+ 5.6	+ 4.8	+ 2.6	+ 7.6	— 4.1	(1)	+18 3	+ 7.4
Newark	+ 6.4	+ 1.8	+ 2.8	+ .9	(1)	(1)	(1)	+ 5.5	+ 8.5	+ 3.9	+ 3.8	+ 2.4	(1)	+ 6.6	+11.9
New Orleans	+ 7.3	+ .5	+ 1.0	+ 1.0	(1)	+14.9	+ 2.5	+ 1.8	+14.5	+ 4.1	+ 1.7	+ 2.1	(1)	+13.6	+ 8.6
New York	+ .5	+ 5.0	+ 6.4	+ 4.7	— .3	+12.1	+ 5.6	+ 4.3	+ 5.4	+ 1.9	+ 3.2	+ 6 2	+ 1.9	+ 9.1	+14.8
Philadelphia	+ 2.1	+ 1.5	+ 2.3	+ 1.6	(1)	+12.7	+ 2.9	+ 7.4	+ 9.1	+ 3.5	+ 1.9	+ 4.2	(1)	+11.2	+11.8
Pittsburgh	+ 1 0	+ 1.8	+ 2.2	— .3	(1)	(1)	(1)	[2]+ 7.1	+ 3.3	+ 2.4	+ 2.1	+ 2.3	(1)	+13.6	+14 2
Portland, Oreg.	+ .5	— .1	+ .8	+ .2	(1)	[3]+15 2	[3]+ 1.4	+ 2.2	+ 2.6	+ 1.7	+ 6.6	— 1.0	(1)	+ 6 8	+15.6
Providence	+ 2.6	+ .7	+ 2.3	+ .9	(1)	+10 0	+ 7.0	+ 8.3	0	+ 2.4	+ 1.3	+ 5.6	(1)	+13.4	+16.7
St. Louis	+ 4.9	+ 5.4	+ 1.0	+ .8	(1)	+10.6	+ 7.8	+ 6.6	+ 7.5	+ 3.2	+ 3.9	+ 3.5	(1)	+11.3	+15.0
San Francisco	+ .9	+ .4	+ .8	0	(1)	+15.5	+ 1.2	+ 3.1	+ 1.7	+ 1.6	+ 5.9	— 2.0	(1)	+12.8	+12.7
Seattle	+ .9	+ 2.4	+ .4	+ .3	+ .5	(1)	(1)	+ 2.3	+ .2	+ 1.3	+ 4.0	+ .4	+ 2.8	+ 9.5	+11.3

[1] Data not available.
[2] Partially estimated.
[3] Revision of previously published data.

Farm Wage Rates

Annual farm wage rates from 1910 to 1922 in table C–7 are geographic division averages of rate data received each year by the Bureau of Agricultural Economics of the United States Department of Agriculture from crop reporters. They give average rates per day and per month paid in their locality, with and without board. During 1910–22, the persons reporting were asked to state the wage rates per day "at harvest" and for "other than harvest" labor.

Beginning in 1923, farm wage-rate inquiries have been made quarterly on the first of January, April, July, and October, and the quarterly wage rates have been combined to obtain annual wage rates. Use of the quarterly survey tended to eliminate the need for a distinction between wage rates for harvest hands and for other than harvest labor.

In the quarterly inquiry, the "average wage being paid to hired labor at the present time in your locality" is requested. Reports for the four types of cash payments continued, as before 1923, to be those per day and per month, with and without board.

Crop reporters are instructed to include in their estimates of day rates "the average daily earnings of piece workers", but it is doubtful that the series on day rates reflect completely the level of day-rate equivalents of piece rates or of rates paid workers hired through labor contractors. Independently collected data indicate that nearly half of the hired farm workers employed in the fall harvest are paid piece rates. It seems likely that the day and month rates reported by crop reporters are usually those paid to able-bodied, experienced hired workers, rather than the averages which include the wages paid inexperienced men or those paid women or children doing hired farm work. The rates reported probably provide a fairly accurate picture of average rates paid regular hired men in the general crop-producing and dairying regions.

Hired farm-worker employment is the basis for weighting wage rates tabulated by States to obtain rates for geographic divisions and the United States. The annual average employment based on census and labor requirements data was used for weighting purposes in the period 1910 to 1922. From 1923 to 1938, quarterly wage rates were weighted by quarterly averages of employment derived from data supplied by crop reporters. From 1939 to date, the appropriate current monthly estimates of hired farm workers have been used to weight the quarterly wage rates.

The composite wage rate is the average of the rates shown for the four methods of payment, weighted by the estimated numbers of workers receiving the different types of payment in the various geographic divisions. The rates per day are multiplied by 20 to obtain their monthly equivalents. A constant set of percentages of the workers receiving each type of rate, based on a special study made in 1927, has been used in weighting for each geographic division from 1925 to date.

As reporting is voluntary, the quarterly wage-rate sample is somewhat selective. The series is based upon reports from farmers employing more than average amounts of farm labor. Although returns are received from nearly all the agricultural counties in the country, most of the returns are from operators of general crop and livestock farms. The prevailing wage rates on fruit, truck, and similar specialized farms are reflected only to the extent that regular crop correspondents give adequate consideration to them in reporting the average wage rates for their localities.

The sample of farmers reporting each month varies from 17,000 to 21,000. The Census of Agriculture reported 5,859,169 farm operators in the United States in 1945.

Farm wage-rate data are shown for 1910–47 in table C–7 for the United States and individual geographic divisions.

NOTE: In addition to the figures shown in table C–7 based on the collection of crop-reporter data, the Bureau of Agricultural Economics initiated an expanded program of farm wage statistics in 1945, including collection of data through enumerative sample surveys. These occasional surveys include collection of information on wages and wage rates paid hired farm workers employed during a specified week in a national sample of about 20,000 farms.

There are important differences between the wage data collected in these surveys and the crop-reporter series. One of the most important differences is that wages and related information are obtained from the farmer for each hired worker employed on his farm during the reporting week. Thus, the farmer provides data on something that actually has occurred on his farm, which he can report more accurately than the level of wages on all farms in the locality. Another important difference is that all types of wage rates and all types of hired farm workers are covered. The new series contain data on receipt of major perquisites and on wages and time worked on the reporting farm during the week as well as on the cash wage rate. Comparisons of hourly, daily, or weekly cash wages earned are possible for workers paid different types of rates and for different groups of workers, as for regular and seasonal workers. Comparisons are also possible of daily wage costs on different types of farms within the major regions of the United States.

The new surveys have not been in operation long enough to provide historical series such as those assembled for the main tables of this Handbook of Labor Statistics. Data from the new farm wage surveys are published by the Bureau of Agricultural Economics in the series entitled Surveys of Wages and Wage Rates in Agriculture.

TABLE C–7: Wage rates of hired farm workers, total and geographic divisions, 1910–47

Period[1]	United States average wage rate				Composite wage rate per month[2]									
	Per day		Per month											
	With board	Without board	With board	Without board	United States	New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
1910	$1.12	$1.39	$21.22	$28.08	$23.93	$29.40	$26.40	$26.90	$28.70	$17.50	$18.70	$22.00	$34.10	$38.10
1911	1.13	1.39	21.49	28.54	24.15	30.40	27.00	27.00	28.40	18.00	18.50	22.10	34.00	38.30
1912	1.18	1.43	22.23	29.34	24.98	31.30	27.50	28.10	29.80	18.60	18.90	22.80	34.70	38.20
1913	1.20	1.46	22.89	30.21	25.59	32.30	28.60	28.90	30.30	19.40	19.40	23.00	34.90	39.00
1914	1.17	1.43	22.62	29.74	25.13	32.10	28.10	28.50	30.30	18.40	18.30	22.70	34.80	39.00
1915	1.18	1.44	22.97	30.06	25.41	32.90	28.50	29.00	31.00	18.30	18.10	22.80	35.20	39.40
1916	1.31	1.58	25.17	32.84	27.93	37.40	32.90	32.00	33.50	20.20	19.50	24.60	37.90	41.50
1917	1.65	1.98	31.11	40.52	34.79	45.30	39.90	38.60	41.20	26.60	24.80	30.20	47.50	51.10
1918	2.15	2.54	37.96	48.80	43.73	54.90	47.70	46.00	52.00	33.20	32.20	38.90	59.00	64.20
1919	2.54	3.03	43.29	56.63	51.13	59.10	52.60	52.20	59.60	39.20	38.30	50.20	63.40	74.70
1920	2.98	3.46	51.73	65.40	59.88	69.80	64.60	62.70	70.20	44.60	43.10	55.40	73.90	87.70
1921	1.77	2.12	33.62	44.67	38.29	52.60	47.30	42.10	41.20	27.40	26.30	31.60	45.30	61.30
1922	1.73	2.07	32.75	43.33	37.47	51.20	47.10	40.60	39.30	26.80	26.40	30.50	42.90	61.10
1923	1.89	2.25	37.24	48.25	41.87	60.10	54.40	46.80	43.10	29.10	28.50	31.70	47.10	68.00
1924	1.94	2.29	37.92	49.32	42.91	61.90	55.40	47.40	43.70	31.70	29.90	34.70	48.30	63.70
1925	1.97	2.29	38.77	49.90	43.51	62.10	56.00	47.60	44.90	33.60	29.70	34.70	48.90	66.50
1926	1.98	2.31	39.87	50.83	44.36	64.00	57.20	48.90	45.10	33.50	30.00	35.80	50.40	68.30
1927	1.98	2.28	40.11	50.85	44.36	64.50	57.40	49.20	45.90	32.40	28.80	34.30	51.20	69.40
1928	1.98	2.27	40.11	50.72	44.28	64.80	55.90	48.60	46.40	32.20	29.00	34.60	52.20	68.50
1929	1.96	2.25	40.61	51.22	44.52	66.30	57.00	49.30	46.70	31.70	28.90	35.00	53.40	68.90
1930	1.76	2.08	37.59	48.10	41.25	63.20	53.60	43.60	42.80	28.80	26.40	31.30	49.30	67.00
1931	1.32	1.62	28.77	38.38	32.11	54.20	43.70	33.60	32.30	22.40	19.70	23.40	38.10	52.90
1932	.94	1.20	20.85	28.88	23.66	42.00	33.50	23.70	23.00	16.60	14.40	17.80	28.40	39.60
1933	.85	1.11	18.07	25.67	21.10	36.80	28.00	20.80	19.20	15.40	13.90	17.40	25.80	34.90
1934	.98	1.26	20.24	28.19	23.61	39.30	29.90	23.10	21.10	17.80	16.00	19.60	29.90	39.50
1935	1.07	1.33	22.42	30.24	25.53	40.60	31.10	25.70	25.00	18.60	17.10	20.70	32.90	43.40
1936	1.15	1.42	24.53	32.28	27.51	42.60	33.80	30.50	27.60	19.30	17.90	22.10	35.00	47.40
1937	1.33	1.61	28.00	36.32	31.25	46.20	38.40	35.70	31.00	21.60	19.90	24.50	38.60	53.50
1938	1.31	1.58	27.73	36.18	30.91	46.00	37.70	34.60	30.90	21.30	19.60	24.10	38.40	51.80
1939	1.30	1.56	27.39	35.82	30.56	47.10	37.10	34.40	30.70	21.40	19.80	23.70	38.30	51.40
1940	1.36	1.59	28.05	36.68	31.28	47.40	38.40	35.20	31.30	22.70	20.10	24.40	38.60	52.20
1941	1.69	1.93	34.85	43.64	38.14	54.30	47.70	44.80	42.10	25.10	22.40	28.30	51.00	64.40
1942	2.19	2.49	46.64	55.91	49.80	72.40	59.40	54.60	54.50	31.50	29.70	39.40	63.60	92.50
1943	2.87	3.27	61.91	72.51	65.35	87.80	73.00	68.30	72.90	40.10	37.80	52.70	84.50	127.00
1944	3.46	3.93	74.00	85.70	78.00	99.90	83.50	78.40	85.90	48.10	45.90	65.10	101.00	145.00
1945	3.80	4.34	82.30	95.40	86.60	107.00	91.10	85.80	96.00	54.40	49.60	72.90	111.00	154.00
1946	4.15	4.74	88.90	103.00	93.70	114.00	101.00	94.80	101.00	62.20	55.30	77.40	116.00	161.00
1947	4.50	5.10	96.00	111.00	101.00	122.00	110.00	104.00	109.00	67.00	60.00	84.00	126.00	164.00
1939: January	1.20	1.53	24.86	34.92	29.03	45.20	35.60	31.30	25.60	21.30	19.50	23.10	33.80	50.10
April	1.23	1.53	27.08	35.42	30.03	46.80	36.80	34.10	30.60	20.80	19.60	23.20	37.50	49.70
July	1.36	1.59	28.18	36.26	31.23	47.40	37.60	35.40	32.20	21.80	20.20	24.30	39.80	51.40
October	1.35	1.57	28.28	36.13	31.13	48.10	37.70	35.70	32.30	21.50	19.70	24.00	39.00	53.20
1940: January	1.22	1.55	25.33	35.27	29.40	45.80	35.60	31.70	25.80	21.60	19.80	23.20	36.00	50.60
April	1.26	1.55	27.45	36.41	30.60	46.40	37.50	34.20	30.50	21.80	20.10	23.30	37.50	50.80
July	1.37	1.62	28.93	37.18	31.91	47.90	39.10	36.10	32.40	22.20	20.00	24.60	39.50	51.80
October	1.39	1.61	28.77	36.84	31.82	48.40	39.50	36.60	33.30	22.50	20.00	25.00	39.60	54.30
1941: January	1.29	1.59	26.88	36.61	30.73	47.50	38.50	34.00	27.80	23.30	20.80	24.90	37.00	52.40
April	1.41	1.70	31.56	40.44	34.29	52.20	42.70	40.60	34.70	24.00	21.70	25.80	40.70	56.90
July	1.80	1.98	36.45	44.95	39.55	59.30	48.70	45.80	40.90	25.90	22.70	29.40	48.10	64.30
October	1.88	2.08	37.45	45.47	40.76	61.30	49.40	47.00	43.50	27.50	24.80	32.20	50.40	70.40
1942: January	1.77	2.12	37.08	47.77	41.21	63.60	49.90	45.70	38.40	28.60	26.20	34.40	48.00	71.60
April	1.83	2.10	41.47	50.54	43.77	68.50	55.20	51.20	47.80	29.50	26.90	34.20	54.60	76.60
July	2.16	2.45	47.29	56.97	50.09	71.60	59.80	54.20	53.60	30.90	28.10	37.20	63.20	88.50
October	2.54	2.76	50.83	59.25	54.41	76.80	62.90	59.30	64.50	32.90	32.20	43.30	73.00	105.00
1943: January	2.39	2.83	50.91	62.43	55.40	79.20	63.40	59.20	56.10	36.70	34.30	47.00	69.40	107.00
April	2.47	2.88	56.84	67.21	59.30	83.70	69.20	64.90	65.90	37.40	34.90	47.50	75.40	117.00
July	2.93	3.34	64.62	76.00	67.60	86.80	74.00	69.50	73.70	40.80	37.30	52.20	86.30	127.00
October	3.17	3.51	65.22	75.44	69.10	92.80	75.70	71.50	83.00	41.00	44.00	55.70	91.90	133.00
1944: January	2.96	3.50	63.01	76.06	68.10	94.30	75.70	70.90	68.90	45.00	41.20	59.40	84.60	132.00
April	3.07	3.58	68.95	81.15	72.30	97.50	80.50	75.70	78.30	46.10	42.20	60.00	90.80	139.00
July	3.58	4.06	77.79	89.54	81.30	101.00	84.30	79.60	87.60	47.90	44.90	65.50	104.00	147.00
October	3.72	4.08	76.40	86.80	80.50	103.00	86.30	81.20	94.90	49.10	49.00	66.90	108.00	149.00
1945: January	3.54	4.15	74.60	88.90	80.30	101.00	84.50	79.80	83.10	53.80	49.00	71.30	98.80	146.00
April	3.56	4.12	78.60	92.70	82.90	106.00	89.90	85.70	92.10	53.80	49.20	71.90	105.00	149.00
July	3.86	4.48	85.80	99.00	89.60	108.00	92.70	86.30	96.50	54.00	49.30	72.40	114.00	156.00
October	3.98	4.39	84.00	95.70	88.00	110.00	92.50	87.20	104.00	53.50	50.40	73.90	116.00	158.00
1946: January	3.76	4.40	80.20	95.30	85.90	103.00	89.40	85.80	85.60	59.80	50.30	73.90	105.00	150.00
April	3.81	4.36	83.80	97.40	87.80	110.00	97.00	91.90	96.50	60.10	51.40	72.50	108.00	154.00
July	4.25	4.84	92.00	106.00	96.50	114.00	103.00	95.40	102.00	61.70	54.80	78.80	117.00	164.00
October	4.36	4.94	91.40	104.00	96.40	120.00	105.00	97.80	107.00	63.00	58.40	78.50	121.00	164.00
1947: January	4.15	4.83	88.40	106.00	94.80	118.00	102.00	97.70	95.10	68.00	57.90	80.40	111.00	164.00
April	4.17	4.77	91.50	107.00	96.20	119.00	107.00	101.00	103.00	66.80	56.80	79.90	118.00	161.00
July	4.54	5.17	98.70	114.00	103.00	121.00	110.00	103.00	110.00	65.70	59.10	82.60	129.00	165.00
October	4.79	5.25	97.80	112.00	103.00	125.00	114.00	107.00	117.00	66.50	63.20	88.00	132.00	166.00

[1] Quarterly reports are for the first day of the reporting month.

[2] Weighted average of monthly rates with and without board, and daily rates with and without board converted to a monthly basis. Composite farm wage rates are an approximate measure of the trend of farm wages; but because of the extreme diversity of the wage rates that enter into the composite and the exclusion of the value of perquisites, this rate has limited validity as a measure of actual wage levels.

Source: United States Department of Agriculture, Bureau of Agricultural Economics Farm Wages, Farm Employment and Related Data, Washington, 1943 (mimeographed) and current releases.

Union Scales of Wages and Hours

Trends in union wage rates and hours are measured annually by the Bureau of Labor Statistics in national surveys covering building construction, printing, baking, trucking, and local transit. The annual reports also give the scales in effect in particular trades and cities. As the statistics deal exclusively with union scales, they may or may not reflect scales generally prevailing in a locality, depending upon the extent of local union organization in that locality.

A union scale is a minimum wage rate or a maximum schedule of hours agreed upon by negotiation between employers and trade-unions. Rates in excess of the agreed minimum, although frequently paid in reward for long service, for special qualifications, or for personal or other reasons are not used in the computations. Scales applying to apprentices are also excluded.

Union scales for the various trades included in the industries studied were obtained directly from officials of the local trade unions concerned, and where feasible, the data were obtained by mail questionnaire.

The series for the building and printing industries were started in 1907. From a coverage of 39 cities in the early years, the total increased to 75 cities having populations of from 40,000 to 1 million and over in 1941. The occupational coverage also increased in the same period from 14 to 27 journeymen and from 4 to 10 helpers and laborers trades in building construction and from 7 to 11 book and job and from 4 to 8 newspaper classifications in the printing industry. The local transit series started with 1929, that for trucking with 1936, and that for baking with 1939. The survey date which was originally May 15 was changed to June 1 in 1938 and to July 1 in 1942.

In all, 64 trades or subdivisions of trades were covered in the five industries on July 1, 1946. Coverage extended to about one-fourth of the estimated building construction workers, about one-third of the printing workers, one-fifth of the bakery workers, and two-fifths of the streetcar and bus operators employed in July 1946. A similar estimate is not currently available for truck drivers because their employment crosses numerous industry classifications.

The index, utilized for trend determination purposes, links data obtained for each pair of years and may be termed a "chain" index. Year-to-year changes are computed from aggregates of the scales of unions furnishing such data for identical classifications in two consecutive years. The active membership, utilized as a weight in both of the aggregates used for each year-to-year comparison, is that reported for the second year. The total of the current aggregates (membership times rate) is then divided by the total of the previous year's aggregates. The ratio so obtained, multiplied by the previous year's index number, becomes the current index number.

Originally, 1907 was the base year of the index series. Subsequently, the base period was changed to 1913. When the series were revised in 1936 a shift was made to 1929 as the base. In 1944, the series were revised using the year 1939 as the base period. That year was selected for basing purposes to give the series greater currency and because it was a period unmarked by unusual economic fluctuations. The indexes are limited to the movement of basic scales and consequently are not intended to measure such factors as movement of earnings or take-home pay.

Indexes of hourly wage rates and weekly hours of union members are shown for selected industries in table C–8 by years from 1907 through 1947. The average hourly rates of union workers in selected building-construction trades in 37 cities appear in table C–9, which covers selected years between 1910 and 1947.

TABLE C–8: Indexes of union hourly wage rates and weekly hours in selected industries and trades, 1907–47

[1939 = 100]

Period	Building trades						Printing trades						Street railway[1]	Baking		Trucking					
	All workers		Journeymen		Helpers and laborers		All printing		Book and job		Newspaper					Drivers and helpers		Drivers		Helpers	
	Hourly wage rate	Weekly hours	Hourly wage rate	Weekly hours	Hourly wage rate	Weekly hours	Hourly wage rate	Weekly hours	Hourly wage rate	Weekly hours	Hourly wage rate	Weekly hours	Hourly wage rate	Hourly wage rate	Weekly hours	Hourly wage rate	Weekly hours	Hourly wage rate	Weekly hours	Hourly wage rate	Weekly hours
1907	29.3	124.3	29.7	123.8	27.3	126.1	.....	.....	27.0	136.6	35.3	120.5	.....	.....	.....	.....	.....	.....	.....	.....	.....
1908	31.2	122.4	31.6	122.0	28.5	123.5	.....	.....	29.9	130.3	37.2	119.9	.....	.....	.....	.....	.....	.....	.....	.....	.....
1909	32.7	120.7	33.2	120.5	29.5	121.0	.....	.....	32.1	129.2	38.8	119.6	.....	.....	.....	.....	.....	.....	.....	.....	.....
1910	34.0	119.2	34.6	119.1	30.5	118.8	.....	.....	33.8	128.8	40.1	119.3	.....	.....	.....	.....	.....	.....	.....	.....	.....
1911	34.5	118.8	35.2	118.7	30.6	118.6	36.0	127.1	34.7	128.8	40.7	119.3	.....	.....	.....	.....	.....	.....	.....	.....	.....
1912	35.3	118.4	36.0	118.3	30.9	118.3	36.6	127.0	35.3	128.7	41.4	119.1	.....	.....	.....	.....	.....	.....	.....	.....	.....
1913	36.1	118.2	36.9	118.0	31.8	118.3	37.3	126.9	36.0	128.7	42.3	119.0	.....	.....	.....	.....	.....	.....	.....	.....	.....
1914	36.9	117.7	37.7	117.7	32.1	117.6	38.0	126.8	36.8	128.7	42.7	118.7	.....	.....	.....	.....	.....	.....	.....	.....	.....
1915	37.2	117.6	38.0	117.6	32.4	117.5	38.2	126.8	36.9	128.7	43.0	118.6	.....	.....	.....	.....	.....	.....	.....	.....	.....
1916	38.4	117.2	39.3	117.1	33.5	117.2	38.6	126.8	37.5	128.7	43.2	118.5	.....	.....	.....	.....	.....	.....	.....	.....	.....
1917	40.8	116.9	41.5	116.9	36.8	116.7	39.9	126.8	38.8	128.7	44.3	118.5	.....	.....	.....	.....	.....	.....	.....	.....	.....
1918	45.3	116.3	45.9	116.2	42.6	116.3	43.4	126.8	43.0	128.7	46.4	118.5	.....	.....	.....	.....	.....	.....	.....	.....	.....
1919	51.9	115.7	52.4	115.7	49.3	115.2	53.1	126.8	53.0	128.6	56.0	118.7	.....	.....	.....	.....	.....	.....	.....	.....	.....
1920	70.0	115.1	70.1	115.2	71.5	114.5	68.1	123.1	69.1	123.8	68.5	118.6	.....	.....	.....	.....	.....	.....	.....	.....	.....
1921	71.3	115.0	71.4	115.1	72.2	114.5	74.6	115.6	76.1	113.9	74.5	118.3	.....	.....	.....	.....	.....	.....	.....	.....	.....
1922	66.9	115.0	67.3	115.2	65.7	114.2	75.4	115.2	76.4	112.5	75.2	120.6	.....	.....	.....	.....	.....	.....	.....	.....	.....
1923	73.9	115.1	74.2	115.3	69.7	114.4	77.7	114.7	79.4	111.8	76.0	120.4	.....	.....	.....	.....	.....	.....	.....	.....	.....
1924	79.8	115.1	80.1	115.3	75.4	114.4	81.5	114.2	82.7	111.8	80.6	118.7	.....	.....	.....	.....	.....	.....	.....	.....	.....
1925	82.9	115.1	83.1	115.3	77.9	114.2	82.7	114.2	83.5	111.9	82.0	118.4	.....	.....	.....	.....	.....	.....	.....	.....	.....
1926	88.3	114.9	88.7	115.1	84.9	113.9	84.5	114.1	85.4	111.7	83.8	118.6	.....	.....	.....	.....	.....	.....	.....	.....	.....
1927	91.3	114.7	91.7	114.8	86.4	113.9	87.0	114.0	87.5	111.7	86.3	118.3	.....	.....	.....	.....	.....	.....	.....	.....	.....
1928	91.9	114.0	92.4	114.0	87.3	113.8	88.6	114.0	88.7	111.7	88.5	118.0	.....	.....	.....	.....	.....	.....	.....	.....	.....
1929	93.1	113.0	93.6	113.3	88.8	111.5	89.9	113.9	89.9	111.6	90.0	117.8	91.6	.....	.....	.....	.....	.....	.....	.....	.....
1930	97.0	109.8	97.5	110.0	93.3	109.0	91.3	113.8	91.5	111.5	90.9	117.6	92.5	.....	.....	.....	.....	.....	.....	.....	.....
1931	97.3	108.5	97.8	108.5	92.8	108.1	91.8	113.7	92.1	111.5	91.2	117.6	92.5	.....	.....	.....	.....	.....	.....	.....	.....
1932	83.1	106.5	83.6	106.6	79.2	105.7	91.1	109.9	91.2	107.2	91.0	114.6	90.6	.....	.....	.....	.....	.....	.....	.....	.....
1933	80.8	106.2	81.4	106.2	75.7	105.2	85.7	109.0	86.1	106.1	85.1	114.0	.....	.....	.....	.....	.....	.....	.....	.....	.....
1934	81.4	102.3	81.8	102.3	77.9	101.9	87.5	103.4	88.5	102.4	86.2	105.0	88.0	.....	.....	.....	.....	.....	.....	.....	.....
1935	82.3	101.5	82.8	101.5	78.3	101.2	90.8	101.7	90.4	100.9	91.5	103.2	91.4	.....	.....	.....	.....	.....	.....	.....	.....
1936	85.3	101.5	85.5	101.5	82.9	101.4	92.9	101.3	93.0	101.0	92.8	101.9	92.1	.....	.....	88.5	101.8	.....	.....	.....	.....
1937	91.2	101.9	91.4	101.9	90.1	101.8	96.0	100.8	96.0	100.8	96.3	101.0	96.4	.....	.....	94.4	100.9	94.5	100.8	94.2	101.2
1938	99.3	100.2	99.3	100.1	99.2	100.2	99.1	100.3	99.2	100.3	98.8	100.5	99.2	.....	.....	97.8	100.9	97.9	100.8	97.5	101.2
1939	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1940	101.6	99.9	101.4	100.0	102.0	99.4	101.4	99.8	100.9	99.8	102.2	99.7	101.1	102.7	99.5	102.0	99.1	102.1	99.2	102.0	98.7
1941	105.3	100.3	105.0	100.5	106.8	99.7	102.6	99.8	102.0	99.8	103.6	99.3	104.8	106.1	99.2	106.1	98.5	105.9	98.5	107.0	98.1
1942	111.9	101.1	110.9	101.8	117.5	98.8	107.0	99.5	106.4	99.8	108.1	99.2	112.5	116.3	99.1	113.6	98.8	113.1	98.6	116.4	100.0
1943	112.7	101.0	111.5	102.0	118.9	98.1	110.4	99.8	109.3	100.1	112.6	99.2	119.8	121.2	98.6	119.8	98.6	119.2	98.4	123.0	99.8
1944	113.6	101.2	112.4	102.2	120.3	98.1	113.1	99.8	112.2	100.1	115.1	99.2	120.8	122.0	98.6	122.6	98.5	121.9	98.3	126.8	99.8
1945	116.0	101.2	114.4	102.2	125.9	98.1	114.6	99.8	113.7	100.1	116.7	99.2	122.1	123.6	98.6	125.2	98.3	124.5	98.1	129.8	99.7
1946	129.3	100.2	126.8	101.1	146.3	97.4	134.2	97.3	133.7	96.6	135.5	98.8	143.1	141.6	98.3	139.3	96.3	138.4	96.1	145.5	97.5
1947	147.9	100.1	144.6	100.9	171.1	97.4	[2]170.2	[2]95.4	[2]169.8	[2]94.3	[2]171.5	[2]97.8	161.5	160.6	98.2	160.8	94.0	159.9	93.6	166.8	95.8

[1] No index of weekly hours computed for this industry.

[2] Covers 18-month period from July 1, 1946 through Jan. 2, 1948.

TABLE C-9: Union hourly wage rates in selected building construction trades in 37 cities, selected years, 1910–47[1]

City	Bricklayers							Carpenters							Electricians		
	1910	1920	1930	1940	1945	1946	1947	1910	1920	1930	1940	1945	1946	1947	1910	1920	1930
Atlanta, Ga	$0.450	$1.125	$1.250	$1.250	$1.580	$1.750	$2.000	$0.300	$0.800	$0.800	$1.000	$1.250	$1.375	$1.650	.....	$0.900	$1.125
Baltimore, Md	.625	1.250	1.750	1.500	1.750	1.900	2.250	.438	.900	1.100	1.250	1.438	1.675	1.950	$0.438	.925	1.650
Birmingham, Ala	.625	1.000	1.500	1.500	1.750	1.938	2.250	.400	.750	1.000	1.125	1.250	1.500	1.625	.500	1.000	1.250
Boston, Mass	.600	1.000	1.500	1.500	1.725	1.995	2.150	.500	1.000	1.375	1.375	1.500	1.600	1.900	.500	1.000	1.500
Buffalo, N.Y	.600	1.000	1.500	1.500	1.750	2.075	2.250	.450	1.000	1.250	1.300	1.600	1.850	2.000	.400	.900	1.375
Charleston, S.C	.400	1.000	1.000	1.000	1.500	1.650	1.750	.283	.800	.750	1.000	1.125	1.250	1.500	....	.800	....
Chicago, Ill	.675	1.250	1.700	1.700	1.900	2.000	2.200	.600	1.250	1.625	1.625	1.775	1.950	2.150	.688	1.250	1.625
Cincinnati, Ohio	.625	1.250	1.625	1.625	1.825	2.000	2.250	.500	1.000	1.400	1.450	1.600	1.800	1.975	.406	1.000	1.400
Cleveland, Ohio	.625	1.250	1.625	1.625	1.875	2.000	2.250	.450	1.250	1.375	1.375	1.575	1.650	2.125	.525	1.250	1.500
Dallas, Tex	.750	1.125	1.750	1.500	1.725	1.938	2.250	.500	1.000	1.125	1.125	1.250	1.425	1.875	.438	1.000	1.375
Denver, Colo	.750	1.250	1.500	1.650	1.800	1.980	2.250	.600	1.125	1.250	1.430	1.500	1.700	1.875	.563	1.000	1.375
Detroit, Mich	.625	1.250	1.575	1.500	1.725	2.000	2.000	.400	1.000	1.150	1.250	1.500	1.750	2.025	.438	1.250	1.550
Indianapolis, Ind	.650	1.250	1.625	1.600	1.675	1.975	2.225	....	1.000	1.225	1.250	1.425	1.675	1.975	.400	1.000	1.500
Jacksonville, Fla	.500	.875	1.250	1.250	1.500	1.625	2.000	.313	.800	.800	1.000	1.125	1.250	1.500	.375	1.000	1.250
Kansas City, Mo	.750	1.125	1.500	1.625	1.750	2.000	2.025	.500	1.000	1.250	1.375	1.500	1.750	1.900	.500	1.000	1.375
Little Rock, Ark	.750	1.250	1.500	1.500	1.625	1.875	2.000	.450	.925	1.000	1.000	1.250	1.375	1.500	.450	.875	.875
Los Angeles, Calif	.750	1.250	1.375	1.250	1.500	1.850	2.375	.438	.875	1.000	1.100	1.350	1.500	1.900	.438	1.000	1.000
Louisville, Ky	.600	1.150	1.500	1.500	1.675	1.800	2.000	.400	.800	1.125	1.240	1.500	1.600	1.800	.438	.750	1.313
Manchester, N.H	.500	1.125	1.500	1.500	1.750	1.875	2.150	.313	1.000	1.000	1.000	1.150	1.375	1.500	....	1.000	1.000
Memphis, Tenn	.700	1.250	1.625	1.625	1.725	1.938	2.250	.500	1.000	1.000	1.125	1.300	1.500	1.650	.450	1.000	1.250
Milwaukee, Wis	.650	1.250	1.400	1.450	1.668	1.825	2.000	.400	1.000	1.100	1.200	1.425	1.600	1.800	.406	.850	1.250
Minneapolis, Minn	.650	1.250	1.375	1.375	1.625	1.825	2.075	.450	1.000	1.000	1.250	1.440	1.650	1.800	.450	.813	1.125
Newark, N.J	.650	1.250	1.938	1.850	2.000	2.250	2.750	.500	1.000	1.500	1.750	2.000	2.300	2.500	.563	1.000	1.625
New Orleans, La	.625	1.000	1.500	1.500	1.625	1.750	1.938	.400	.750	.900	1.250	1.375	1.500	1.625	.450	.900	1.250
New York, N.Y	.700	1.250	1.925	2.000	2.000	2.250	2.750	.625	1.125	1.650	1.850	1.850	2.100	2.500	.563	1.125	1.650
Omaha, Nebr	.700	1.250	1.250	1.450	1.575	1.825	2.100	.500	1.125	1.000	1.200	1.375	1.625	1.825	.500	1.125	1.250
Philadelphia, Pa	.625	1.300	1.750	1.700	2.000	2.250	2.500	.500	1.125	1.250	1.400	1.580	1.775	2.000	.450	1.000	1.250
Pittsburgh, Pa	.650	1.125	1.750	1.750	2.000	2.150	2.450	.500	.900	1.500	1.500	1.750	2.000	2.000	.500	1.000	1.563
Portland, Oreg	.750	1.250	1.500	1.500	1.725	1.875	2.100	....	1.000	1.125	1.125	1.375	1.550	1.750	.438	1.000	1.250
Providence, R.I	.600	1.150	1.500	1.500	1.650	1.825	2.050	.450	1.000	1.175	1.175	1.350	1.500	1.650	.410	.850	1.100
Richmond, Va	.625	1.000	1.500	1.500	1.650	1.875	2.250	.375	.725	....	1.000	1.150	1.300	1.650	....	.750	.875
St. Louis, Mo	.700	1.250	1.750	1.500	1.900	2.000	2.250	.600	1.000	1.500	1.500	1.700	1.875	2.200	.650	1.000	1.650
Salt Lake City, Utah	.750	1.250	1.375	1.375	1.580	1.750	1.875	.625	1.125	1.125	1.125	1.375	1.500	1.625	.469	1.125	1.125
San Francisco, Calif	.875	1.250	1.375	1.750	1.875	2.050	2.250	.625	1.063	1.125	1.250	1.500	1.750	2.000	.625	1.125	1.125
Scranton, Pa	.550	1.125	1.500	1.500	1.650	1.750	2.000	.425	.875	1.188	1.125	1.300	1.500	1.750	.469	.950	1.125
Seattle, Wash	.750	1.250	1.500	1.600	1.845	1.975	2.235	.563	1.000	1.125	1.250	1.545	1.675	1.935	.625	1.125	1.375
Washington, D.C	.625	1.000	1.750	1.750	1.900	2.125	2.375	.500	.950	1.375	1.625	1.775	1.925	2.050	.500	1.000	1.500

City	Electricians—Cont.				Painters							Plumbers						
	1940	1945	1946	1947	1910	1920	1930	1940	1945	1946	1947	1910	1920	1930	1940	1945	1946	1947
Atlanta, Ga	$1.250	$1.500	$1.650	$1.800	$0.311	$0.600	$0.850	$1.000	$1.250	$1.375	$1.625	$0.408	$0.750	$1.250	$1.375	$1.550	$1.750	$2.000
Baltimore, Md	1.375	1.650	1.850	2.000	.375	.900	1.100	1.125	1.300	1.500	1.775	.438	.875	1.375	1.375	1.650	1.850	2.000
Birmingham, Ala	1.250	1.650	1.750	2.000	.400	.875	1.000	1.250	1.375	1.500	1.750	.688	1.500	1.500	1.500	1.750	1.875	2.000
Boston, Mass	1.500	1.725	1.900	2.150	.455	1.000	1.375	1.250	1.438	1.625	1.875	.550	1.000	1.500	1.500	1.675	1.875	2.000
Buffalo, N.Y	1.375	1.750	2.000	2.150	.406	.875	1.250	1.250	1.500	1.750	1.875	.500	1.000	1.375	1.375	1.750	2.000	2.150
Charleston, S.C	1.000	1.500	1.650	1.750	.223	.800	....	1.000	1.125	1.375	1.250	.389	1.000	1.000	1.250	1.750	1.750	2.000
Chicago, Ill	1.700	1.850	1.975	2.150	.600	1.250	1.750	1.667	1.725	1.917	2.150	.688	1.250	1.625	1.700	1.850	1.950	2.150
Cincinnati, Ohio	1.500	1.725	1.875	2.000	.432	.875	1.338	1.350	1.550	1.700	1.875	.563	1.000	1.400	1.500	1.725	1.875	2.125
Cleveland, Ohio	1.650	1.875	2.000	2.125	.400	1.125	1.313	1.350	1.550	1.675	2.000	.563	1.000	1.500	1.500	1.725	1.850	2.125
Dallas, Tex	1.375	1.625	1.750	2.000	.438	1.000	1.125	1.000	1.250	1.425	1.625	.625	1.250	1.500	1.500	1.625	1.750	2.125
Denver, Colo	1.500	1.650	1.850	2.050	.500	1.000	1.250	1.250	1.430	1.600	1.750	.625	1.000	1.375	1.430	1.650	1.850	2.050
Detroit, Mich	1.650	1.850	2.000	2.250	.375	1.000	1.250	1.250	1.500	1.725	1.950	.500	1.250	1.500	1.500	1.750	1.900	2.165
Indianapolis, Ind	1.500	1.700	1.700	2.100	....	1.000	1.250	1.250	1.425	1.625	1.875	.500	1.000	1.500	1.500	1.625	1.850	2.100
Jacksonville, Fla	1.375	1.500	1.750	1.750	.313	.875	.750	1.000	1.250	1.250	1.500	.625	.938	1.000	1.250	1.500	1.700	2.000
Kansas City, Mo	1.375	1.650	1.875	2.025	.500	1.000	1.250	1.375	1.575	1.700	1.825	.625	1.000	1.375	1.500	1.700	1.875	2.125
Little Rock, Ark	1.000	1.375	1.500	1.750	.400	1.000	1.000	.875	1.250	1.375	1.500	.563	1.125	1.125	1.000	1.500	1.750	1.875
Los Angeles, Calif	1.250	1.700	1.750	2.150	.438	.875	1.000	1.000	1.250	1.500	1.750	.563	1.125	1.125	1.250	1.750	2.000	2.250
Louisville, Ky	1.313	1.625	1.725	1.925	.400	.750	1.125	1.125	1.250	1.500	1.600	.500	.800	1.375	1.375	1.625	1.725	1.950
Manchester, N.H	1.000	1.250	1.250	1.500	....	.800	.900	.900	1.000	1.150	1.250	....	1.000	1.125	1.250	1.375	1.500	1.750
Memphis, Tenn	1.375	1.580	1.750	2.000	.450	1.000	1.125	1.125	1.375	1.500	1.625	....	1.250	1.500	1.375	1.500	1.750	2.000
Milwaukee, Wis	1.300	1.500	1.650	1.850	....	.850	1.125	1.125	1.300	1.500	1.650	.563	.875	1.188	1.350	1.550	1.700	2.000
Minneapolis, Minn	1.375	1.650	1.850	2.060	.425	1.000	1.000	1.250	1.440	1.625	1.800	.563	1.000	1.250	1.375	1.550	1.750	2.000
Newark, N.J	1.750	2.000	2.250	2.500	.440	1.000	1.500	1.250	1.714	1.825	1.900	.550	1.125	1.650	1.500	1.750	2.000	2.250
New Orleans, La	1.450	1.625	1.750	2.000	.400	.750	.900	.875	1.150	1.250	1.500	.563	.900	1.050	1.375	1.580	1.750	2.050
New York, N.Y	2.000	2.000	2.000	2.250	.500	1.125	1.650	1.500	1.800	1.840	2.000	.625	1.125	1.650	2.000	2.000	2.000	2.500
Omaha, Nebr	1.250	1.500	1.750	2.000	.475	1.000	1.000	1.000	1.250	1.375	1.500	.625	1.250	1.250	1.250	1.580	1.750	2.000
Philadelphia, Pa	1.625	1.875	2.000	2.250	.425	1.000	1.050	1.250	1.500	1.750	1.900	.438	.900	1.250	1.440	1.750	2.000	2.250
Pittsburgh, Pa	1.650	1.875	2.000	2.250	.425	1.125	1.500	1.500	1.625	1.850	2.000	.563	1.063	1.625	1.700	1.750	1.875	2.250
Portland, Oreg	1.375	1.580	1.700	1.875	.438	1.000	1.100	1.100	1.375	1.550	1.750	.750	1.125	1.375	1.500	1.725	1.875	2.125
Providence, R.I	1.250	1.500	1.625	1.850	.375	.900	1.125	1.000	1.250	1.375	([2])	....	1.000	1.275	1.350	1.550	1.700	2.000
Richmond, Va	1.000	1.500	1.625	1.800	....	.650	.800	.800	1.100	1.250	1.500	.469	.750	1.000	1.000	1.500	1.625	1.875
St. Louis, Mo	1.650	1.750	1.875	2.250	.525	1.000	1.500	1.500	1.563	1.650	1.800	.663	1.250	1.625	1.625	1.750	1.875	2.250
Salt Lake City, Utah	1.150	1.500	1.500	1.750	.563	1.000	1.000	1.000	1.250	1.375	1.500	.650	1.125	1.200	1.200	1.500	1.625	1.750
San Francisco, Calif	1.375	1.700	1.875	2.250	.563	1.063	1.125	1.250	1.500	1.750	2.000	....	1.250	1.250	1.400	1.700	1.875	2.250
Scranton, Pa	1.250	1.500	1.625	2.000	.400	.875	1.125	1.125	1.250	1.425	1.750	.469	.875	1.250	1.200	1.375	1.500	1.750
Seattle, Wash	1.500	1.745	1.875	2.135	.563	1.000	1.125	1.250	1.545	1.675	2.235	.813	1.125	1.375	1.500	1.745	1.875	2.340
Washington, D.C	1.800	2.000	2.125	2.250	.438	.900	1.375	1.571	1.775	1.775	1.950	.500	1.000	1.500	1.650	1.875	1.875	2.125

Rates for 1910, 1920, and 1930 were those effective on May 15; beginning in 1940 the survey covered June 1; in 1945, 1946, and 1947, the survey date was July 1.

[2] Work stoppage on July 1, 1947.

Net Spendable Weekly Earnings

The published averages of weekly earnings in manufacturing industries (see table C–1) have been adjusted by the Bureau of Labor Statistics to show spendable income of workers after the payment of personal income taxes. Before the extension of income taxes to the lower income brackets in recent years (see changes in table L–9), the only Nation-wide deduction from gross weekly pay was the social-security tax of 1 percent of annual income up to $3,000, which became effective, January 1, 1937.

The amount of tax liability depends on the number of dependents supported by the worker as well as on the level of his gross income. Therefore, the tax liability has been computed for two types of income receivers: (1) A worker supporting an adult and two children; and (2) a single person with no dependents. Income taxes on annual income are computed for the two types of income receivers by using Internal Revenue Form 1040 (long income tax form) and applying to it allowances for deductible expenses, personal exemption, credit for dependents, and earned income credit provided by Internal Revenue Income Tax Form 1040A (short income tax form). Allowances made for deductible expenses are 6 percent of annual income for years prior to 1944 and 10 percent for subsequent years. These deductible expenses are subtracted from annual income to obtain net income. All income is considered to be earned, within the limits provided by law, for the purpose of determining earned-income credit which is estimated at 10 percent of net income in the years in which such credit was allowed. The normal tax and the surtax are then computed by using the rates given in the instructions for filling out Internal Revenue Form 1040 and are combined to obtain the income tax. The defense tax is computed for 1940 and the victory tax for the year 1943. The social-security tax is added to these taxes to obtain total Federal taxes.

Net spendable annual income is then obtained by subtracting these Federal taxes from annual income. Net spendable weekly earnings are computed by dividing net spendable annual income by 52.

To reduce gross weekly earnings to net spendable earnings, income and social security taxes are subtracted from the average weekly earnings by means of formulas derived by the method explained above.

Net spendable weekly earnings are computed from average weekly earnings of $49.17 (August 1947):

For a single worker

$$\$49.17 \times 0.819 + \$1.83 = \$42.10$$

For a family of 4

$$\$49.17 \times 0.819 + \$7.31 = \$47.58$$

Changes in purchasing power of net spendable weekly earnings are derived by deflating net spendable weekly earnings by the changes in the consumers' price index for moderate income families (see table D–1). In making this adjustment, the year 1939 was used as a base. The consumers' price index applies to family living costs rather than to those for single individuals; no current information is generally available as to the prices of room, board, and restaurant items that are important in the budgets of single persons.

However, to adjust the Consumers' Price Index from a 1935–39 base to a 1939 base, the method is exemplified as follows:

> The August 1947 index of 160.3 (1935–39 = 100) divided by the 1939 index of 99.4 (1935–39 = 100) equals 1.613—the ratio between the Consumers' Price Index in August 1947 and the year 1939—or an index for August 1947 of 161.3 (1939 = 100).

To obtain net spendable weekly earnings expressed in 1939 dollars for August 1947, computations are:

For a single worker

$$\$42.10 \div 1.613 = \$26.11$$

For a family of 4

$$\$47.58 \div 1.613 = \$29.50$$

Net spendable weekly earnings for a single person and a family of four are shown in table C–10, both in current dollars and in terms of 1939 dollars, by months from 1939 to 1947.

TABLE C–10: Gross and net spendable average weekly earnings of production workers in manufacturing industries, in current and 1939 dollars, 1939–47

[Current dollars and 1939 dollars]

Period	Gross average weekly earnings	Net spendable average weekly earnings			
		Worker with no dependents		Worker with three dependents	
		Current dollars	1939 dollars	Current dollars	1939 dollars
1939	$23.86	$23.58	$23.58	$23.62	$23.62
1940	25.20	24.69	24.49	24.95	24.75
1941	29.58	28.05	26.51	29.28	27.67
1942	36.65	31.77	27.11	36.28	30.96
1943	43.14	36.01	28.97	41.39	33.30
1944	46.08	38.29	30.32	44.06	34.89
1945	44.39	36.97	28.61	42.74	33.08
1946	43.74	37.65	26.87	43.13	30.78
1947	49.25	42.17	26.33	47.65	29.75
1939: January	23.19	22.94	22.87	22.96	22.89
February	23.54	23.28	23.30	23.30	23.32
March	23.76	23.49	23.56	23.52	23.59
April	23.18	22.93	23.02	22.95	23.04
May	23.32	23.07	23.21	23.09	23.23
June	23.60	23.34	23.53	23.36	23.55
July	23.04	22.80	22.92	22.81	22.93
August	23.77	23.50	23.69	23.53	23.72
September	23.93	23.65	23.37	23.69	23.41
October	24.96	24.64	24.42	24.71	24.49
November	24.85	24.53	24.36	24.60	24.43
December	25.23	24.89	24.84	24.98	24.93
1940: January	24.56	24.08	24.06	24.31	24.29
February	24.39	23.92	23.75	24.15	23.98
March	24.70	24.21	24.11	24.45	24.35
April	24.40	23.93	23.81	24.16	24.04
May	24.62	24.14	23.97	24.37	24.20
June	24.89	24.39	24.12	24.64	24.37
July	24.54	24.06	23.84	24.29	24.07
August	25.41	24.89	24.74	25.16	25.01
September	25.79	25.25	25.00	25.523	25.28
October	26.20	25.64	25.44	25.94	25.73
November	25.97	25.42	25.24	25.71	25.53
December	26.90	26.31	25.97	26.63	26.29
1941: January	26.64	25.41	25.06	26.37	26.00
February	27.47	26.16	25.80	27.20	26.82
March	27.90	26.54	26.07	27.62	27.13
April	28.08	26.71	25.98	27.80	27.04
May	29.34	27.84	26.89	29.05	28.06
June	30.23	28.64	27.22	29.93	28.44
July	29.62	28.09	26.52	29.32	27.68
August	30.25	28.66	26.82	29.95	28.03
September	30.67	29.04	26.70	30.36	27.92
October	31.35	29.65	26.96	31.04	28.23
November	31.23	29.54	26.65	30.92	27.89
December	32.18	30.39	27.34	31.86	28.66
1942: January	33.40	29.12	25.84	33.00	29.35
February	34.05	29.65	26.10	33.71	29.68
March	34.63	30.12	26.19	34.28	29.81
April	35.10	30.51	26.35	38.75	30.01
May	35.82	31.10	26.65	35.46	30.39
June	36.25	31.45	26.86	35.89	30.65
July	36.43	31.59	26.84	36.07	30.64
August	37.38	32.37	27.38	37.01	31.31
September	37.80	32.71	27.60	37.42	31.57
October	38.89	33.60	28.07	38.50	32.16
November	39.78	34.33	28.48	39.77	32.58
December	40.27	34.73	28.67	39.70	32.78
1943: January	$40.62	$34.05	$28.04	$39.27	$32.34
February	41.12	34.44	28.29	39.69	32.60
March	41.75	34.93	28.27	40.22	32.56
April	42.48	35.50	28.43	40.84	32.71
May	43.08	35.97	28.58	41.34	32.85
June	43.25	36.10	28.75	41.48	33.04
July	42.76	35.72	28.66	41.07	32.95
August	43.52	36.31	29.25	41.69	33.58
September	44.39	36.99	29.68	42.38	34.00
October	44.86	37.36	29.85	42.75	34.16
November	45.32	37.72	30.19	43.12	34.51
December	44.58	37.14	29.68	42.53	33.98
1944: January	45.29	37.67	30.15	43.44	34.77
February	45.47	37.81	30.36	43.58	34.99
March	45.64	37.95	30.47	43.72	35.10
April	45.55	37.88	30.22	43.65	34.82
May	46.02	38.24	30.38	44.01	34.97
June	46.24	38.42	30.45	44.19	35.03
July	45.43	37.78	29.78	43.55	34.33
August	45.88	38.13	29.99	43.90	34.52
September	46.24	38.42	30.19	44.19	34.72
October	46.94	38.96	30.61	44.73	35.15
November	46.85	38.89	30.53	44.66	35.06
December	47.44	39.36	30.81	45.13	35.32
1945: January	47.50	39.40	30.81	45.17	35.33
February	47.37	39.30	30.78	45.07	35.30
March	47.40	39.32	30.82	45.09	35.35
April	47.12	39.10	30.58	44.87	35.09
May	46.02	38.24	29.67	44.01	34.15
June	46.32	38.48	29.65	44.25	34.10
July	45.45	37.80	29.04	43.57	33.47
August	41.72	34.88	26.81	40.47	31.11
September	40.87	34.21	26.38	39.65	30.58
October	40.97	34.29	26.44	39.74	30.65
November	40.77	34.13	26.24	39.55	30.40
December	41.21	34.48	26.38	39.98	30.59
1946: January	41.15	35.53	27.19	40.74	31.17
February	40.58	35.07	26.90	40.17	30.81
March	42.15	36.35	27.75	41.23	31.86
April	42.88	36.95	28.02	42.43	32.17
May	42.51	36.65	27.66	42.08	31.76
June	43.31	37.30	27.81	42.78	31.90
July	43.38	37.36	26.30	42.84	30.16
August	44.99	38.68	26.68	44.16	30.46
September	45.39	39.00	26.57	44.48	30.30
October	45.73	39.28	26.27	44.76	29.94
November	45.79	39.33	25.69	44.81	29.26
December	46.96	40.29	26.12	45.77	29.68
1947: January	47.10	40.40	26.20	45.88	29.75
February	47.29	40.56	26.32	46.04	29.87
March	47.69	40.89	26.00	46.37	29.49
April	47.50	40.73	25.92	46.21	29.41
May	48.44	41.50	26.44	46.98	29.93
June	49.33	42.33	26.72	47.71	30.19
July	48.98	41.94	25.32	47.42	29.76
August	49.17	42.10	26.11	47.58	29.50
September	50.47	43.16	26.19	48.64	29.52
October	51.05	43.64	26.48	49.12	29.81
November	51.29	43.84	26.43	49.32	29.73
December	52.69	44.98	26.77	50.46	30.03

Section D: Prices and Cost of Living

Throughout this century, the Bureau of Labor Statistics has been the principal price collection agency of the Federal Government, outside the field of agriculture, and is the only agency of the Federal Government that systematically collects price statistics at manufacturing, wholesale, and retail levels. As a part of its regular work, the Bureau of Labor Statistics has for many years provided basic price information for other governmental agencies, for State and local governments, and for labor and business organizations as a basis for wage and price adjustments. This program currently includes the official United States indexes of wholesale prices, the consumers' price index for moderate-income families in large cities (including retail costs of foods, rents, fuels, and other goods and services), and price checks among consumers.

Consumers' Price Index for Moderate-Income Families in Large Cities

The Bureau of Labor Statistics consumers' price index for moderate-income families in large cities—called "cost of living" index until September 1945—is designed to measure average changes in retail prices of selected goods, rents, and services—weighted by quantities bought by families of wage earners and moderate-income city workers in 1934–36. It indicates, for example, how much more it cost in 1946 than in 1939 to buy the goods typically purchased by a family which in 1934–36 had an income of about $30 a week, and which still lived in the same town, in about the same kind of house. It is a price barometer, not a measure of changes in the total amount families spend for living, which also depends on changes in income and in the manner of living.

The index represents the movement in the prices of living essentials in the family budget—food, apparel, housefurnishings, rent, utilities, fuels, and miscellaneous goods and services such as medical care, personal care, transportation, laundry services, and recreation. Approximately 180 individual items are priced for the index: 61 foods, 39 articles of apparel, 12 kinds of fuel, 21 kinds of housefurnishings, 48 miscellaneous goods and services, and rent. Since two or more qualities are priced for many articles, well over 300 different articles and qualities are used in the computation of the index. In 1934–36, the Bureau of Labor Statistics selected the articles to be priced on the basis of an extensive study of actual expenditures of about 14,500 moderate-income families. Prices for some goods follow the same trends as others. It is not necessary, therefore, actually to collect prices for everything the typical family buys.

The consumers' price index is based upon changes in food prices in 56 cities and changes in prices of all other important goods and services in 34 cities. More than 120,000 food prices are collected each month in 1,750 independent food stores and 275 chain organizations or their branches, representing approximately 8,600 individual stores. Prices for goods and services other than food are obtained from 3,900 stores and service establishments, selected to represent all types of retail outlets which wage earners and other families with moderate incomes patronize. Rental data are obtained directly from tenants in 40,000 dwellings in 34 cities. The number of rental dwellings and stores surveyed in each city varies with the size of the city.

Prices for all articles except coal, gas, and electricity, are collected by personal visits of representatives of the Bureau. Every attempt is made to price goods and services of the same quality from period to period. The agent does not ask for the price of "a medium-priced shirt" but obtains a price from the buyer for a shirt in stock which most nearly answers the detailed description furnished to him by the Bureau. The prices recorded are those actually charged consumers. As a rule the agent, as well as obtaining selling prices and quality information from buyers or department heads, examines the merchandise and checks price tags or listed prices. Prices for coal, gas, and electricity are obtained by mail questionnaires, supplemented by personal visits by agents at least once a year.

In order to give an accurate picture of the effect of changes in retail prices on the family budget, each item priced is given an importance equal to the importance in family purchases of that article or of a group of articles which the priced item represents. Since, for example, bread is more important than cheese and both are more important than bananas, the weighting procedure used in the index to reflect price changes for food items takes into account the difference in family expenditure for these items. Thus, if the prices of bread and of bananas both rise 10 percent, the change in the price of bread has a much greater effect upon the index. The importance of each article priced was determined city by city from the information collected in the 1934–36 survey of expenditures, the same survey from which the list of items to be priced was selected.

The index is calculated as a fixed base weighted aggregate, using prices in 1935–39 as 100. Weights for individual commodities and groups of commodities in each city are based primarily upon family expenditures in that city as shown by the 1934–36 expenditure study, with certain changes necessitated by changed market conditions. Indexes for individual cities are combined to obtain the national average for 34 cities, using weights based upon most recent population data.

NOTE: From June 1944 to January 1947, the Bureau of Labor Statistics with each month's release on the consumers' price index explained that "the index does not show the full wartime effect on the cost of living of such factors as lowered quality, disappearance of low-priced goods and forced changes in housing and eating away from home." This statement was expanded after the report of the President's Committee on the Cost of Living in November 1944, which recommended: "Under the exceptional market conditions which exist in wartime, and so long as we have a seller's market, allowance should be made for a hidden increase in the cost of living of probably as much as 3 and certainly not more than 4 percentage points, due to quality deterioration, disappearance of cheaper goods, decrease of special sales, and increases in under-reporting of prices actually charged."

In December 1945, the Stabilization Director, in connection with Executive Orders No. 9599 and No. 9651, indicated that if account were taken of continued deterioration of quality and unavailability of merchandise between September 1944 and September 1945, the over-all allowance for the period from January 1941 to September 1945 would total approximately 5 points for large and small cities combined. No agency has attempted to take account of quality changes and other hidden factors affecting the consumers' price index since September 1945.

The President's Committee in establishing the original adjustment explained that the disadvantage to a buyer in a seller's market "can be expected to disappear as soon as we can resume full production of consumer goods and services in a competitive market." By the end of 1946, it was evident that several of the factors had disappeared or diminished in importance since the end of World War II, such as the failure to measure adequately over-ceiling food prices. Other factors still remained, and some had increased, such as special rental charges. The Bureau of Labor Statistics had never been able to make any precise estimate of the amount of these adjustments. In fact, the President's Committee noted that the methods applied by its Technical Committee "to estimate the hidden increase in living costs in a seller's market . . . should not be adopted by the Bureau of Labor Statistics."

These adjustments were never included in the consumers' price index, and the Bureau of Labor Statistics after January 1947 dropped the explanation from its reports.

The consumers' price index for moderate-income families in large cities is shown by groups of commodities for the period 1913–47 in table D–1; and in table D–2, this index is shown for selected cities, Territories, and Possessions for 1923–47.

The base period for the consumers' price indexes for all of the data in table D–1 and most of the data in table D–2 is the 5-year average for 1935–39. Bridgeport, Omaha, San Diego, South Bend, and Wichita indexes in table D–2 have June or December 1944 as bases. These five cities mentioned are included in table D–2 with the 34 large cities regularly surveyed for the consumers' price index. The indexes for Alaska have a July 1944 base period; those for Honolulu, March 1943; for Puerto Rico, March 1941; and for the Virgin Islands, October 1943.

Table D–1: Consumers' price index for moderate-income families in large cities, by group of commodities, 1913–47

[1935-39=100]

Period	All items	Food	Apparel	Rent	Fuel, electricity, and ice			Housefurnishings	Miscellaneous
					Total	Gas and electricity	Other fuels and ice		
1913	70.7	79.9	69.3	92.2	61.9	......	......	59.1	50.9
1914	71.8	81.8	69.8	92.2	62.3	......	......	60.7	51.9
1915	72.5	80.9	71.4	92.9	62.5	......	......	63.6	53.6
1916	77.9	90.8	78.3	94.0	65.0	......	......	70.9	56.3
1917	91.6	116.9	94.1	93.2	72.4	......	......	82.8	65.1
1918	107.5	134.4	127.5	94.9	84.2	......	......	106.4	77.8
1919	123.8	149.8	168.7	102.7	91.1	......	......	134.1	87.6
1920	143.3	168.8	201.0	120.7	106.9	......	......	164.6	100.5
1921	127.7	128.3	154.8	138.6	114.0	......	......	138.5	104.3
1922	119.7	119.9	125.6	142.7	113.1	......	......	117.5	101.2
1923	121.9	124.0	125.9	146.4	115.2	......	......	126.1	100.8
1924	122.2	122.8	124.9	151.6	113.7	......	......	124.0	101.4
1925	125.4	132.9	122.4	152.2	115.4	......	......	121.5	102.2
1926	126.4	137.4	120.6	150.7	117.2	......	......	118.8	102.6
1927	124.0	132.3	118.3	148.3	115.4	......	......	115.9	103.2
1928	122.6	130.8	116.5	144.8	113.4	......	......	113.1	103.8
1929	122.5	132.5	115.3	141.4	112.5	......	......	111.7	104.6
1930	119.4	126.0	112.7	137.5	111.4	......	......	108.9	105.1
1931	108.7	103.9	102.6	130.3	108.9	......	......	98.0	104.1
1932	97.6	86.5	90.8	116.9	103.4	......	.....	85.4	101.7
1933	92.4	84.1	87.9	100.7	100.0	......	......	84.2	98.4
1934	95.7	93.7	96.1	94.4	101.4	......	......	92.8	97.9
1935	98.1	100.4	96.8	94.2	100.7	102.8	98.8	94.8	98.1
1936	99.1	101.3	97.6	96.4	100.2	100.8	99.9	96.3	98.7
1937	102.7	105.3	102.8	100.9	100.2	99.1	101.3	104.3	101.0
1938	100.8	97.8	102.2	104.1	99.9	99.0	100.8	103.3	101.5
1939[1]	99.4	95.2	100.5	104.3	99.0	98.9	99.3	101.3	100.7
1940	100.2	96.6	101.7	104.6	99.7	98.0	101.6	100.5	101.1
1941	105.2	105.5	106.3	106.2	102.2	97.1	107.4	107.3	104.0
1942	116.5	123.9	124.2	108.5	105.4	96.7	113.9	122.2	110.9
1943	123.6	138.0	129.7	108.0	107.7	96.1	119.0	125.6	115.8
1944	125.5	136.1	138.8	108.2	109.8	95.8	123.4	136.4	121.3
1945	128.4	139.1	145.9	108.3	110.3	95.0	125.1	145.8	124.1
1946	139.3	159.6	160.2	108.6	112.4	92.4	132.0	159.2	128.8
1941									
January 15	100.8	97.8	100.7	105.0	100.8	97.4	104.2	100.1	101.9
February 15	100.8	97.9	100.4	105.1	100.6	97.3	104.0	100.4	101.9
March 15	101.2	98.4	102.1	105.1	100.7	97.3	104.2	101.6	101.9
April 15	102.2	100.6	102.4	105.4	101.0	97.3	104.8	102.4	102.2
May 15	102.9	102.1	102.8	105.7	101.1	97.2	105.0	103.2	102.5
June 15	104.6	105.9	103.3	105.8	101.4	97.4	105.4	105.3	103.3
July 15	105.3	106.7	104.8	106.1	102.3	97.1	107.4	107.4	103.7
August 15	106.2	108.0	106.9	106.3	103.2	97.1	109.3	108.9	104.0
September 15	108.1	110.7	110.8	106.8	103.7	96.9	110.5	112.0	105.0
October 15	109.3	111.6	112.6	107.5	104.0	96.7	111.1	114.4	106.9
November 15	110.2	113.1	113.8	107.8	104.0	96.7	111.1	115.6	107.4
December 15	110.5	113.1	114.8	108.2	104.1	96.7	111.3	116.8	107.7
1942									
January 15	112.0	116.2	116.1	108.4	104.3	96.7	111.8	118.2	108.5
February 15	112.9	116.8	119.0	108.6	104.4	96.7	112.0	119.7	109.4
March 15	114.3	118.6	123.6	108.9	104.5	96.7	112.1	121.2	110.1
April 15	115.1	119.6	126.5	109.2	104.3	96.7	111.6	121.9	110.6
May 15	116.0	121.6	126.2	109.9	104.9	96.6	112.9	122.2	110.9
June 15	116.4	123.2	125.3	108.5	105.0	96.6	113.1	122.3	110.9
July 15	117.0	124.6	125.3	108.0	106.3	96.7	115.6	122.8	111.1
August 15	117.5	126.1	125.2	108.0	106.2	96.7	115.4	123.0	111.1
September 15	117.8	126.6	125.8	108.0	106.2	96.7	115.4	123.6	111.4
October 15	119.0	129.6	125.9	108.0	106.2	96.7	115.5	123.6	111.8
November 15	119.8	131.1	125.9	108.0	106.2	96.8	115.5	123.7	112.7
December 15	120.4	132.7	125.9	108.0	106.3	96.8	115.5	123.7	112.8
1943									
January 15	120.7	133.0	126.0	108.0	107.3	96.8	117.5	123.8	113.2
February 15	121.0	133.6	126.2	108.0	107.2	96.3	117.8	124.1	113.6
March 15	122.8	137.4	127.6	108.0	107.4	96.2	118.3	124.5	114.5
April 15	124.1	140.6	127.9	108.0	107.5	96.2	118.5	124.8	114.9
May 15	125.1	143.0	127.9	108.0	107.6	96.1	118.7	125.1	115.3
June 15	124.8	141.9	127.9	108.0	107.7	96.1	118.9	125.4	115.7
July 15	123.9	139.0	129.1	108.0	107.6	95.9	118.9	125.6	116.1
August 15	123.4	137.2	129.6	108.0	107.6	95.8	119.1	125.9	116.5
September 15	123.9	137.4	132.5	108.0	107.6	95.8	119.1	126.3	117.0
October 15	124.4	138.2	133.3	108.0	107.8	95.9	119.3	126.7	117.6
November 15	124.2	137.3	133.5	108.0	107.9	96.0	119.6	126.9	117.7
December 15	124.4	137.1	134.6	108.1	109.4	96.0	122.4	127.9	118.1
1944									
January 15	124.2	136.1	134.7	108.1	109.5	96.0	122.7	128.3	118.4
February 15	123.8	134.5	135.2	108.1	110.3	96.0	124.2	128.7	118.7
March 15	123.8	134.1	136.7	108.1	109.9	96.0	123.5	129.0	119.1
April 15	124.6	134.6	137.1	108.1	109.9	96.0	123.5	132.9	120.9
May 15	125.1	135.5	137.4	108.1	109.8	95.9	123.3	135.0	121.3
June 15	125.4	135.7	138.0	108.1	109.6	95.6	123.2	138.4	121.7
July 15	126.1	137.4	138.3	108.2	109.7	95.9	123.2	138.7	122.0
August 15	126.4	137.7	139.4	108.2	109.8	95.8	123.3	139.3	122.3
September 15	126.5	137.0	141.4	108.2	109.8	95.8	123.4	140.7	122.4
October 15	126.5	136.4	141.9	(2)	109.8	95.8	123.5	141.4	122.8
November 15	126.6	136.5	142.1	(2)	109.9	95.8	123.6	141.7	122.9
December 15	127.0	137.4	142.8	108.3	109.4	94.8	123.6	143.0	123.1
1945									
January 15	127.1	137.3	143.0	(2)	109.7	95.5	123.6	143.6	123.3
February 15	126.9	136.5	143.3	(2)	110.0	95.5	124.1	144.0	123.4
March 15	126.8	135.9	143.7	108.3	110.0	95.5	124.1	144.5	123.6
April 15	127.1	136.6	144.1	(2)	109.8	95.5	123.7	144.9	123.8
May 15	128.1	138.8	144.6	(2)	110.0	95.2	124.4	145.4	123.9
June 15	129.0	141.1	145.4	108.3	110.0	95.2	124.5	145.8	124.0
July 15	129.4	141.7	145.9	(2)	111.2	95.2	126.7	145.6	124.3
August 15	129.3	140.9	146.4	(2)	111.4	95.2	127.2	146.0	124.5
September 15	128.9	139.4	148.2	108.3	110.7	95.2	125.7	146.8	124.6
October 15	128.9	139.3	148.5	(2)	110.5	94.8	125.7	146.9	124.7
November 15	129.3	140.1	148.7	(2)	110.1	94.0	125.8	147.6	124.6
December 15	129.9	141.4	149.4	108.3	110.3	94.0	126.1	148.3	124.8
1946									
January 15	129.9	141.0	149.7	(2)	110.8	93.8	127.3	148.8	125.4
February 15	129.6	139.6	150.5	(2)	111.0	93.8	127.8	149.7	125.6
March 15	130.2	140.1	153.1	108.4	110.5	92.9	127.7	150.2	125.9
April 15	131.1	141.7	154.5	(2)	110.4	92.6	127.8	152.0	126.7
May 15	131.7	142.6	155.7	(2)	110.3	92.2	127.8	153.7	127.2
June 15	133.3	145.6	157.2	108.5	110.5	92.1	128.4	156.1	127.9
July 15	141.2	165.7	158.7	(2)	113.3	92.1	133.8	157.9	128.2
August 15	144.1	171.2	161.2	108.7	113.7	91.8	135.0	160.0	129.8
September 15	145.9	174.1	165.9	108.8	114.4	91.7	136.5	165.6	129.9
October 15	148.6	180.0	168.1	(2)	114.4	91.6	136.6	168.5	131.0
November 15	152.2	187.7	171.0	(2)	114.8	91.8	137.2	171.0	132.5
December 15	153.3	185.9	176.5	(2)	115.5	92.0	138.3	177.1	136.1
1947									
January 15	153.3	183.8	179.0	108.8	117.3	91.9	142.1	179.1	137.1
February 15	153.2	182.3	181.5	108.9	117.5	92.2	142.3	180.8	137.4
March 15	156.3	189.5	184.3	109.0	117.6	92.2	142.5	182.3	138.2
April 15	156.2	188.0	184.9	109.0	118.4	92.5	143.8	182.5	139.2
May 15	156.0	187.6	185.0	109.2	117.7	92.4	142.4	181.9	139.0
June 15	157.1	190.5	185.7	109.2	117.7	91.7	143.0	182.6	139.1
July 15	158.4	193.1	184.7	110.0	119.5	91.7	146.6	184.3	139.5
August 15	160.3	196.5	185.9	111.2	123.8	92.0	154.8	184.2	139.8
September 15	163.8	203.5	187.6	113.6	124.6	92.1	156.3	187.5	140.8
October 15	163.8	201.6	189.0	114.9	125.2	92.2	157.4	187.8	141.8
November 15	164.9	202.7	190.2	115.2	126.9	92.5	160.5	188.9	143.0
December 15	167.0	206.9	191.2	115.4	127.8	92.6	162.0	191.4	144.4

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[1] For August 1939, the month before World War II started, the indexes were: All items, 98.6; foods, 93.5; apparel, 100.3; rent, 104.3; fuel, electricity, and ice, 97.5; housefurnishings, 100.6; and miscellaneous, 100.4.

[2] Rents not surveyed this month.

TABLE D–2: Consumers' price index for moderate-income families in 39 United States cities and 4 Territories and Possessions[1], 1923–47

(1935–39 = 100, unless otherwise indicated)

Period	Atlanta, Ga.		Baltimore, Md.		Birmingham, Ala.		Boston, Mass.		Buffalo, N.Y.		Chicago, Ill.		Cincinnati, Ohio		Cleveland, Ohio		Denver, Colo.		Detroit, Mich.	
	All items	Food	All items	Food	All items	Food	All items	Food	All items	Food	All items	Food	All items	Food	All items	Food	All items	Food	All items	Food
1923	127.8	130.8	116.5	118.2	131.8	137.2	121.1	130.8	118.2	123.2	127.1	119.8	114.4	119.9	120.1	124.1	121.5	115.0	128.0	124.0
1924	126.1	129.1	116.7	117.1	132.1	136.3	121.0	128.3	118.3	121.0	129.2	121.2	115.4	118.8	120.3	121.9	119.9	114.3	128.1	122.4
1925	130.3	146.1	119.8	127.0	136.2	152.4	124.5	137.6	122.3	132.4	132.7	130.6	121.0	132.3	122.3	132.7	122.5	124.0	129.7	134.5
1926	131.6	154.2	121.4	132.5	137.9	159.3	126.5	142.3	124.7	139.1	133.4	135.7	123.1	139.1	123.6	138.9	121.7	126.4	130.2	140.1
1927	127.7	145.8	118.4	125.8	133.9	149.1	124.2	137.3	121.9	131.5	130.7	131.7	120.9	132.5	121.0	132.3	118.1	121.0	126.9	134.3
1928	126.2	141.9	117.5	123.3	131.4	143.4	123.2	135.9	121.4	130.1	128.8	131.0	120.0	131.6	119.5	130.9	116.1	118.7	124.5	131.2
1929	125.4	141.8	117.6	124.1	129.1	143.5	123.3	137.1	121.5	132.6	128.6	133.2	121.2	135.6	119.0	131.1	116.6	120.6	124.9	133.9
1930	120.3	134.2	115.8	119.2	124.4	138.5	120.5	131.6	118.5	125.0	125.4	127.9	120.0	131.1	116.6	124.2	114.1	114.9	119.9	124.4
1931	108.0	106.7	106.8	99.4	108.3	106.4	110.0	108.8	107.1	100.3	113.8	106.3	108.4	108.2	104.9	99.2	104.4	94.9	105.4	100.3
1932	96.6	86.1	96.8	83.0	94.3	86.3	98.9	89.3	96.9	85.7	99.7	87.5	95.7	83.9	95.0	82.4	94.7	81.6	90.9	78.8
1933	92.0	84.7	92.5	81.5	89.4	85.0	94.8	86.3	92.0	83.6	91.6	82.4	92.0	83.4	90.3	81.8	90.8	80.8	85.7	80.5
1934	96.1	95.2	96.5	91.3	94.3	94.5	98.1	95.0	94.7	92.0	93.1	89.6	95.6	92.1	93.7	91.2	93.5	88.8	90.4	91.3
1935	98.6	102.2	98.6	99.8	97.3	102.2	99.7	101.0	97.5	100.7	97.2	100.0	98.7	102.5	97.2	100.3	97.4	100.4	94.9	99.5
1936	99.8	102.2	99.7	100.9	98.5	102.6	99.9	101.2	99.0	101.4	98.5	101.4	99.8	103.5	98.1	100.6	98.9	101.6	98.3	101.8
1937	102.9	105.7	101.9	104.3	103.7	107.7	102.5	104.7	103.1	104.7	103.0	106.1	103.0	105.5	102.3	104.1	103.5	106.3	104.5	106.8
1938	99.9	95.6	100.2	98.3	101.2	95.6	99.7	97.8	100.8	97.4	101.5	97.8	100.3	96.2	101.5	98.6	100.7	97.1	102.6	98.2
1939	98.8	94.3	99.6	96.7	99.2	91.9	98.2	95.3	99.5	95.9	99.8	94.9	98.3	92.3	100.9	96.3	99.4	94.6	99.6	93.7
1940	99.1	94.2	99.9	96.6	99.8	93.2	99.3	96.2	101.0	98.2	100.6	96.7	99.0	94.3	101.3	97.6	99.3	94.4	100.3	95.7
1941	104.6	103.8	106.1	107.0	106.6	103.3	103.5	103.2	107.5	108.5	105.7	106.2	104.8	105.0	107.2	107.7	103.9	103.2	106.6	104.9
1942	115.8	122.8	118.4	127.8	118.2	122.4	114.5	121.3	120.0	126.5	116.3	122.9	116.5	124.0	118.9	125.7	115.6	123.7	118.3	123.4
1943	123.8	138.8	125.7	145.3	125.5	139.3	120.7	133.1	126.3	140.3	122.8	136.0	123.1	136.0	127.1	142.6	122.1	137.2	124.7	135.8
1944	125.9	136.7	127.5	141.8	129.2	139.9	122.0	130.9	126.1	134.1	124.7	135.0	125.5	135.3	129.2	142.0	124.5	137.1	126.3	132.8
1945	130.2	140.0	131.5	147.4	132.2	143.4	124.4	133.6	128.5	136.8	127.3	137.8	128.3	137.6	131.2	143.2	127.1	138.8	129.6	135.6
1946	139.9	159.0	141.5	166.1	142.5	164.4	134.6	153.1	138.3	152.7	138.4	160.1	138.6	156.0	141.3	163.9	137.1	158.3	140.9	156.4
1941: January	......	94.3	100.9	97.9	101.3	96.0	99.1	95.2	102.1	100.2	101.3	98.2	99.7	96.5	102.1	99.2	99.8	94.8	101.1	97.0
February	......	95.8	101.1	98.3	101.3	95.6	99.4	96.2	102.2	100.3	101.3	97.9	99.7	96.5	102.2	99.3	99.5	94.4	101.3	97.2
March	100.5	96.7	101.5	99.1	101.6	95.3	99.5	96.1	102.8	100.8	101.5	98.4	100.5	97.6	102.9	100.3	99.9	95.1	102.1	98.4
April	......	99.7	102.6	101.5	102.4	97.0	100.6	98.3	104.1	103.2	102.5	100.5	101.6	100.1	103.6	102.1	101.1	98.6	103.4	101.3
May	......	99.0	103.8	103.7	103.0	97.7	101.2	99.5	105.5	106.0	103.2	101.9	102.0	100.9	104.3	103.4	101.6	99.5	103.5	100.7
June	103.3	103.4	105.9	108.7	105.5	103.0	102.5	102.6	107.3	110.1	104.8	105.8	103.9	104.8	106.2	107.8	102.9	103.0	106.4	107.0
July	......	105.2	106.4	108.6	107.0	105.2	103.8	104.7	108.0	110.8	106.1	107.5	104.5	104.8	107.1	108.7	103.9	104.2	107.1	107.2
August	......	107.0	107.4	109.6	108.2	106.8	105.2	107.3	108.7	111.8	106.8	108.1	106.4	109.0	109.0	112.1	104.9	106.0	107.5	107.1
September	107.6	110.0	109.5	113.1	109.9	109.0	106.4	108.4	110.9	114.1	109.5	114.0	108.1	110.0	110.9	114.1	106.0	107.3	109.6	108.9
October	......	112.2	110.4	113.6	111.8	109.7	107.1	108.5	112.1	114.4	110.2	113.5	109.8	112.6	111.7	114.0	108.3	109.9	111.8	111.1
November	......	111.1	111.3	114.3	113.5	112.6	108.6	111.5	112.9	115.2	111.0	114.8	110.6	114.3	112.9	116.4	109.7	113.2	112.5	112.0
December	110.6	111.1	112.4	116.1	113.9	112.0	108.2	110.1	113.3	115.4	110.6	113.2	110.3	112.7	113.3	115.0	109.4	111.9	112.7	111.4
1942: January	......	114.3	113.9	119.0	115.1	115.2	109.5	112.6	115.0	118.4	112.0	116.0	111.8	115.8	114.7	117.8	111.3	116.4	114.5	115.0
February	......	116.1	114.9	120.5	116.4	117.0	111.0	115.1	116.2	119.6	112.4	115.1	112.6	116.4	115.2	117.9	111.8	115.8	115.4	116.5
March	113.9	118.4	116.7	123.0	117.3	117.8	111.6	115.3	117.8	121.5	113.7	117.5	114.4	118.9	117.0	120.5	113.1	117.7	117.2	118.6
April	......	120.3	117.3	123.6	118.2	118.9	112.0	115.3	119.0	122.4	115.3	120.0	115.3	120.7	117.9	122.3	114.6	120.2	118.4	121.0
May	......	120.4	118.2	125.8	118.7	120.5	113.4	118.3	120.5	125.2	116.5	121.7	115.9	122.4	118.8	124.1	115.6	122.9	118.8	122.4
June	115.5	121.8	119.2	127.1	117.1	120.9	113.9	119.9	120.9	127.3	116.3	122.1	116.8	124.3	119.5	127.4	115.7	123.7	118.5	124.5
July	......	122.7	118.5	128.3	117.2	121.2	115.8	122.6	120.9	127.8	116.4	122.8	116.7	124.2	119.2	126.7	116.0	124.4	118.5	125.0
August	......	124.9	119.1	129.6	118.8	126.1	115.3	122.5	120.5	127.6	117.4	125.5	117.4	125.8	118.9	125.8	116.3	126.0	118.0	123.7
September	117.3	125.9	119.8	131.2	118.8	125.3	116.2	124.4	120.5	127.6	117.3	124.9	118.0	126.9	119.6	127.3	117.2	126.8	118.4	124.7
October	......	129.0	120.4	133.8	119.9	128.1	117.9	128.5	122.0	131.8	118.9	128.9	119.2	130.1	121.4	131.8	117.8	128.4	119.9	128.2
November	......	129.2	120.9	134.9	119.9	127.7	118.8	130.4	123.0	133.7	119.5	129.9	119.6	130.6	122.0	132.5	118.5	129.9	120.6	129.6
December	119.2	130.2	121.8	137.3	120.8	130.2	118.9	130.7	123.6	135.5	119.5	129.9	120.0	131.5	122.9	134.8	119.5	132.4	121.4	131.8
1943: January	......	132.5	122.6	139.1	121.3	131.4	118.9	130.5	124.7	137.3	119.8	129.9	119.9	131.0	123.1	134.6	119.6	132.6	121.0	130.0
February	......	133.1	122.3	137.9	121.4	131.7	118.9	130.4	125.0	138.1	120.6	132.1	120.0	131.1	123.8	135.9	120.3	133.9	122.2	132.3
March	123.0	137.7	124.8	144.0	122.8	134.8	120.6	134.1	126.4	141.2	122.3	135.9	122.0	135.1	125.5	139.5	121.8	137.2	124.0	135.7
April	......	140.3	126.7	148.6	125.5	141.0	121.8	137.1	127.4	144.0	123.5	138.6	123.4	138.2	126.2	141.4	122.5	139.0	125.0	137.4
May	......	142.9	128.2	152.6	125.8	140.7	122.3	138.1	128.8	147.8	124.5	141.1	123.8	138.3	128.0	146.3	124.4	143.8	127.3	143.4
June	125.2	143.9	128.1	152.5	126.4	141.9	121.8	136.8	127.8	145.2	124.1	140.0	124.3	139.2	129.2	149.5	123.5	141.0	126.8	141.6
July	......	141.5	126.0	146.3	126.2	140.9	120.3	132.5	126.2	140.5	122.5	137.1	124.0	137.9	127.9	145.0	122.7	138.4	126.0	138.8
August	......	139.2	125.6	145.2	126.6	141.3	120.0	131.1	125.4	137.9	122.9	136.4	124.0	137.6	128.0	145.2	121.1	134.5	124.6	134.8
Sept.	124.6	139.9	126.0	145.3	127.6	142.9	120.4	131.0	125.5	137.3	123.7	137.0	123.7	136.2	128.3	143.9	121.6	134.8	124.4	133.6
October	......	140.3	126.9	147.0	127.3	141.8	121.6	133.1	126.1	138.5	123.8	136.6	124.0	136.1	128.5	143.9	121.9	135.3	125.0	134.5
November	......	137.5	125.2	142.4	127.4	141.7	121.0	131.4	125.9	137.8	122.8	133.9	123.6	134.9	128.2	143.1	122.5	136.8	124.6	133.3
December	124.3	137.3	125.9	142.5	127.6	141.2	121.1	130.9	126.1	137.6	123.1	133.7	124.2	135.9	128.3	142.6	123.5	138.7	125.4	134.2

See footnotes at end of table.

TABLE D–2: Consumers' price index for moderate-income families in 39 United States cities and 4 Territories and Possessions[1], 1923–47—Continued

[1935–39 = 100, unless otherwise indicated]

Period	Atlanta, Ga.		Baltimore, Md.		Birmingham, Ala.		Boston, Mass.		Buffalo, N.Y.		Chicago, Ill.		Cincinnati, Ohio		Cleveland, Ohio		Denver, Colo.		Detroit, Mich.	
	All items	Food	All items	Food	All items	Food	All items	Food	All items	Food	All items	Food	All items	Food	All items	Food	All items	Food	All items	Food
1944: January	......	138.0	126.1	142.5	127.8	140.6	121.1	130.9	125.2	135.0	122.7	132.5	123.9	135.1	127.7	140.8	122.6	136.0	125.0	132.8
February	......	135.9	125.5	140.2	127.1	137.8	120.4	128.7	125.0	134.0	122.3	131.3	123.4	133.7	127.8	140.6	122.6	135.7	124.4	130.9
March	123.6	133.0	125.9	139.3	126.9	136.2	120.5	128.6	124.8	133.3	122.5	131.6	123.2	132.9	127.8	140.3	122.9	135.7	124.5	130.8
April	......	134.6	126.7	140.3	127.6	136.1	121.2	129.5	124.9	132.5	124.0	133.9	125.2	135.4	128.8	141.7	123.9	136.6	125.2	131.2
May	......	135.4	126.9	140.5	128.7	138.5	121.3	129.6	126.0	134.2	124.2	134.2	124.6	133.7	128.9	141.9	125.1	139.3	125.8	132.4
June	125.6	135.2	127.5	141.2	129.5	139.8	121.8	130.4	126.3	134.6	124.8	135.4	126.6	138.4	128.9	141.3	124.7	137.5	126.6	133.0
July	......	138.1	128.3	143.1	130.1	141.4	122.4	131.9	126.6	135.0	126.2	138.6	127.1	139.2	130.5	144.6	126.0	140.6	127.9	136.5
August	......	139.2	128.6	143.5	131.7	145.4	122.8	132.2	126.3	134.0	125.7	137.1	126.5	136.8	130.6	144.3	124.9	137.1	127.3	134.4
September	127.1	137.8	127.7	140.7	130.0	140.3	123.3	132.9	127.1	134.8	126.1	137.3	126.3	135.8	130.4	142.8	124.9	136.4	127.4	134.0
October	......	136.9	128.3	142.0	129.8	139.5	122.7	131.1	127.1	134.7	125.8	135.8	125.8	133.4	130.1	141.9	125.2	136.2	127.2	132.8
November	......	137.9	129.2	144.3	130.5	141.3	123.0	131.8	126.7	133.4	125.9	135.8	126.3	134.4	130.4	142.6	125.3	136.4	127.1	132.3
December	128.7	138.8	129.2	143.9	131.0	142.3	123.5	132.7	127.1	134.1	126.3	136.5	126.6	134.7	129.1	140.6	126.1	137.9	127.5	132.7
1945: January	......	139.7	129.8	145.2	131.3	142.8	123.6	132.8	127.4	135.5	126.0	135.3	127.0	135.5	129.8	140.8	126.2	137.8	127.5	132.4
February	......	137.8	130.0	145.2	130.5	140.6	123.3	132.1	127.6	136.3	125.7	134.5	126.7	134.6	129.7	140.1	125.9	136.9	127.5	131.7
March	128.7	136.9	129.8	144.1	130.3	139.8	122.9	130.6	127.2	135.2	126.0	135.0	126.5	134.1	129.7	139.6	126.0	136.9	127.3	131.4
April	......	137.3	130.0	144.9	131.0	141.1	123.0	130.8	127.1	134.7	126.5	136.2	127.0	135.0	130.1	140.7	126.5	137.9	127.8	132.1
May	......	138.3	131.0	146.9	131.4	141.4	123.9	133.0	127.8	137.1	127.9	139.5	128.0	137.5	131.7	144.6	128.4	141.8	129.1	135.0
June	130.1	140.6	132.9	151.4	132.2	143.7	125.5	136.8	129.4	140.2	128.2	140.2	129.4	140.6	132.3	146.4	128.4	142.0	130.8	139.2
July	......	142.1	133.0	150.4	133.5	146.9	125.8	136.6	129.3	138.9	128.5	140.7	129.5	140.8	132.2	145.8	127.8	139.8	130.8	138.3
August	......	142.1	132.6	149.1	133.9	147.5	125.7	135.7	129.4	138.4	127.9	139.2	129.3	140.0	132.1	145.6	127.7	139.3	131.2	138.4
September	131.5	141.5	132.3	148.1	133.0	144.1	124.6	133.4	128.5	135.3	127.5	137.5	128.9	138.2	131.4	142.7	126.6	136.1	130.8	136.8
October	......	140.5	132.1	147.5	133.1	144.2	124.5	133.3	128.6	135.6	127.6	137.8	129.3	139.0	131.7	143.3	126.8	138.0	130.7	136.4
November	......	141.0	131.9	147.5	133.0	143.8	124.6	133.8	129.4	136.7	127.4	137.8	(2)	137.7	131.9	143.8	126.8	137.9	131.0	137.5
December	131.4	141.6	132.5	148.1	133.5	145.2	124.9	134.5	129.8	137.6	128.0	139.3	129.5	138.7	132.3	144.8	128.3	141.7	131.3	138.3
1946: January	......	141.5	132.2	147.7	133.3	144.6	125.5	135.1	129.8	136.9	128.1	139.2	129.6	138.2	132.2	144.2	127.9	139.8	132.3	137.8
February	......	139.4	131.5	145.6	132.9	142.9	125.0	133.3	129.8	136.1	127.8	138.6	129.0	136.1	131.6	142.7	128.0	139.5	132.0	136.7
March	131.6	137.7	132.1	147.1	133.2	142.8	125.7	134.1	130.2	136.4	128.0	138.7	129.4	136.9	131.7	142.7	128.9	139.9	132.2	137.0
April	......	140.8	133.4	149.4	133.6	132.3	126.6	135.9	131.2	138.8	129.9	141.9	130.2	137.9	132.7	144.5	129.4	140.5	133.6	140.1
May	......	140.5	133.7	149.3	134.5	144.0	126.7	135.1	132.0	139.0	130.1	141.9	131.0	139.1	134.0	146.7	130.1	141.7	134.4	141.6
June	133.8	141.0	135.6	152.4	136.5	147.7	127.9	138.0	132.6	140.2	130.9	142.8	132.2	141.4	135.7	149.3	131.7	145.3	136.4	145.4
July	......	161.5	143.2	170.5	143.3	166.6	137.6	161.9	139.6	157.9	141.1	168.4	140.2	161.6	143.8	171.3	138.1	161.8	144.2	166.9
August	......	174.1	146.7	178.0	148.6	180.8	140.0	165.2	142.2	162.8	144.0	174.0	143.5	168.6	147.0	178.6	140.1	166.3	145.4	168.5
September	146.5	173.4	148.1	180.1	147.1	176.6	141.6	168.0	144.9	164.7	146.1	176.2	145.4	169.3	147.6	179.3	142.5	170.1	146.6	168.4
October	......	177.5	150.9	186.1	150.4	183.0	144.6	174.4	146.5	168.4	149.5	183.4	146.5	171.3	149.5	183.1	143.7	171.4	148.8	173.9
November	......	192.0	154.9	195.1	157.9	203.5	146.1	177.8	149.6	175.4	152.5	189.4	152.9	187.0	154.0	193.1	151.9	192.7	152.0	181.6
December	155.8	188.7	155.7	192.3	158.5	198.4	148.2	178.1	151.7	175.8	153.0	187.0	152.7	184.0	156.2	191.4	152.5	190.6	153.1	179.2
1947: January	......	187.5	156.2	191.4	158.7	196.0	148.7	177.6	152.7	175.9	153.0	184.5	152.6	182.4	156.1	189.1	151.4	185.0	153.0	176.5
February	......	187.5	155.9	189.7	158.1	193.5	147.4	172.7	152.4	173.3	152.8	183.2	153.2	182.8	155.9	186.9	152.2	185.7	153.1	175.1
March	160.9	199.6	159.6	199.3	162.0	202.9	150.3	180.0	155.3	179.7	156.2	190.8	157.0	191.3	159.2	195.1	154.8	191.4	156.5	183.0
April	......	194.6	159.7	197.7	161.7	198.8	149.4	176.3	155.3	179.2	155.7	188.6	157.2	188.9	159.2	195.0	155.8	192.4	156.7	182.7
May	......	190.3	159.4	198.5	160.7	195.8	148.6	175.6	156.2	182.5	156.8	190.6	156.8	187.9	159.0	194.3	155.8	191.9	156.8	182.7
June	159.1	193.0	160.5	202.2	162.1	197.3	150.3	179.6	157.7	187.0	158.3	193.9	158.5	191.1	160.3	198.3	155.9	191.9	158.7	188.5
July	......	194.5	......	204.6	164.1	201.8	151.9	183.5	159.1	188.7	160.1	198.4	160.4	194.3	......	199.7	155.7	191.6	160.2	191.4
August	162.2	198.9	......	206.9	166.6	204.8	154.5	187.9	......	192.4	162.7	203.1	162.2	198.3	163.0	204.3	......	195.8	162.8	195.5
September	......	209.4	167.8	212.8	169.1	210.9	158.6	195.3	......	196.5	168.3	211.0	166.3	206.7	......	211.0	......	199.0	164.2	197.4
October	......	211.1	......	211.5	169.7	210.7	157.5	191.8	162.6	193.3	167.3	207.1	167.1	206.9	......	208.7	160.4	197.2	166.7	199.0
November	167.5	206.9	......	211.8	171.6	212.7	158.3	192.4	......	194.8	168.3	207.8	167.1	204.2	166.9	206.1	......	201.0	166.6	196.7
December	......	211.1	171.3	217.8	173.8	217.0	160.4	195.7	......	200.3	170.1	210.5	170.3	211.6	......	212.3	......	205.6	169.0	202.0

See footnotes at end of table.

TABLE D-2: Consumers' price index for moderate-income families in 39 United States cities and 4 Territories and Possessions[1], 1923-47—Continued

[1935-39 = 100, unless otherwise indicated]

Period	Houston, Texas		Indianapolis, Ind.		Jacksonville, Fla.		Kansas City, Mo.		Los Angeles, Calif.		Manchester, N.H.		Memphis, Tenn.		Milwaukee, Wisc.		Minneapolis, Minn.		Mobile, Ala.	
	All items	Food	All items	Food	All items	Food	All items	Food	All items	Food	All items	Food	All items	Food	All items	Food	All items	Food	All items	Food
1923	121.8	124.5	123.7	126.0	127.2	129.3	122.5	119.2	132.5	132.2	......	124.1	125.6	128.3	......	120.2	118.4	114.9	121.4	130.0
1924	121.2	124.7	123.1	124.8	127.5	129.7	121.2	119.3	133.2	133.7	......	119.1	124.6	126.8	......	121.3	117.5	113.9	121.6	129.1
1925	123.7	136.9	125.8	134.9	132.1	141.9	123.4	131.7	133.5	141.4	......	126.0	127.0	140.3	......	127.3	118.8	122.5	125.2	142.0
1926	122.6	135.6	126.8	143.2	140.8	153.3	123.1	135.5	129.9	140.0	......	132.6	127.1	145.5	......	134.0	120.2	129.1	128.4	149.5
1927	120.3	129.7	123.3	135.5	134.7	139.0	119.1	127.4	127.5	136.3	......	127.3	123.5	136.9	......	128.9	116.9	123.1	126.1	142.6
1928	119.2	127.1	121.7	133.9	128.5	133.5	117.4	126.2	125.5	134.0	......	126.5	121.6	135.2	......	127.8	115.8	122.0	125.4	138.9
1929	119.7	130.1	122.2	138.3	125.0	131.8	117.7	129.8	125.1	136.2	......	127.0	121.7	138.0	......	131.6	116.5	125.0	124.5	136.5
1930	116.8	124.3	119.3	132.5	120.0	128.3	115.8	124.5	121.0	127.8	......	120.9	119.4	132.4	......	125.5	114.3	119.5	121.8	132.5
1931	106.2	98.5	106.5	104.6	108.4	104.8	108.5	102.3	109.0	102.0	......	99.7	106.6	103.1	......	102.7	105.9	98.4	108.8	106.4
1932	94.5	80.3	95.1	85.5	96.5	84.8	97.7	84.2	98.5	86.5	......	82.9	95.2	86.8	......	87.1	96.1	80.3	96.7	85.5
1933	90.0	80.5	91.2	84.4	92.0	81.9	93.2	83.3	92.9	87.6	......	82.6	91.0	85.1	......	84.6	90.8	78.4	92.5	83.1
1934	94.4	91.6	95.1	93.0	96.9	93.0	96.0	93.0	93.6	92.9	......	91.7	96.1	96.1	......	92.6	94.2	91.0	96.4	92.2
1935	97.2	99.6	97.9	100.6	98.8	99.9	98.4	101.4	96.4	100.3	......	99.9	98.6	103.3	......	99.0	96.8	99.2	98.8	100.2
1936	98.2	99.9	99.0	101.9	99.4	100.9	99.1	101.2	97.6	99.9	......	101.9	99.4	102.0	......	101.5	98.5	100.8	98.6	100.3
1937	102.1	103.9	103.0	106.5	102.8	104.1	102.5	105.6	103.1	106.0	......	104.2	102.9	105.8	......	107.0	102.8	104.9	102.6	105.5
1938	101.6	98.7	101.1	97.6	100.1	98.4	100.7	97.5	101.8	97.7	......	97.9	100.3	96.1	......	98.6	101.4	97.9	100.5	97.7
1939	100.8	97.8	99.1	93.5	98.9	96.7	99.4	94.3	101.0	96.2	......	96.1	98.8	92.7	98.4	93.7	100.5	97.2	99.5	96.3
1940	101.2	99.4	100.3	95.8	100.1	98.6	98.4	91.8	101.1	97.1	100.1	97.9	98.9	93.3	98.7	95.0	100.8	97.2	99.2	96.9
1941	105.7	108.9	106.7	106.3	107.4	108.6	102.8	101.2	106.2	107.7	105.2	104.8	104.7	103.8	103.9	104.0	106.0	106.6	107.2	109.0
1942	116.6	127.6	118.4	125.2	120.1	130.3	114.2	119.4	119.3	131.9	118.4	124.0	117.5	125.8	114.7	120.7	115.9	121.8	120.4	131.0
1943	122.7	139.0	124.5	135.5	129.4	147.6	121.1	133.0	125.4	143.3	126.3	136.4	126.7	145.5	121.3	134.9	121.0	132.0	126.7	146.6
1944	123.9	136.2	126.3	133.0	132.0	144.7	123.4	130.6	127.3	141.2	127.6	132.9	128.9	144.6	123.3	134.2	122.2	129.6	127.8	144.5
1945	126.4	138.7	129.0	135.4	135.9	148.2	126.6	133.0	130.9	145.6	130.2	135.2	131.4	148.1	126.0	137.4	124.4	132.0	129.7	147.1
1946	136.3	158.3	138.7	156.5	144.1	166.5	135.3	150.7	141.0	166.6	140.2	156.6	140.5	171.3	136.0	156.5	135.5	153.0	138.9	164.5
1941: January	101.9	102.6	......	98.2	......	98.8	98.3	92.4	102.8	101.8	......	96.6	......	94.2	......	95.9	101.5	99.0	......	97.9
February	101.9	102.1	......	97.9	......	99.2	98.6	93.6	101.8	99.0	......	96.7	......	94.8	......	95.4	101.9	100.5	......	98.2
March	102.3	102.1	102.2	98.8	102.4	99.0	99.2	94.8	102.5	100.8	100.1	97.2	100.2	95.7	99.5	96.3	102.1	100.2	101.7	99.8
April	103.2	104.2	......	101.1	....	101.7	100.2	97.4	103.2	102.7	......	99.5	......	98.2	......	99.2	102.7	101.5	......	102.9
May	103.5	105.0	......	103.5	......	103.1	100.4	97.9	104.3	105.2	......	101.3	......	99.8	......	101.1	103.9	103.1	......	104.2
June	104.0	106.4	105.6	106.5	106.1	107.6	101.8	101.3	105.6	107.7	104.4	104.6	103.5	103.3	103.6	106.5	105.6	107.4	105.1	106.6
July	105.0	108.7	......	106.9	......	111.4	102.2	101.2	105.7	107.2	......	107.1	......	105.7	......	106.8	106.3	108.2	......	110.4
August	105.8	109.5	......	108.5	......	113.6	103.2	101.8	106.6	109.3	......	108.4	......	106.4	......	107.1	107.3	110.0	......	112.3
September	107.9	113.1	109.7	111.3	110.6	114.6	105.4	107.3	108.1	111.9	108.9	110.4	108.3	110.6	106.8	109.2	109.0	112.0	110.7	116.0
October	110.1	116.6	......	112.6	......	117.5	107.1	107.1	109.8	112.4	......	110.9	......	111.3	......	109.2	110.1	112.5	......	118.9
November	111.2	118.6	......	114.9	......	119.2	108.3	109.6	111.1	115.4	......	112.8	......	112.3	......	111.3	110.7	112.9	......	120.2
December	111.4	117.9	113.3	115.2	114.3	117.3	108.7	109.7	112.3	118.6	110.7	111.7	111.1	113.1	109.4	110.5	110.7	111.9	116.4	120.7
1942: January	112.5	120.1	......	118.1	......	120.2	109.8	112.2	113.5	120.6	......	114.5	......	115.3	......	113.3	111.9	114.9	......	124.0
February	114.0	122.5	......	119.6	......	121.3	111.1	112.7	114.5	121.4	......	116.5	......	116.1	......	114.3	112.7	115.4	......	125.3
March	115.3	124.6	117.2	120.8	118.0	124.3	112.9	116.5	116.5	124.9	115.6	118.7	114.8	117.8	112.7	116.0	114.3	117.3	121.4	130.7
April	115.7	124.6	......	122.8	......	126.1	113.7	117.2	117.1	125.2	......	119.5	......	120.8	......	117.9	114.7	118.0	......	129.1
May	116.2	125.9	......	125.0	......	127.4	114.1	118.8	118.1	128.1	......	124.0	......	123.5	......	119.8	115.9	120.9	......	126.8
June	115.7	124.9	119.2	125.7	119.9	129.3	114.1	119.0	118.6	129.8	119.1	125.3	117.4	124.1	115.7	122.0	115.9	121.4	118.6	128.4
July	116.7	128.2	......	125.5	......	133.1	113.8	118.3	120.0	133.6	......	126.0	......	125.5	......	122.0	116.1	122.1	......	130.0
August	117.6	130.0	......	126.9	......	134.9	114.9	121.2	121.2	136.8	......	125.2	......	132.1	......	121.7	116.4	122.9	......	131.4
September	118.0	130.8	119.1	127.1	121.5	134.2	114.7	120.7	121.7	137.9	120.2	126.8	119.3	129.7	115.3	121.0	116.8	123.3	120.9	133.9
October	118.8	132.9	......	129.2	......	137.7	116.4	124.0	122.7	140.0	......	128.8	......	132.6	......	125.2	118.0	126.6	......	136.8
November	118.8	132.4	......	129.7	......	137.1	117.0	125.0	123.4	141.5	......	130.0	......	134.4	......	126.8	118.9	128.9	......	137.6
December	119.5	134.4	120.9	131.4	123.3	138.3	117.7	127.2	123.9	142.8	122.8	132.3	122.3	137.1	118.2	128.6	119.2	129.9	123.0	138.3
1943: January	119.6	134.8	......	131.3	......	139.7	117.8	127.3	123.7	141.8	......	133.4	......	137.2	......	129.0	119.0	129.1	......	139.5
February	120.8	137.9	......	131.2	......	140.1	118.7	129.4	122.9	139.5	......	134.4	......	139.6	......	131.1	119.6	130.7	......	140.4
March	123.5	142.7	123.5	134.8	127.0	146.0	120.7	133.7	124.6	142.8	126.2	137.8	125.6	144.8	120.7	134.2	121.0	133.0	126.0	145.6
April	124.0	143.4	......	138.0	......	153.4	122.2	137.4	125.9	146.2	......	139.2	......	149.2	......	137.4	121.0	133.5	......	150.5
May	124.4	143.7	......	140.2	......	151.5	122.5	137.9	125.8	146.2	......	142.3	......	150.1	......	141.9	121.8	134.9	......	149.9
June	123.2	140.0	126.2	140.3	130.7	151.7	121.8	135.8	126.3	146.8	128.5	143.4	127.0	148.3	122.7	138.7	121.9	134.1	128.3	149.8
July	122.3	137.4	......	137.0	......	152.5	120.8	132.0	125.2	142.4	......	136.6	......	147.7	......	136.2	121.0	131.3	......	148.6
August	122.0	136.2	......	135.1	......	150.9	120.8	131.7	124.7	141.1	......	133.7	......	148.0	......	134.4	120.8	130.4	......	149.7
September	123.3	138.7	124.7	134.6	131.9	150.0	121.3	132.6	125.4	141.8	125.5	133.9	128.4	148.2	121.4	133.6	121.0	130.4	127.1	147.9
October	123.4	138.4	......	135.4	......	146.8	121.8	132.6	126.3	143.3	......	134.5	......	144.4	......	135.4	121.7	132.3	......	147.5
November	123.1	137.3	......	134.0	......	144.9	121.9	132.7	126.8	144.4	......	133.8	......	143.9	......	134.0	121.7	132.2	......	145.4
December	123.3	137.3	124.8	134.4	130.4	144.2	122.4	132.7	126.6	143.3	126.4	133.8	127.7	144.5	121.5	132.9	122.1	132.3	126.5	144.9

See footnotes at end of table.

TABLE D-2: Consumers' price index for moderate-income families in 39 United States cities and 4 Territories and Possessions[1], 1923-47—Continued

[1935-39 = 100, unless otherwise indicated]

Period	Houston, Texas		Indianapolis, Ind.		Jacksonville, Fla.		Kansas City, Mo.		Los Angeles, Calif.		Manchester, N.H.		Memphis, Tenn.		Milwaukee, Wisc.		Minneapolis, Minn.		Mobile, Ala.	
	All items	Food	All items	Food	All items	Food	All items	Food	All items	Food	All items	Food	All items	Food	All items	Food	All items	Food	All items	Food
1944: January	123.4	137.5	......	133.3	......	145.8	121.9	130.3	126.3	142.0	......	132.5	......	146.0	......	130.5	120.8	128.3	......	145.5
February	122.9	135.9	......	131.9	......	143.3	121.9	129.8	125.8	140.5	......	131.4	......	142.6	......	131.0	121.1	128.9	......	144.2
March	122.6	134.9	124.4	131.0	129.1	139.6	122.1	129.8	126.2	140.9	126.3	132.0	126.9	141.0	121.6	131.9	121.3	128.7	126.4	142.7
April	123.2	135.3	......	132.1	......	141.4	122.9	130.1	126.0	138.6	......	130.8	......	141.3	......	132.1	121.7	128.9	......	143.4
May	123.8	135.9	......	132.2	......	143.0	123.6	131.4	127.6	142.0	......	131.7	......	143.0	......	134.4	122.2	129.5	......	143.4
June	123.6	135.0	126.2	132.6	131.7	142.9	123.5	130.5	126.8	139.2	126.8	130.9	129.2	144.7	123.8	135.5	122.2	129.0	127.2	142.1
July	124.3	137.0	......	134.6	......	144.8	124.2	132.5	126.6	138.5	......	135.3	......	146.1	......	137.4	123.0	131.3	......	144.4
August	124.7	137.8	......	134.4	......	148.9	123.9	131.2	127.6	141.1	......	135.0	......	148.3	......	136.4	122.7	130.5	......	147.1
September	124.8	137.5	127.6	134.3	134.1	148.1	124.3	130.9	128.0	141.4	129.0	134.2	130.2	146.5	124.3	135.5	122.6	129.7	129.4	146.6
October	124.6	136.6	......	132.7	......	146.1	124.0	129.7	128.7	143.0	......	133.4	......	144.9	......	135.7	123.0	130.4	......	145.4
November	124.0	134.6	......	133.1	......	145.9	124.2	130.3	128.8	143.3	......	133.6	......	144.9	......	135.2	122.9	130.0	......	145.0
December	124.7	135.9	128.0	133.8	134.4	146.8	124.8	131.0	129.1	143.9	129.3	133.6	130.2	145.6	124.3	135.2	123.2	130.4	128.9	144.6
1945: January	125.2	136.5	......	134.0	......	146.3	125.1	131.6	129.2	143.4	......	134.0	......	147.1	......	135.2	123.3	130.7	......	143.8
February	124.8	135.4	......	132.7	......	144.9	125.1	130.6	128.7	141.8	......	133.5	......	145.4	......	133.8	123.2	129.7	......	143.8
March	124.8	134.8	127.5	132.1	133.6	142.8	125.1	130.3	129.2	142.7	128.9	132.7	129.8	144.4	124.2	133.8	123.1	129.3	128.4	143.9
April	125.6	136.7	......	133.3	......	145.5	125.6	131.5	130.0	144.4	......	132.7	......	145.2	......	134.3	123.2	129.5	......	144.9
May	126.2	138.4	......	135.1	......	146.4	126.3	132.4	130.3	144.5	......	133.9	......	146.9	......	138.1	123.9	131.2	......	144.9
June	126.7	139.5	129.5	137.4	135.6	147.5	127.1	134.4	130.5	144.8	131.3	137.4	132.0	149.8	127.0	141.0	124.6	133.0	129.3	145.9
July	127.5	141.6	......	136.8	......	152.4	127.4	135.0	130.6	145.2	......	139.4	......	150.7	......	140.6	125.0	133.7	......	151.1
August	127.4	141.2	......	137.7	......	152.0	127.6	135.4	131.0	145.9	......	136.4	......	150.9	......	139.4	124.9	133.2	......	152.3
September	127.6	140.5	129.5	136.0	138.2	151.9	127.0	132.8	132.0	147.2	130.0	134.9	131.6	148.1	126.6	137.8	125.1	132.6	130.6	148.9
October	127.2	139.7	......	136.0	......	149.0	127.0	132.9	132.3	147.2	......	134.6	......	148.6	......	137.4	125.2	132.6	......	148.1
November	127.0	139.5	......	136.3	......	149.5	127.4	133.8	133.0	149.2	......	136.1	......	148.8	......	137.8	125.6	133.7	......	148.4
December	127.3	140.9	130.4	137.7	137.4	150.7	128.0	135.3	133.7	150.9	131.0	137.3	133.3	151.8	127.2	139.1	126.1	135.1	131.1	148.9
1946: January	127.2	140.8	......	138.0	......	149.9	127.9	134.5	132.7	148.6	......	136.7	......	151.2	......	137.5	126.3	134.3	......	147.9
February	126.8	139.3	......	135.6	......	145.8	127.3	132.6	132.5	148.4	......	135.8	......	149.2	......	136.3	126.0	132.5	......	147.9
March	127.6	139.3	130.0	136.0	136.1	146.5	127.7	133.6	133.1	148.9	131.0	136.4	132.5	148.8	127.1	136.5	126.1	131.8	131.3	147.7
April	128.0	139.7	......	137.7	......	148.0	128.5	134.0	133.4	149.0	......	137.8	......	149.8	......	138.3	126.5	133.0	......	148.6
May	128.5	139.7	......	138.6	......	147.3	129.0	134.9	134.3	150.7	......	139.2	......	151.7	......	140.8	127.5	134.9	......	148.3
June	130.5	144.0	131.9	141.5	138.4	150.8	129.4	134.8	136.1	154.8	134.7	144.4	134.5	153.6	131.2	144.3	129.4	137.5	132.9	149.8
July	136.6	160.4	......	159.9	......	170.6	136.4	154.4	142.3	171.2	......	161.5	......	174.6	......	167.4	138.0	160.9	......	163.8
August	140.7	168.8	......	170.8	......	181.5	140.4	164.3	144.6	175.1	......	168.7	......	187.5	......	168.3	139.5	163.3	......	175.5
September	142.8	173.5	146.1	172.4	150.2	180.7	141.1	165.3	145.5	176.5	147.0	170.0	146.2	185.3	142.8	170.3	142.4	167.9	145.2	176.4
October	144.2	174.7	......	175.9	......	182.5	142.1	166.6	148.5	182.8	......	176.9	......	191.0	......	174.8	145.9	177.6	......	182.8
November	150.0	190.0	......	187.3	......	199.1	146.8	178.0	154.5	198.1	......	185.6	......	207.3	......	184.1	148.8	181.7	......	193.8
December	152.3	189.9	154.2	184.3	158.8	194.8	147.0	175.4	154.5	195.1	156.5	186.7	156.3	206.0	150.6	179.7	149.7	180.2	153.6	191.0
1947: January	153.9	192.5	......	180.0	......	190.3	147.7	175.4	155.3	194.3	......	183.6	......	200.2	......	178.0	148.3	174.0	......	189.2
February	154.1	190.6	......	179.9	......	189.3	148.7	176.6	155.9	194.1	......	177.5	......	198.6	......	180.1	149.0	174.6	......	188.7
March	157.1	196.3	157.5	187.8	163.4	198.8	150.8	182.3	156.9	195.5	158.1	186.8	158.8	205.1	154.5	186.9	151.6	181.3	159.2	199.6
April	158.6	199.2	......	187.9	......	199.7	151.0	182.7	157.4	195.7	......	184.0	......	204.6	......	185.4	151.4	179.6	......	201.6
May	157.6	197.1	......	185.1	......	196.0	150.5	180.7	157.6	196.7	......	185.1	......	201.6	......	186.6	151.5	179.0	......	197.0
June	157.6	196.2	158.0	188.7	163.5	199.1	149.5	180.0	156.3	193.8	160.4	190.3	160.6	205.1	156.6	190.8	152.9	182.6	159.3	196.9
July	158.4	198.7	159.5	191.7	......	201.8	150.5	181.3	157.2	193.8	162.1	192.6	......	210.1	......	193.4	......	182.5	......	198.6
August	159.7	200.8	......	195.5	......	205.0	......	183.5	157.8	195.4	......	196.8	......	213.5	159.0	196.8	......	187.4	......	200.8
September	162.1	206.4	......	203.0	168.5	209.1	......	193.5	161.6	204.2	......	201.3	169.0	220.5	......	200.1	162.1	197.2	164.3	206.8
October	163.4	208.7	167.8	204.5	......	214.7	157.9	193.5	161.3	201.9	166.1	198.0	......	223.6	......	197.6	......	194.6	......	209.3
November	165.8	210.2	......	204.3	......	211.0	......	194.2	164.1	206.7	......	199.0	......	226.2	164.0	200.7	......	193.7	......	206.8
December	169.3	218.1	......	208.8	173.9	216.6	......	197.3	166.0	211.1	......	204.7	173.5	229.7	......	204.6	166.2	199.3	170.3	216.3

See footnotes at end of table.

TABLE D-2: Consumers' price index for moderate-income families in 39 United States cities and 4 Territories and Possessions[1], 1923–47—Continued

[1935-39 = 100, unless otherwise indicated]

Period	New Orleans, La.		New York, N.Y.		Norfolk, Va.		Philadelphia, Pa.		Pittsburgh, Pa.		Portland, Maine		Portland, Oreg.		Richmond, Va.		St. Louis, Mo.		SanFrancisco, Calif.	
	All items	Food	All items	Food	All items	Food	All items	Food	All items	Food	All items	Food	All items	Food	All items	Food	All items	Food	All items	Food
1923	120.1	116.0	119.9	127.0	121.8	123.3	121.4	121.9	122.3	125.2	118.4	129.7	123.0	121.6	119.4	131.5	119.6	113.8	116.4	118.2
1924	120.0	116.7	119.9	124.3	120.4	122.2	122.1	119.3	123.6	124.0	117.2	126.4	122.7	123.3	118.7	127.7	120.6	114.5	116.4	119.4
1925	122.2	124.0	123.2	132.3	122.9	137.0	126.8	131.5	127.6	133.9	119.6	135.6	123.0	129.4	122.4	140.9	124.7	127.4	119.8	129.9
1926	122.2	124.7	124.4	135.9	124.3	145.1	129.2	137.3	128.7	138.9	121.2	142.1	122.1	128.5	125.3	147.6	126.3	132.2	119.3	128.9
1927	121.4	122.9	123.1	132.7	122.6	139.4	126.3	131.7	126.4	134.1	118.8	136.0	120.5	126.8	121.1	137.2	124.1	127.1	118.3	126.3
1928	120.1	122.0	122.4	132.0	121.4	136.1	124.3	130.8	125.4	132.8	118.6	136.2	118.4	125.9	119.2	134.6	121.6	123.7	117.8	125.5
1929	119.6	124.3	122.6	133.4	121.7	138.0	122.9	130.3	125.4	135.4	119.3	137.3	117.4	128.1	118.3	133.9	122.7	128.1	118.2	127.8
1930	116.2	118.6	119.4	126.2	118.9	131.9	119.6	123.6	121.3	126.5	116.4	128.9	114.9	121.3	116.5	129.5	120.3	121.9	115.4	124.3
1931	103.9	96.5	110.4	107.6	108.2	106.2	109.8	105.3	110.0	102.9	108.4	108.8	104.0	96.9	106.6	103.6	107.6	98.2	105.7	102.6
1932	95.8	84.0	101.0	92.5	97.8	88.6	97.8	86.5	97.7	83.9	99.6	90.9	94.8	84.7	96.9	85.4	96.4	80.4	97.5	89.5
1933	92.0	81.3	95.2	88.4	92.8	82.7	92.9	83.5	91.7	81.6	95.9	88.3	89.7	80.5	92.7	83.8	91.8	79.9	93.7	87.7
1934	95.7	89.1	98.1	97.3	97.7	93.9	98.1	96.4	95.1	92.3	99.5	97.2	92.9	87.4	96.7	94.4	95.4	89.6	96.4	94.4
1935	99.0	100.6	99.2	100.6	99.8	101.6	98.8	100.1	97.9	100.2	100.4	102.2	96.1	96.7	99.0	101.5	98.5	99.7	98.6	100.8
1936	98.9	100.2	99.4	101.0	100.1	102.4	100.1	102.5	99.3	101.4	100.5	102.5	98.0	99.8	100.1	103.6	99.5	101.2	98.1	100.3
1937	102.0	103.4	102.0	104.1	102.2	105.0	102.5	105.7	103.1	106.4	102.6	105.6	103.0	105.6	102.3	105.4	102.7	105.2	101.8	104.4
1938	100.0	97.7	100.0	97.8	99.6	96.7	100.1	97.2	100.9	98.5	99.1	96.2	102.0	99.7	100.1	96.5	100.3	98.2	101.4	98.5
1939	100.0	98.1	99.5	96.5	98.3	94.2	98.5	94.4	98.8	93.5	97.4	93.6	100.9	98.3	98.6	92.9	99.0	95.7	100.2	96.0
1940	101.4	100.7	100.8	98.6	98.9	95.0	98.7	94.1	100.1	96.1	98.2	94.7	100.9	99.2	99.0	92.8	99.6	96.8	100.4	96.5
1941	107.1	110.7	104.7	106.0	107.5	107.4	103.6	102.4	105.5	106.2	103.3	103.5	107.3	111.5	104.2	103.4	104.8	107.5	105.9	107.0
1942	119.6	132.9	114.7	122.2	121.1	129.3	115.3	121.3	116.2	123.4	116.0	122.8	122.1	135.5	115.7	123.2	116.1	126.1	118.7	128.5
1943	129.4	151.7	123.1	138.5	129.8	147.6	122.7	135.8	123.7	137.8	122.8	135.2	129.2	147.3	121.7	137.1	122.4	139.6	126.4	143.4
1944	130.1	149.6	126.2	137.2	130.5	143.1	124.4	134.0	126.3	135.6	124.3	132.9	130.7	144.8	122.7	134.1	124.2	138.5	129.4	143.8
1945	132.7	153.3	129.1	140.1	132.5	143.8	127.4	137.1	129.4	138.6	125.9	133.6	135.0	149.5	125.3	136.4	126.5	141.4	132.9	148.2
1946	144.8	173.8	141.7	162.3	141.9	164.6	138.4	156.8	140.6	160.8	134.6	153.3	144.5	169.0	133.9	155.1	137.4	162.4	143.7	170.1
1941: January	......	101.9	101.1	99.5	......	95.8	99.3	95.0	101.2	98.0	......	95.3	......	101.7	......	93.7	100.9	99.2	102.1	99.6
February	......	102.0	101.3	100.4	......	99.5	99.2	94.9	100.8	97.5	......	96.0	......	101.6	......	94.7	100.8	99.3	102.2	99.6
March	102.4	102.9	101.5	99.8	102.6	100.6	99.6	95.2	101.4	98.5	98.8	95.9	102.7	102.8	100.0	94.9	101.1	99.5	102.4	100.6
April	......	105.9	102.3	101.6	......	102.1	100.5	97.0	102.3	101.1	......	98.6	......	105.5	......	97.9	101.9	101.4	103.5	103.5
May	......	105.2	102.6	102.3	......	102.1	101.7	100.1	103.4	103.6	......	100.7	......	106.8	......	97.8	102.1	102.4	104.2	104.9
June	105.6	108.6	104.5	106.7	106.4	107.0	103.3	103.3	105.2	107.3	102.8	104.2	106.2	110.2	103.0	102.9	104.1	107.2	105.4	107.1
July	......	112.0	104.8	107.0	......	108.4	103.7	103.3	106.2	108.7	......	106.3	......	111.5	......	105.1	104.6	108.5	105.7	107.2
August	......	114.7	105.5	107.8	......	110.8	104.7	104.7	106.8	109.0	......	107.9	......	114.3	......	107.5	105.1	109.4	106.3	108.3
September	110.9	117.4	106.8	109.8	110.9	113.1	106.7	107.5	108.7	111.9	106.2	109.2	111.0	119.9	107.4	109.9	107.8	114.5	107.8	111.0
October	......	118.8	108.0	111.4	......	115.2	108.0	109.0	109.4	111.8	......	109.3	.....	120.3	......	112.3	108.7	114.6	109.4	112.6
November	......	118.7	108.7	113.1	......	116.7	108.3	108.7	110.2	112.9	......	111.2	......	121.7	......	111.8	109.8	117.0	110.6	114.4
December	113.5	119.9	108.7	112.5	115.3	117.6	108.8	109.8	110.8	113.7	108.7	110.7	113.7	121.3	110.1	112.6	110.6	117.5	111.3	115.4
1942: January	......	123.0	110.3	115.4	......	121.1	110.6	113.9	112.1	116.9	......	112.4	......	125.8	......	115.7	111.8	119.8	113.9	120.7
February	......	126.2	111.0	115.8	......	123.6	111.2	114.5	112.8	116.3	......	115.5	......	127.0	......	117.4	112.9	119.9	114.2	120.1
March	117.6	128.0	112.0	116.5	120.5	126.7	112.7	115.5	113.8	117.8	112.9	117.1	119.1	129.7	113.4	118.4	114.8	122.9	115.7	121.9
April	......	130.0	112.6	116.6	......	126.4	113.8	117.5	113.9	117.7	......	117.6	......	129.6	......	119.2	115.4	123.8	117.0	123.6
May	......	129.0	113.3	118.0	......	126.1	114.7	119.4	115.8	121.4	......	121.7	......	134.5	......	120.9	115.6	123.8	117.6	125.5
June	118.3	128.9	114.2	120.4	120.3	128.5	114.9	119.7	115.9	124.7	116.7	122.9	122.1	134.6	115.8	122.9	116.6	125.9	117.9	126.1
July	......	133.2	115.2	122.8	......	129.8	116.3	122.9	116.6	124.1	......	124.4	......	135.2	......	123.6	116.3	126.0	118.3	126.6
August	......	135.6	116.2	125.1	......	131.6	116.7	124.0	116.7	125.0	......	125.8	......	137.8	......	125.6	117.4	129.0	119.6	130.2
September	121.6	135.9	116.3	125.2	122.1	131.9	116.9	123.9	117.5	125.9	118.0	125.8	124.9	141.2	117.2	126.2	116.6	126.7	120.9	133.5
October	......	141.4	117.4	128.0	......	134.0	117.7	125.8	118.8	129.4	......	128.5	......	142.2	......	128.2	117.9	129.9	121.7	134.6
November	......	140.7	118.5	130.2	......	135.4	118.8	128.2	119.2	129.6	......	130.0	......	143.0	......	128.9	118.4	130.8	123.6	139.3
December	124.7	142.9	119.3	132.3	124.4	136.4	119.7	130.5	120.0	131.6	120.1	131.3	126.8	145.9	119.3	131.3	119.8	134.4	124.0	140.1
1943: January	......	144.8	119.8	133.1	......	139.2	119.9	130.2	120.7	133.4	......	131.7	......	146.4	......	132.4	119.3	133.1	124.5	141.3
February	......	147.0	120.2	133.4	......	140.9	119.7	129.6	120.8	133.8	......	132.3	......	147.0	......	132.8	119.9	134.4	124.6	141.7
March	130.1	153.2	122.0	138.0	128.6	144.5	121.4	133.5	122.6	137.2	122.1	134.4	128.7	148.5	121.2	135.8	121.8	138.9	126.1	143.7
April	......	160.7	122.8	139.9	......	152.0	124.3	140.5	123.7	139.4	......	137.3	......	150.3	......	142.4	123.1	142.4	128.5	149.7
May	......	152.5	124.2	143.3	......	153.3	124.8	141.6	124.9	142.4	......	140.3	......	153.6	......	141.5	124.0	144.7	128.1	148.0
Juno	129.6	152.2	123.8	141.4	131.4	151.7	123.8	139.2	124.9	142.3	124.5	140.6	130.7	152.1	122.6	139.6	123.7	143.5	128.7	149.8
July	......	153.8	123.7	140.5	......	150.4	122.6	135.8	123.9	138.9	......	136.1	......	145.7	......	136.9	123.2	141.6	125.3	140.0
August	......	153.3	122.8	137.2	......	151.1	122.5	135.3	123.8	137.8	......	133.6	......	144.7	......	137.0	122.7	140.2	124.3	137.3
September	130.3	151.7	124.0	138.4	131.1	149.7	122.7	135.2	124.4	137.4	122.4	132.7	129.0	144.8	122.0	136.7	122.6	139.1	125.6	139.9
October	......	152.1	124.5	138.7	......	148.3	123.6	137.1	125.0	138.2	......	134.3	......	144.6	......	137.1	122.7	139.1	126.8	142.4
November	......	149.9	124.8	139.3	......	144.8	123.0	135.4	125.1	138.0	......	134.5	......	145.0	......	136.5	122.9	138.7	127.4	143.7
December	129.3	149.0	125.1	139.1	130.2	145.1	123.6	136.1	124.4	135.1	123.5	134.4	129.5	144.9	122.1	136.0	123.3	139.3	127.5	143.7

See footnotes at end of table.

TABLE D-2: Consumers' price index for moderate-income families in 39 United States cities and 4 Territories and Possessions[1], 1923–47—Continued

[1935–39 = 100, unless otherwise indicated]

Period	New Orleans, La.		New York, N.Y.		Norfolk, Va.		Philadelphia, Pa.		Pittsburgh, Pa.		Portland, Maine		Portland, Oreg.		Richmond, Va.		St. Louis, Mo.		San Francisco, Calif.	
	All items	Food	All items	Food	All items	Food	All items	Food	All items	Food	All items	Food	All items	Food	All items	Food	All items	Food	All items	Food
1944: January	......	149.9	124.7	138.0	......	145.1	123.4	135.0	124.4	134.6	......	132.3	......	142.5	......	134.7	122.9	137.9	127.6	143.6
February	......	148.4	124.2	135.4	......	145.0	123.0	133.3	124.0	133.1	......	132.0	......	142.8	......	133.0	122.3	136.0	127.0	141.6
March	128.8	147.2	124.7	135.7	130.0	143.7	122.7	131.9	124.3	132.9	122.9	131.6	129.4	143.3	121.2	131.8	122.5	135.9	127.4	142.2
April	......	148.5	125.3	135.7	......	143.8	123.5	132.5	125.4	134.8	......	131.2	......	142.2	......	131.6	123.6	137.4	128.3	142.2
May	......	148.4	125.9	137.0	......	142.7	123.7	132.8	125.5	134.6	......	131.4	......	144.7	......	131.9	123.9	137.8	129.4	144.7
June	129.3	146.9	125.9	136.8	130.3	142.0	124.8	134.5	126.5	135.8	124.1	131.1	129.4	144.4	122.6	134.0	124.3	138.7	129.2	142.5
July	......	149.6	126.5	138.1	......	143.2	124.9	134.8	126.9	136.7	......	135.1	......	146.2	......	134.4	125.7	141.9	129.3	142.4
August	......	152.7	127.2	138.9	......	144.8	125.5	136.1	127.9	138.7	......	136.5	......	145.3	......	136.5	125.2	140.1	129.4	142.4
September	132.0	153.1	127.1	137.3	130.6	141.1	125.5	134.7	127.9	138.0	125.2	133.6	131.8	144.8	123.3	134.1	125.2	139.8	129.9	143.3
October	......	150.7	127.1	137.2	......	140.8	125.0	133.5	127.5	136.6	......	133.8	......	146.5	......	134.7	124.6	138.0	131.0	145.2
November	......	149.7	127.3	137.4	......	142.0	125.0	133.3	126.9	134.7	......	133.2	......	146.8	......	135.7	124.9	138.5	131.6	146.3
December	131.0	150.3	127.9	138.7	131.6	143.2	125.9	135.0	128.0	136.1	125.6	133.1	133.3	148.1	124.4	137.1	125.3	139.5	132.7	149.1
1945: January	......	150.6	127.9	138.7	......	145.0	126.0	135.1	128.1	136.4	......	132.4	......	147.0	......	136.5	125.5	140.0	132.0	146.9
February	......	150.0	127.4	137.3	......	144.0	126.5	135.9	128.0	135.6	......	132.5	......	146.4	......	135.0	125.1	139.1	131.2	145.3
March	131.4	151.0	127.1	136.4	131.2	141.4	126.0	134.3	127.6	133.8	125.4	131.4	133.2	145.8	124.1	133.5	124.9	138.1	131.8	146.2
April	......	152.5	127.4	136.8	......	140.1	126.0	134.2	128.1	135.4	......	131.3	......	147.4	......	133.2	125.3	139.0	132.8	148.4
May	......	153.0	128.5	139.6	......	142.4	127.3	137.7	128.9	137.1	......	133.4	......	149.9	......	134.5	126.4	141.7	131.9	145.7
June	132.4	152.4	129.7	142.1	132.3	143.4	127.8	138.8	130.5	141.2	126.7	135.2	135.5	150.3	125.2	136.1	127.4	144.0	132.7	147.5
July	......	157.6	130.6	143.8	......	145.3	128.4	139.2	130.7	142.4	......	136.4	......	152.5	......	137.5	127.0	142.9	133.6	150.1
August	......	156.5	130.0	141.7	......	146.1	128.4	138.9	130.2	141.3	......	135.7	......	150.9	......	138.3	127.5	144.0	132.5	147.1
September	134.4	155.7	129.5	139.7	133.1	144.1	128.0	137.6	129.9	139.6	125.5	133.1	135.3	149.3	126.2	138.5	126.8	141.4	132.6	147.3
October	......	154.4	129.4	139.5	......	144.3	127.8	137.2	130.0	140.0	......	133.0	......	149.7	......	137.7	126.9	141.4	133.0	147.9
November	......	153.2	130.4	141.7	......	144.3	128.2	137.9	130.0	139.7	......	133.9	......	151.4	......	137.8	126.8	141.4	134.4	151.5
December	133.3	152.7	131.1	143.3	134.0	145.2	128.6	138.7	130.9	140.3	126.4	135.2	137.3	153.9	126.4	138.6	128.4	144.1	135.8	154.1
1946: January	......	152.7	131.4	143.5	......	146.5	128.8	138.9	131.4	141.0	......	134.2	......	149.1	......	138.7	128.7	144.3	134.2	149.5
February	......	151.1	131.3	141.8	......	145.4	128.3	137.6	131.0	140.4	......	133.7	......	148.7	......	137.5	128.1	142.3	133.5	147.7
March	134.4	151.5	132.2	142.3	133.8	144.5	129.4	139.0	131.2	141.4	126.8	134.8	135.9	149.9	126.0	136.5	128.4	142.6	133.6	148.3
April	......	153.6	133.6	144.5	......	147.2	130.2	139.6	131.8	142.5	......	135.4	......	151.5	......	136.7	129.2	143.4	134.1	149.3
May	......	153.8	134.3	145.9	......	146.4	131.0	141.0	132.2	142.8	......	135.4	......	153.2	......	137.3	129.6	144.5	134.8	150.4
June	138.0	157.6	135.8	149.2	135.2	146.0	132.5	143.5	134.7	147.1	128.7	138.4	140.3	158.4	128.2	138.4	131.2	147.4	137.8	155.5
July	......	180.6	143.9	168.9	......	164.5	140.0	160.8	142.8	167.6	......	160.8	......	175.8	......	154.0	139.6	169.7	144.4	172.1
August	......	188.8	145.7	171.0	......	176.6	143.7	169.2	145.9	174.0	......	166.5	......	182.1	......	164.1	142.5	175.5	147.9	180.6
September	153.8	190.7	149.4	178.8	148.8	177.4	146.0	172.6	147.4	176.9	141.4	167.0	150.9	184.5	139.8	167.4	142.9	174.5	150.9	186.5
October	......	196.0	152.8	186.7	......	189.3	147.8	176.2	149.4	179.3	......	173.5	......	183.7	......	175.9	146.6	183.6	153.3	191.4
November	......	207.4	154.3	188.6	......	197.0	150.5	181.6	153.8	188.5	......	178.9	......	194.8	......	188.2	150.6	191.8	159.1	205.2
December	162.9	202.4	155.2	186.1	157.6	195.0	152.5	181.8	155.4	187.7	149.2	180.5	157.8	196.0	149.3	186.5	151.2	189.3	160.4	204.6
1947: January	......	199.7	154.6	183.5	......	191.3	152.3	179.7	156.0	185.2	......	179.8	......	192.8	......	181.5	151.1	187.4	159.3	200.6
February	......	199.1	154.2	182.1	......	191.6	151.6	177.2	156.5	185.6	......	174.3	......	191.2	......	182.1	151.8	188.4	158.4	195.4
March	164.5	204.3	157.4	189.5	160.9	199.8	156.1	185.8	159.2	192.0	152.5	184.8	160.6	198.1	152.9	188.8	155.8	198.9	160.3	199.5
April	......	204.0	156.8	187.3	......	200.5	154.9	181.9	159.0	189.9	......	181.4	......	201.4	......	188.3	155.1	195.2	161.3	201.7
May	......	201.1	155.6	184.8	......	198.8	155.1	183.4	159.6	192.4	......	180.2	......	200.8	......	186.3	154.6	193.4	169.5	199.9
June	164.6	203.7	156.9	187.9	160.9	198.0	157.1	187.1	161.1	196.9	153.3	185.3	161.5	199.7	152.6	185.8	155.6	196.8	159.3	196.9
July	......	207.2	157.5	191.7	......	199.5	158.3	188.9	162.6	199.9	......	188.4	162.1	202.7	153.8	188.4	......	200.9	......	200.4
August	168.5	211.0	158.6	194.3	163.6	203.2	159.5	191.7	164.9	202.0	......	191.0	......	205.0	......	194.3	......	205.0	......	200.4
September	......	216.8	161.9	203.0	......	210.7	163.2	199.8	168.2	209.8	159.2	193.6	......	209.9	......	203.8	165.4	215.9	165.7	210.4
October	......	219.5	161.7	200.6	......	214.3	162.2	196.2	167.8	206.1	......	190.9	166.5	208.7	161.7	205.1	......	209.4	......	208.8
November	173.2	220.2	163.3	203.9	168.2	210.6	164.2	197.5	168.1	205.2	......	190.7	......	214.2	......	201.0	......	209.9	......	214.4
December	......	222.1	164.9	206.1	......	216.1	166.3	201.8	170.2	209.6	162.0	195.2	......	219.0	......	207.6	167.9	215.2	168.9	215.7

See footnotes at end of table.

TABLE D-2: Consumers' price index for moderate-income families in 39 United States cities and 4 Territories and Possessions[1], 1923–47—Continued

[1935–39 = 100, unless otherwise indicated]

Period	Savannah, Ga.		Scranton, Pa.		Seattle, Wash.		Washington, D.C.		Bridgeport, Conn. (Dec. 1940 = 100)		Omaha, Nebr. (Dec. 1940 = 100)		San Diego, Calif. (Dec. 1940 = 100)		South Bend, Ind. (Dec. 1940 = 100)		Wichita, Kans. (June 1940 = 100)		Puerto Rico (Mar. 1941 = 100)	
	All items	Food	All items	Food	All items	Food	All items	Food	All items	Food	All items	Food	All items	Food	All items	Food	All items	Food	All items	Food
1923	126.1	123.7	122.9	131.0	118.9	123.3	115.2	126.5	......	126.3	......	123.6	......	......	......	......	......	......	......	......
1924	124.1	121.1	123.3	127.4	119.4	124.2	114.7	124.3	......	122.9	......	123.7	......	......	......	......	......	......	......	......
1925	127.0	136.7	128.0	139.1	122.0	133.1	117.5	132.7	......	131.5	......	136.0	......	......	......	......	......	......	......	......
1926	129.4	144.7	130.0	143.9	121.8	132.1	119.1	139.7	......	136.7	......	140.2	......	......	......	......	......	......	......	......
1927	126.1	135.7	127.5	138.4	119.5	128.7	115.8	132.5	......	132.7	......	132.6	......	......	......	......	......	......	......	......
1928	125.2	133.0	127.2	138.7	118.3	126.4	114.9	133.1	......	131.9	......	128.4	......	......	......	......	......	......	......	......
1929	124.7	133.4	126.9	140.6	119.0	129.6	114.4	134.6	......	132.2	......	130.5	......	......	......	......	......	......	......	......
1930	121.0	126.5	122.3	132.0	116.6	123.9	112.4	127.9	......	124.9	......	125.4	......	......	......	......	......	......	......	......
1931	109.6	103.0	110.5	107.4	106.4	100.9	105.5	108.3	......	106.0	......	100.3	......	......	......	......	......	......	......	......
1932	97.6	84.1	99.1	88.7	96.7	87.4	97.3	89.2	......	91.5	......	82.5	......	......	......	......	......	......	......	......
1933	93.6	82.7	95.3	87.2	92.3	85.0	94.3	87.9	......	88.3	......	80.6	......	......	......	......	......	......	......	......
1934	97.4	92.1	98.8	95.7	94.5	91.6	97.6	96.5	......	97.9	......	92.4	......	......	......	......	......	......	......	......
1935	99.2	99.8	100.4	100.2	96.8	98.9	99.1	102.6	......	104.4	......	104.9	......	......	......	......	......	......	......	......
1936	99.5	101.5	101.1	102.5	98.0	100.5	99.6	101.4	......	105.0	......	103.2	......	......	......	......	......	......	......	......
1937	102.1	104.4	102.5	105.5	102.7	105.5	102.3	105.0	......	109.3	......	106.8	......	......	......	......	......	......	......	......
1938	99.8	97.5	98.9	97.1	101.5	97.9	100.0	96.1	......	102.1	......	96.7	......	......	......	......	......	......	......	......
1939	99.3	96.7	97.2	94.8	101.1	97.2	99.1	95.0	......	98.4	......	95.9	......	......	......	......	......	......	......	......
1940	100.6	98.7	98.6	97.3	101.7	99.4	99.7	96.4	......	100.4	......	98.2	......	......	......	......	......	......	......	......
1941	106.8	109.8	103.3	104.9	107.8	110.2	104.3	105.4	......	108.9	......	105.1	......	......	......	......	......	105.9	......	......
1942	120.7	130.5	114.1	123.0	121.1	132.8	115.5	123.9	......	128.3	......	122.4	......	......	......	......	......	129.1	......	......
1943	130.7	149.7	121.4	138.9	127.5	144.0	122.6	138.2	......	143.0	......	134.5	......	......	......	......	......	146.6	......	......
1944	133.8	150.9	123.2	136.2	129.2	141.6	124.2	134.9	......	138.9	......	132.4	......	......	......	......	......	146.5	......	......
1945	136.7	153.7	126.6	139.4	132.2	144.4	128.0	139.9	......	141.1	......	133.6	......	......	......	......	......	149.6	......	......
1946	147.4	175.0	138.2	159.9	142.4	164.3	138.9	159.8	......	159.8	......	156.5	......	......	......	......	......	169.1	......	......
1941: January	101.4	100.5	......	97.5	102.2	101.0	......	97.7	100.1	100.2	99.7	99.1	100.3	100.2	100.2	100.0	99.9	97.2	......	......
February	100.9	100.0	......	97.7	102.5	101.0	......	98.8	......	100.1	......	98.6	......	......	......	......	......	96.5	......	......
March	101.6	100.7	99.1	97.6	103.0	102.4	100.9	99.3	......	100.5	......	98.7	......	......	......	......	......	97.1	......	......
April	102.5	103.0	......	100.4	104.1	104.7	......	100.7	102.5	104.5	100.7	101.7	......	......	......	......	101.3	101.0	......	......
May	103.3	104.7	......	102.9	106.0	108.0	......	102.8	......	106.2	......	103.2	......	......	......	......	......	103.8	......	......
June	105.0	108.9	102.8	105.2	107.2	109.7	103.2	104.8	......	110.7	......	106.0	......	......	......	......	......	108.5	......	......
July	107.4	113.5	......	106.8	107.4	109.3	......	105.7	106.5	111.8	102.0	104.7	105.8	112.4	106.2	113.4	104.4	107.4	......	......
August	108.3	114.8	......	108.8	108.7	112.2	......	107.4	......	112.6	......	107.1	......	......	......	......	......	108.0	......	......
September	110.5	116.4	106.7	110.3	111.5	117.0	106.7	110.5	......	114.3	......	109.6	......	......	......	......	......	110.8	......	......
October	112.8	118.3	......	109.8	112.9	118.1	108.4	111.9	111.0	114.1	105.5	109.3	111.2	120.8	110.6	117.4	108.1	110.9	......	......
November	113.4	118.6	......	109.5	113.4	118.9	108.6	111.4	......	115.8	......	110.8	......	......	......	......	......	115.3	......	......
December	113.9	118.1	108.3	111.8	114.7	120.6	109.7	113.4	......	116.2	......	112.0	......	......	......	......	......	114.1	114.3	124.2
1942: January	115.4	121.2	......	114.6	116.7	125.3	111.1	116.4	113.5	119.5	108.2	114.4	115.8	129.4	114.5	125.9	111.2	117.2	......	......
February	116.7	123.2	......	114.3	117.9	126.0	111.9	116.2	......	121.2	......	115.9	......	......	......	......	......	119.6	......	......
March	118.4	125.2	112.1	117.6	119.6	126.7	113.5	118.3	......	123.2	......	118.0	......	......	......	......	......	123.7	......	......
April	120.2	128.6	......	118.5	120.4	127.5	113.8	118.0	117.4	123.3	110.9	119.2	118.9	132.9	117.6	130.4	115.6	126.2	......	......
May	120.9	130.3	......	121.0	121.2	129.9	114.7	120.7	......	126.0	......	121.5	......	......	......	......	......	129.0	......	......
June	120.2	129.4	114.3	123.0	119.2	129.4	115.5	123.2	......	128.8	......	122.4	......	......	......	......	......	130.1	130.2	142.1
July	121.6	132.0	......	125.3	119.7	130.9	116.4	125.3	119.7	129.7	111.4	121.1	120.1	139.7	117.2	133.2	115.3	129.2	......	......
August	121.6	132.3	......	125.5	121.7	136.1	116.9	127.5	......	131.3	......	123.0	......	......	......	......	......	131.3	......	......
September	122.1	133.3	115.2	125.6	122.7	137.3	117.1	128.1	......	132.0	......	124.8	......	......	......	......	......	132.0	......	......
October	123.6	137.1	......	129.0	124.0	139.6	117.7	129.5	120.6	133.6	114.5	128.5	122.8	147.4	118.4	136.5	117.9	136.3	......	......
November	123.4	136.0	......	130.3	124.7	141.3	118.2	130.5	......	135.1	......	128.7	......	......	......	......	......	136.6	......	......
December	124.2	137.6	117.8	131.7	125.6	143.6	119.0	132.7	......	136.4	......	130.7	......	......	......	......	......	138.3	139.3	153.3
1943: January	125.3	139.8	......	133.7	125.8	143.5	119.5	133.8	122.3	137.7	115.4	130.0	125.0	151.7	120.6	141.5	119.4	139.2	136.6	147.5
February	126.2	141.3	......	134.0	126.2	143.9	119.3	132.2	......	138.0	......	131.5	......	......	......	......	......	141.6	136.8	147.3
March	128.2	145.1	120.5	136.9	127.0	144.7	121.3	136.9	......	142.9	......	134.1	......	......	......	......	......	144.6	137.2	147.2
April	131.2	152.5	......	143.3	127.9	145.9	122.5	139.9	126.2	145.1	117.9	136.6	127.6	156.9	124.4	149.5	124.8	152.7	139.3	148.5
May	131.9	153.8	......	148.3	129.5	150.3	123.7	142.5	......	150.3	......	139.7	......	......	......	......	......	150.7	141.4	150.6
June	132.3	153.8	123.6	144.4	128.1	146.6	123.8	142.7	......	149.3	......	139.5	......	......	......	......	......	149.7	142.2	151.0
July	132.3	153.0	......	139.6	126.2	140.9	123.2	140.1	126.3	144.5	117.2	134.7	126.7	153.8	124.3	148.3	123.3	146.7	141.8	149.8
August	132.1	152.4	......	137.5	125.8	139.8	123.0	138.5	......	140.4	......	132.5	......	......	......	......	......	146.2	142.1	149.9
September	132.5	152.5	121.2	137.2	127.8	142.4	123.5	138.5	......	141.2	......	133.3	......	......	......	......	......	146.8	142.2	149.8
October	132.5	152.2	......	138.7	128.2	142.8	124.2	140.2	126.7	142.5	117.5	133.9	128.4	157.5	124.3	147.1	124.2	145.8	140.9	148.5
November	131.9	150.4	......	137.0	128.6	143.6	123.4	137.5	......	142.0	......	133.5	......	......	......	......	......	146.7	141.4	148.9
December	131.8	149.7	121.5	136.2	128.6	143.1	123.4	135.9	......	142.0	......	133.9	......	......	......	......	......	148.8	141.6	149.5
1944: January	132.6	151.1	......	134.7	128.4	142.5	123.6	136.4	126.0	140.4	117.4	132.5	127.6	154.0	123.3	143.6	125.0	146.1	142.3	151.1
February	132.2	149.5	......	133.1	127.7	140.6	122.9	133.6	......	138.5	......	133.6	......	......	......	......	......	146.3	142.4	151.5
March	131.9	147.2	120.9	132.4	128.2	140.5	122.5	131.7	......	137.7	......	133.0	......	......	......	......	......	145.4	142.0	150.7
April	133.4	150.8	......	135.4	127.9	139.2	123.3	132.8	125.3	136.6	118.2	132.4	127.3	150.2	123.1	140.9	125.1	144.2	142.5	151.7
May	133.2	149.4	......	135.5	128.9	141.3	123.9	134.1	......	136.4	......	132.9	......	......	......	......	......	145.5	143.1	153.1
June	133.7	150.2	123.2	135.9	128.8	140.4	124.4	135.3	......	136.4	......	132.8	......	......	......	......	......	146.2	143.4	153.9

See footnotes at end of table.

TABLE D-2: Consumers' price index for moderate-income families in 39 United States cities and 4 Territories and Possessions[1], 1923–47—Continued

[1935–39 = 100, unless otherwise indicated]

Period	Savannah, Ga.		Scranton, Pa.		Seattle, Wash.		Washington, D.C.		Bridgeport, Conn. (Dec. 1940 = 100)		Omaha, Nebr. (Dec. 1940 = 100)		San Diego, Calif. (Dec. 1940 = 100)		South Bend, Ind. (Dec. 1940 = 100)		Wichita, Kans. (June 1940 = 100)		Puerto Rico (Mar. 1941 = 100)	
	All items	Food	All items	Food	All items	Food	All items	Food	All items	Food	All items	Food	All items	Food	All items	Food	All items	Food	All items	Food
1944: July	134.8	152.9	......	138.6	129.5	141.9	124.3	134.9	127.5	140.8	118.1	131.8	128.1	151.7	125.3	146.4	127.1	148.4	143.4	154.1
August	135.6	154.7	......	138.8	129.7	141.6	125.0	136.7	......	140.3	......	131.4	......	......	......	......	......	147.8	143.4	153.9
September	135.1	152.8	125.0	138.1	129.9	141.7	124.8	135.2	......	140.3	......	131.6	......	......	......	......	......	147.0	143.8	154.5
October	134.5	150.9	......	138.1	130.5	143.3	124.8	134.7	128.1	140.7	118.5	131.4	130.6	157.3	124.9	143.8	127.1	146.8	143.9	154.7
November	134.4	150.6	......	136.3	130.3	142.7	125.5	136.7	......	139.7	......	132.0	......	......	......	......	......	147.2	144.1	154.8
December	134.6	150.5	125.0	137.2	131.1	143.9	125.8	137.1	......	139.8	......	131.7	......	......	......	......	......	147.3	145.0	154.9
1945: January	134.9	150.7	......	137.2	131.2	143.4	126.1	138.0	127.6	139.5	118.8	132.0	130.4	156.3	125.3	145.0	127.8	148.0	144.9	154.0
February	135.1	150.9	......	136.9	130.8	142.2	126.1	137.4	......	138.6	......	131.4	......	......	......	......	......	147.2	145.0	153.6
March	135.3	150.7	124.3	135.9	131.4	143.0	126.0	136.8	......	137.9	......	131.3	......	......	......	......	......	147.5	144.6	153.3
April	135.2	150.8	......	136.4	131.4	143.0	126.4	137.8	127.6	139.2	118.9	131.6	131.6	158.1	125.5	144.5	128.8	149.9	145.5	154.7
May	135.8	151.7	......	139.8	132.1	144.4	127.6	139.7	......	141.1	......	135.7	......	......	......	......	......	151.7	145.5	154.8
June	136.4	153.1	128.2	144.5	132.0	144.0	128.5	141.6	......	143.8	......	135.3	......	......	......	......	......	150.0	145.4	154.8
July	137.7	156.6	......	142.6	132.7	145.7	128.9	142.2	129.7	144.2	120.2	134.9	132.4	158.6	127.8	150.8	129.5	150.9	145.6	155.2
August	138.3	157.5	......	141.3	132.9	145.8	128.9	141.7	......	142.7	......	133.5	......	......	......	......	......	149.8	148.5	160.6
September	138.3	157.2	126.9	139.3	132.4	144.2	129.1	141.5	128.6	141.3	119.8	132.5	132.5	159.3	127.3	148.0	128.9	148.7	147.5	159.1
October	137.5	155.4	......	138.7	131.9	142.7	129.0	140.2	......	141.6	......	132.8	......	......	......	......	......	148.3	147.9	159.8
November	137.8	155.6	......	139.5	132.9	145.3	129.5	140.8	......	141.5	......	134.5	......	......	......	......	......	150.6	148.4	161.1
December	137.7	154.4	128.1	141.3	134.7	149.6	129.9	140.9	......	142.1	......	136.3	......	......	......	......	......	152.1	148.8	161.7
1946: January	137.6	153.8	......	140.2	133.5	146.0	130.9	143.0	......	140.3	......	135.4	......	......	......	......	......	150.4	148.8	162.2
February	138.4	155.6	......	138.8	133.6	146.1	130.3	141.0	......	140.8	......	133.5	......	......	......	......	......	147.6	149.3	163.5
March	138.7	154.7	128.6	141.8	134.2	145.6	131.2	141.3	129.8	142.3	121.1	133.9	134.6	161.6	126.6	144.7	129.6	148.0	149.8	164.3
April	139.2	155.7	......	143.3	134.6	146.3	131.7	142.2	......	140.4	......	136.4	......	......	......	......	......	149.4	150.7	165.8
May	139.2	155.8	......	143.8	135.3	147.1	131.4	141.1	......	142.2	......	138.6	......	......	......	......	......	151.7	151.0	166.4
June	140.6	158.5	132.2	144.0	137.0	151.6	133.8	145.5	......	144.7	......	141.3	......	......	......	......	......	154.4	151.9	167.5
July	148.8	180.1	......	168.4	142.9	167.1	140.5	164.8	......	164.8	......	163.5	......	......	......	......	......	174.8	154.6	172.1
August	152.7	187.2	......	171.2	144.8	170.0	142.6	169.9	......	170.6	......	170.0	......	......	......	......	......	183.2	157.9	177.6
September	153.8	190.9	146.4	174.0	147.9	175.6	145.0	174.7	145.9	175.5	138.1	172.8	145.2	184.3	139.5	169.5	145.4	186.6	159.5	180.1
October	155.2	192.2	......	182.5	151.9	186.1	147.6	180.6	......	182.7	......	180.5	......	......	......	......	......	189.2	163.5	187.3
November	161.8	209.4	......	185.6	155.3	194.6	150.3	186.8	......	186.4	......	186.5	......	......	......	......	......	198.5	179.6	217.2
December	162.2	205.8	154.0	185.2	157.2	195.9	152.0	186.1	......	187.6	......	185.3	......	......	......	......	......	195.5	186.1	224.9
1947: January	162.3	203.8	......	180.6	155.7	189.6	152.1	183.7	......	186.9	......	180.5	......	......	......	......	......	193.3	182.5	217.5
February	162.5	203.1	......	182.9	155.4	187.4	151.5	181.3	......	185.4	......	180.6	......	......	......	......	......	190.1	181.7	216.1
March	166.6	213.1	157.3	188.9	158.2	194.3	154.7	190.3	......	191.7	......	185.6	......	......	......	......	......	199.6	181.6	215.6
April	166.2	208.9	...	188.0	159.1	196.4	154.8	189.4	154.8	187.5	146.5	185.1	158.6	209.4	152.7	197.1	154.6	198.7	182.4	217.1
May	165.5	208.2	......	189.2	158.5	193.9	154.6	187.8	......	187.7	......	186.2	......	......	......	......	......	195.3	178.3	209.8
June	165.8	209.4	159.9	194.9	158.3	193.3	156.0	190.9	......	194.1	......	189.9	......	......	......	......	......	197.3	177.3	208.2
July	165.9	207.4	......	196.1	......	197.1	......	190.2	......	194.9	......	189.7	......	......	......	......	......	199.8	177.2	207.9
August	......	215.1	162.8	199.5	161.8	200.3	159.1	197.1	......	198.7	......	193.6	......	......	......	......	......	201.8	175.8	205.3
September	......	220.3	......	206.6	......	206.0	......	202.9	......	204.4	......	200.5	......	......	......	......	......	213.8	178.3	210.3
October	171.5	219.2	......	199.1	......	205.4	......	200.9	......	203.1	......	198.2	......	......	......	......	......	213.8	181.0	215.5
November	......	217.5	165.2	202.8	166.2	207.6	161.7	202.9	......	204.0	......	200.7	......	......	......	......	......	215.1	181.4	216.2
December	......	212.2	......	210.0	......	213.4	......	207.4	......	206.6	......	205.3	......	......	......	......	......	221.6	182.6	218.1

[1] Limited data for Alaska, the Virgin Islands, and Hawaii have been collected as follows:

[2] Data not available.

Period	Alaska (July 1944 = 100)					
	Anchorage		Fairbanks		Juneau	
	All items	Food	All items	Food	All items	Food
1943: March						
1944: July	97.5	98.1	98.6	98.3	98.4	98.1
September	100.0	100.0	100.0	100.0	100.0	100.0
December	101.1	102.1	100.2	100.2	100.3	100.6
1945: March	101.0	102.2	100.4	100.8	101.1	101.0
June	101.7	101.9	100.8	100.8	101.0	100.4
September	102.1	102.3	100.9	100.7	100.7	100.4
	102.5	103.6	101.2	101.0	101.0	100.9

Period	Virgin Islands (October 1943 = 100)					
	Charlotte Amalie		Christiansten and Frederiksted			
1941: September	89.0	95.7	87.3	90.7	....	....
1942: September	103.3	112.4	101.4	106.1	....	....
1943: October	100.0	100.0	100.0	100.0	....	....

Period	Hawaii (March 1943 = 100)	
	Honolulu	
	All items	Food
1943: March	100.0	100.0
June	101.0	100.8
September	100.9	101.6
December	100.9	102.0
1944: March	100.3	100.1
June	102.7	100.3
September	102.9	100.1
December	103.4	100.4
1945: March	103.9	100.7
June	104.2	100.8
September	104.6	101.6
December	105.0	102.5
1946: March	104.4	100.7
June	106.0	102.7
September	115.6	121.4
December	126.5	143.0
1947: March	125.0	134.6
June	126.2	137.0
September	129.5	142.9
December	130.9	143.6

Retail Prices of Foods

Bureau of Labor Statistics indexes showing changes in retail prices for foods normally purchased by moderate-income city families are a component of the consumers' price index for moderate-income families in large cities, described on page 104. Prices for 61 foods are used in computing the indexes. These food prices are obtained monthly by trained representatives of the Bureau from a scientifically selected sample of chain and independent retail food dealers. The survey is made simultaneously in 56 large cities during the first 3 days of the week containing the 15th day of each month.

In order to have the most comparable measure possible from store to store, from time to time, and from city to city, the Bureau's agents use a description defining the quality or grade and the amount of each food for which prices are to be quoted by retailers. Each retailer is asked to quote prices for the brand and size of the specified food he sells in greatest volume.

In the preparation of the indexes, proper weights are given to chain and independent stores as determined by retail sales volume of such stores in each city. The city average prices for these foods are then weighted on the basis of relative amounts of each food normally purchased by families of wage earners and clerical workers to obtain city food indexes. Indexes so obtained are combined by the use of population weights to secure the 56-city average. In addition to the 34 cities included in the consumers' price index (see table D-2), indexes of retail prices of foods for 22 cities during 1923-47 are shown in table D-3. Food indexes are given by groups of food in table D-4 covering 1923-47.

TABLE D-3: Indexes of retail prices of foods in 22 cities, 1923–47

[1935-39 = 100, unless otherwise indicated]

Period	Bridgeport	Butte	Cedar Rapids (June 1940 = 100)	Charleston, S. C.	Columbus	Dallas	Fall River	Jackson (June 1940 = 100)	Knoxville (June 1940 = 100)	Little Rock	Louisville
1923	121.6	125.6	....	121.4	121.1	127.1	126.7	....	....	126.7	115.3
1924	118.4	124.8	....	121.7	122.8	129.2	122.7	....	....	124.5	115.6
1925	126.6	134.6	....	132.3	132.6	137.8	129.9	....	....	137.1	131.0
1926	131.6	133.8	....	138.5	139.1	137.7	135.6	....	....	143.1	137.8
1927	127.8	130.2	....	128.6	132.9	135.5	131.5	....	....	135.8	130.5
1928	127.0	128.5	....	126.3	120.0	136.1	130.6	....	....	131.8	129.6
1929	127.3	133.2	....	128.0	131.5	137.2	130.8	....	....	135.5	132.9
1930	120.3	125.1	....	124.9	128.3	130.2	122.8	....	....	129.0	125.4
1931	102.1	103.6	....	103.4	102.5	104.4	99.9	....	....	99.1	98.1
1932	88.1	84.6	....	84.9	83.6	85.1	84.6	....	....	79.9	80.8
1933	85.0	80.5	....	80.6	83.3	84.1	82.5	....	....	78.6	82.9
1934	94.3	89.0	....	89.7	94.0	94.2	92.6	....	....	90.4	93.2
1935	100.5	99.5	....	99.2	103.2	103.7	98.8	....	....	101.0	103.8
1936	101.1	101.0	....	101.6	103.9	102.2	100.7	....	....	102.2	100.9
1937	105.3	105.1	....	104.3	104.6	105.0	106.0	....	....	105.8	104.9
1938	98.3	98.4	....	98.5	96.0	96.7	98.5	....	....	96.2	96.4
1939	94.8	96.0	....	96.4	92.3	92.5	96.0	....	....	94.8	93.9
1940	96.7	97.2	....	95.9	92.4	92.2	97.4	....	....	95.1	94.4
1941	104.9	105.0	104.1	104.7	102.2	101.0	104.9	111.4	104.9	104.3	105.2
1942	123.6	123.0	123.2	123.8	119.2	119.9	122.9	133.6	130.3	125.0	122.8
1943	137.7	136.1	138.2	135.9	131.4	134.7	135.6	149.8	154.1	136.1	134.8
1944	133.8	133.6	138.2	133.3	128.3	132.7	130.9	144.4	155.2	135.3	131.8
1945	135.9	136.6	142.5	136.9	131.5	135.9	132.9	149.7	159.3	138.6	132.8
1946	153.9	153.6	163.8	157.1	149.8	157.7	152.8	169.2	183.5	156.5	151.3
1941: January	96.5	98.7	95.9	95.9	93.4	92.6	97.5	105.3	97.1	95.6	95.5
February	96.4	98.4	96.4	95.9	93.2	92.1	98.4	104.0	95.5	95.6	95.8
March	96.8	98.3	97.0	96.1	94.0	93.5	98.4	103.7	96.6	95.6	96.2
April	100.6	101.3	100.5	98.2	96.9	95.7	100.4	103.8	101.2	98.4	99.7
May	102.3	103.8	102.6	100.0	98.6	96.4	102.3	105.8	101.2	100.1	101.4
June	106.6	106.1	108.3	103.5	102.9	97.7	106.0	108.5	104.3	101.9	107.2
July	107.6	106.8	105.6	107.6	104.5	100.9	107.5	107.7	109.0	104.9	107.9
August	108.4	107.4	105.0	107.9	104.4	103.8	107.1	111.5	109.2	108.2	107.8
September	110.1	108.8	106.7	111.0	107.6	106.3	109.5	117.7	110.3	109.9	110.9
October	109.9	109.6	108.3	112.6	109.2	110.0	110.1	120.8	113.7	111.3	111.6
November	111.5	110.9	110.4	113.1	110.4	111.7	111.7	122.9	115.3	114.4	114.1
December	111.9	110.4	112.0	115.1	111.1	111.0	110.5	124.6	116.0	115.5	113.7
1942: January	115.1	113.0	116.7	116.4	113.5	112.7	113.8	126.8	117.2	117.9	116.8
February	116.7	116.4	119.0	118.8	115.0	114.7	115.4	124.3	120.7	119.1	118.2
March	118.6	118.3	120.7	119.8	115.2	115.6	118.2	126.9	124.6	120.1	119.3
April	118.7	119.1	122.2	122.7	117.1	116.0	118.5	126.8	127.5	123.1	120.6
May	121.3	121.5	123.9	123.2	118.6	116.8	120.8	128.3	131.0	123.2	122.6
June	124.0	123.5	129.9	122.9	120.3	117.6	122.6	130.3	134.4	123.3	123.2
July	124.9	122.7	126.4	125.0	118.4	120.9	124.8	131.0	130.3	124.7	122.4
August	126.4	123.6	120.0	125.2	119.2	122.7	125.4	134.0	132.9	127.6	124.3
September	127.1	124.6	121.2	126.6	119.6	123.7	125.7	141.0	134.2	129.2	124.2
October	128.6	129.5	123.1	127.7	122.7	126.1	128.3	143.7	134.9	130.5	126.9
November	130.1	131.3	125.6	127.6	124.4	125.1	130.6	144.1	136.1	130.3	126.5
December	131.4	132.7	129.1	129.2	126.0	126.9	130.9	146.1	139.3	131.1	128.0

TABLE D-3: Indexes of retail prices of foods in 22 cities, 1923-47—Continued

[1935-39 = 100 unless otherwise indicated]

Period	Bridgeport	Butte	Cedar Rapids (June 1940 = 100)	Charleston, S. C.	Columbus	Dallas	Fall River	Jackson (June 1940 = 100)	Knoxville (June 1940 = 100)	Little Rock	Louisville
1943: January	132.5	131.8	130.3	131.0	126.9	127.2	131.3	148.5	141.4	130.6	128.9
February	132.9	131.8	133.0	130.8	126.5	129.2	132.7	151.5	142.8	131.5	129.0
March	137.6	133.5	136.3	133.7	130.2	134.3	138.0	153.5	149.7	137.4	132.6
April	139.6	134.7	141.1	140.4	134.8	137.0	139.3	155.9	156.7	140.8	138.4
May	144.7	138.3	144.3	140.3	136.3	138.2	140.5	153.0	156.6	141.8	141.5
June	143.8	140.6	143.3	139.0	134.5	136.6	140.8	149.6	158.5	140.1	139.5
July	139.1	138.6	139.6	136.4	130.8	135.5	135.6	148.1	155.8	135.2	134.9
August	135.2	137.2	138.0	136.5	131.6	135.4	134.0	151.5	156.2	137.6	134.7
September	136.0	136.0	136.1	136.4	130.9	134.8	133.4	148.7	157.9	135.0	134.9
October	137.1	136.5	138.0	137.1	131.7	137.1	135.2	147.5	157.5	133.4	135.0
November	136.7	136.9	139.0	134.8	131.7	136.0	133.2	145.8	158.2	134.5	134.2
December	136.7	137.2	139.7	134.4	130.7	135.5	132.6	144.6	157.4	135.5	134.0
1944: January	135.1	135.3	137.6	134.2	128.1	134.5	131.2	142.9	154.3	134.7	132.6
February	133.4	133.4	137.2	133.2	127.3	133.8	129.6	144.0	152.7	135.3	131.2
March	132.6	133.0	136.6	131.5	126.9	131.6	128.7	142.1	151.7	133.2	129.7
April	131.4	133.2	136.2	132.1	127.6	131.6	130.0	141.2	151.8	132.9	131.8
May	131.4	133.0	136.3	130.7	127.1	133.3	129.8	140.4	152.7	133.9	130.8
June	131.4	132.8	137.3	130.6	127.1	130.8	129.2	139.3	154.1	133.8	132.9
July	135.5	134.8	140.5	133.0	129.2	132.3	132.9	138.5	157.3	135.8	133.4
August	135.1	133.7	139.1	135.4	130.2	133.5	132.3	142.9	158.6	137.7	133.4
September	135.1	133.1	139.0	134.7	129.4	132.9	132.4	150.7	157.9	137.4	131.7
October	135.4	133.1	138.8	134.5	128.7	131.9	131.2	149.3	156.3	135.4	131.0
November	134.5	133.5	139.6	134.7	129.0	132.7	131.6	150.2	156.8	136.3	131.0
December	134.6	134.3	139.9	135.0	129.4	133.4	132.2	151.3	158.3	137.0	132.0
1945: January	134.2	134.8	140.7	134.3	129.5	133.7	132.5	152.9	160.2	137.3	131.9
February	133.5	133.2	139.4	133.9	128.8	132.9	131.9	150.2	158.3	136.5	130.1
March	132.8	133.2	139.0	134.0	128.1	133.8	130.6	147.1	156.3	136.1	130.2
April	133.9	134.2	140.5	133.5	128.4	134.4	130.1	148.3	156.5	137.6	130.6
May	135.9	136.5	142.7	134.8	130.7	134.2	131.9	147.4	157.8	138.0	131.2
June	138.5	138.0	144.6	136.5	133.6	135.6	134.6	149.0	159.0	140.3	134.1
July	138.7	138.7	145.4	139.4	133.4	137.7	134.8	149.4	161.1	141.0	134.3
August	137.4	138.7	145.3	139.7	134.0	138.9	134.1	151.2	160.6	140.4	135.0
September	136.0	137.7	142.9	139.5	132.5	137.6	132.4	151.2	160.8	139.3	133.5
October	136.4	136.7	142.2	139.4	132.6	137.1	132.8	150.0	161.1	138.3	133.5
November	136.3	137.9	142.8	138.4	133.0	137.0	134.3	150.1	160.0	138.8	134.2
December	136.8	139.2	144.3	138.9	133.5	137.5	134.8	150.0	159.8	139.8	135.2
1946: January	135.1	136.2	143.0	138.7	132.5	138.5	134.6	149.2	160.5	140.8	134.2
February	135.6	135.2	141.9	138.4	131.3	137.8	132.1	146.6	158.1	138.1	132.7
March	136.9	135.7	144.1	138.3	131.2	138.3	133.8	146.6	159.1	137.9	132.9
April	135.2	135.9	144.9	138.9	133.3	138.2	133.7	145.2	159.7	141.2	133.8
May	136.9	136.3	148.2	139.6	133.2	139.5	134.5	145.7	162.4	141.6	133.2
June	139.3	139.7	148.2	140.8	136.4	142.4	138.1	150.6	165.6	139.1	135.6
July	158.7	154.4	171.8	161.9	153.1	162.7	158.2	169.1	186.4	159.3	155.2
August	164.3	163.6	174.6	173.2	160.3	168.6	164.7	188.0	203.7	167.8	163.1
September	168.9	170.0	180.0	170.4	161.9	173.0	168.4	189.0	197.8	168.6	163.7
October	175.9	175.6	184.8	173.0	171.6	177.0	175.6	195.8	201.5	172.3	167.4
November	179.5	180.8	192.2	188.2	179.4	188.7	182.6	203.4	226.5	186.3	184.9
December	180.7	180.2	192.7	184.2	174.0	187.1	177.2	200.8	220.4	184.8	178.6
1947: January	180.0	174.9	188.6	180.5	171.6	186.3	180.9	199.1	216.4	182.4	177.7
February	178.5	175.1	190.0	181.5	170.0	186.5	178.2	199.0	213.9	182.9	176.6
March	184.6	184.5	195.6	189.2	177.0	191.4	186.8	203.3	225.2	190.8	183.9
April	180.4	183.4	197.3	188.0	176.2	193.8	183.1	206.0	223.4	193.0	183.6
May	180.8	184.7	197.3	187.0	176.6	192.5	181.7	201.7	216.8	188.1	180.0
June	186.9	185.9	203.2	188.3	178.4	191.4	186.3	202.7	223.0	189.8	183.4
July	187.7	188.9	203.7	190.6	179.3	192.8	188.7	205.6	225.8	193.6	185.4
August	191.3	193.8	204.4	189.8	184.9	195.5	190.0	209.5	225.9	195.1	189.7
September	196.8	195.7	212.0	198.0	190.0	200.3	195.8	212.0	235.9	201.3	198.2
October	195.6	195.0	208.7	201.4	192.0	201.6	195.6	212.6	236.9	200.4	196.2
November	196.5	194.2	209.1	198.9	190.1	204.4	195.0	213.1	235.6	200.4	195.8
December	199.0	195.8	213.0	213.1	194.4	208.2	199.0	223.2	243.5	211.8	198.9

TABLE D-3: Indexes of retail prices of foods in 22 cities, 1923–47—Continued

[1935–39 = 100, unless otherwise indicated]

Period	Newark	New Haven	Omaha	Peoria	Providence	Rochester	St. Paul	Salt Lake City	Springfield, Ill.	Wichita (June 1940 = 100)	Winston-Salem (June 1940 = 100)
1923	120.9	120.3	122.0	117.9	127.9	124.7	120.4	121.5	121.4	....	....
1924	118.6	117.6	122.1	119.9	124.6	122.2	119.7	122.5	123.9	....	....
1925	125.4	125.6	134.2	131.7	132.2	133.8	128.6	135.9	133.8	....	....
1926	128.4	131.3	138.4	136.6	136.8	139.9	136.3	132.1	139.5	....	....
1927	125.4	127.1	130.9	131.9	131.3	131.5	129.3	130.2	133.4	....	....
1928	126.5	126.9	126.7	126.3	130.9	131.3	126.7	126.9	130.0	....	....
1929	127.2	128.4	128.8	128.6	132.9	131.8	128.3	128.9	131.7	....	....
1930	120.7	121.8	123.8	124.8	125.9	124.6	122.4	123.0	127.5	....	....
1931	104.1	103.5	99.0	97.7	104.2	100.3	100.2	99.1	99.0	....	....
1932	89.3	88.2	81.4	81.8	86.6	84.6	82.5	81.7	81.7	....	....
1933	83.6	84.2	79.6	81.8	85.0	83.0	81.2	81.1	81.9	....	....
1934	93.3	94.0	91.2	91.0	93.6	93.3	93.8	90.9	89.9	....	....
1935	98.7	100.0	103.5	100.4	100.1	99.1	101.1	100.4	100.2	....	....
1936	100.8	101.4	101.9	101.1	101.4	101.5	101.0	100.9	100.7	....	....
1937	105.4	105.8	105.4	104.6	105.9	105.8	104.4	105.9	105.9	....	....
1938	98.4	98.1	95.4	97.8	97.7	98.6	97.5	97.0	97.7	....	....
1939	96.7	94.7	94.7	96.0	94.9	94.9	96.1	95.8	95.5	....	....
1940	98.6	96.0	96.9	97.8	97.2	98.9	95.9	97.5	96.2	....	....
1941	105.7	103.9	103.7	108.2	104.6	106.9	104.1	106.1	105.6	105.9	102.0
1942	124.5	123.0	120.8	128.7	123.1	123.7	119.7	127.0	128.5	129.1	119.3
1943	139.6	137.7	132.8	141.8	135.8	134.9	131.2	141.2	142.1	146.6	136.5
1944	138.6	134.7	130.7	139.2	133.9	131.5	128.1	139.9	141.1	146.5	136.1
1945	141.4	136.0	131.9	143.3	138.1	135.6	130.9	142.9	144.2	149.6	140.8
1946	159.2	153.8	154.5	165.5	159.7	153.8	151.4	162.0	165.0	169.1	163.0
1941: January	98.8	95.7	97.9	99.0	96.3	99.9	98.6	97.5	96.2	97.2	93.7
February	100.2	96.1	97.3	99.4	97.3	99.8	98.6	97.8	96.5	96.5	94.0
March	99.2	96.3	97.4	100.3	97.0	100.1	98.0	98.4	97.0	97.1	95.4
April	101.9	99.8	100.4	103.5	99.2	103.1	99.6	101.0	100.3	101.0	97.7
May	102.7	101.4	101.9	104.0	101.1	105.0	101.5	103.5	100.8	103.8	100.1
June	106.9	105.8	104.6	108.2	104.5	108.6	104.3	107.2	105.6	108.5	104.5
July	106.1	105.9	103.4	110.2	107.0	109.7	103.9	106.7	106.7	107.4	103.9
August	108.0	107.2	105.7	111.0	108.9	110.2	104.7	106.9	107.4	108.0	104.3
September	109.4	108.5	108.2	115.2	110.8	111.1	108.2	109.1	111.9	110.8	104.9
October	111.2	108.3	108.0	114.7	110.9	111.1	109.3	113.9	112.8	110.9	106.7
November	111.9	110.5	109.4	116.1	112.1	112.1	111.4	115.7	115.7	115.3	107.8
December	112.1	111.1	110.5	116.7	110.2	112.2	111.5	115.4	115.8	114.1	110.5
1942: January	116.0	113.8	113.1	118.6	113.9	116.3	113.4	116.9	119.8	117.2	112.3
February	118.2	115.8	114.4	121.2	114.9	116.8	113.6	118.8	121.5	119.6	114.2
March	118.5	118.0	116.5	123.6	117.3	118.4	115.2	120.0	124.3	123.7	115.7
April	119.3	117.9	117.9	126.0	118.6	119.1	116.3	120.7	126.0	126.2	117.2
May	120.9	120.6	119.9	129.0	122.1	122.3	118.7	124.2	128.0	129.0	119.3
June	122.3	122.3	120.8	129.6	122.8	126.2	119.2	126.8	128.4	130.1	120.1
July	125.1	124.2	119.8	130.0	125.4	125.5	118.9	129.2	129.0	129.2	119.2
August	127.0	125.2	121.4	130.2	126.1	125.2	119.7	128.8	130.9	131.3	121.1
September	128.0	126.2	123.2	130.7	126.3	125.2	120.8	130.1	130.2	132.0	119.8
October	130.3	128.6	127.1	135.2	128.9	128.2	125.8	134.0	133.1	136.3	122.5
November	133.6	130.3	127.0	134.6	129.7	129.2	127.1	136.1	134.3	136.6	124.1
December	134.5	133.0	129.0	135.2	131.0	132.0	128.1	137.8	136.0	138.3	125.6

TABLE D-3: Indexes of retail prices of foods in 22 cities, 1923-47—Continued

[1935-39 = 100, unless otherwise indicated]

Period	Newark	New Haven	Omaha	Peoria	Providence	Rochester	St. Paul	Salt Lake City	Springfield, Ill.	Wichita (June 1940 = 100)	Winston-Salem (June 1940 = 100)
1943: January	135.5	132.1	128.6	136.1	130.8	132.2	128.0	139.0	136.4	139.2	127.8
February	135.3	132.9	129.8	136.9	132.3	133.8	129.8	138.5	136.4	141.6	129.3
March	139.1	136.1	132.4	140.8	135.3	137.6	132.1	141.1	141.3	144.6	134.5
April	140.7	138.4	135.2	144.0	137.0	139.3	133.6	142.2	144.8	152.7	138.2
May	142.4	145.7	137.9	148.7	141.0	139.6	134.8	144.7	148.5	150.7	140.0
June	142.1	143.1	137.7	146.9	139.7	138.6	133.7	144.1	146.4	149.7	139.7
July	141.2	138.2	133.3	143.2	135.8	134.8	131.2	142.2	144.2	146.7	136.5
August	139.0	136.7	130.8	141.2	135.0	133.1	128.9	139.5	142.1	146.2	138.3
September	139.6	136.6	131.6	140.6	135.5	132.1	128.7	138.6	141.6	146.8	138.6
October	140.8	138.6	132.5	141.3	136.9	133.1	130.5	140.5	141.6	145.8	139.4
November	139.5	137.1	131.8	141.5	136.2	132.4	131.3	142.6	140.9	146.7	138.2
December	139.4	136.9	132.2	140.8	134.2	132.5	131.8	141.3	141.0	148.8	137.5
1944: January	140.7	136.3	131.1	138.4	132.0	131.5	127.1	138.6	138.7	146.1	136.9
February	138.0	134.7	131.9	137.6	131.2	129.8	127.6	138.2	139.2	146.3	134.7
March	137.6	133.0	131.3	138.0	131.8	128.2	127.1	138.9	138.9	145.4	133.4
April	137.6	132.4	131.0	137.5	132.1	128.5	127.3	138.6	140.2	144.2	132.9
May	137.8	133.1	131.2	138.2	131.9	129.5	127.9	139.2	140.5	145.5	134.2
June	137.7	132.6	131.1	138.2	133.4	131.3	128.1	139.5	140.9	146.2	135.1
July	139.2	135.3	130.4	140.4	135.5	133.8	129.6	141.1	144.2	148.4	136.0
August	138.4	136.0	129.7	141.1	136.8	133.0	128.5	139.9	142.5	147.8	138.8
September	138.5	136.3	129.9	140.6	135.9	133.8	127.9	140.3	142.5	147.0	137.4
October	138.8	135.7	130.0	139.9	134.6	132.5	128.3	141.3	141.1	146.8	137.6
November	139.1	135.2	130.3	140.2	135.6	132.4	128.3	141.1	141.9	147.2	138.0
December	140.2	135.3	130.0	140.5	135.7	134.0	129.1	141.9	142.0	147.3	138.7
1945: January	140.0	135.1	130.6	140.0	135.6	134.3	129.6	140.4	142.7	148.0	139.7
February	138.3	134.7	129.7	140.1	134.5	134.0	128.8	139.7	141.8	147.2	138.1
March	137.5	133.5	129.6	139.7	134.8	132.6	128.2	139.0	140.8	147.5	137.1
April	138.0	134.1	130.3	140.9	134.1	133.7	128.5	140.1	142.0	149.9	138.0
May	139.9	136.3	133.9	142.1	136.0	135.4	130.1	142.5	144.3	151.7	139.9
June	145.3	139.9	133.5	144.6	140.7	138.9	131.9	144.3	146.3	150.0	141.4
July	145.1	139.0	133.5	144.8	141.9	138.2	132.2	144.8	144.7	150.9	143.1
August	143.4	137.2	131.8	145.9	141.6	137.8	132.1	143.9	146.1	149.8	143.4
September	140.7	135.7	131.1	145.6	140.0	134.9	131.5	143.4	144.7	148.7	142.0
October	141.0	135.5	131.1	145.5	139.1	134.7	131.4	144.5	145.0	148.3	142.6
November	143.6	135.3	132.8	145.4	139.0	135.1	132.8	145.6	145.5	150.6	142.1
December	144.0	135.8	134.5	145.7	140.3	137.7	133.7	146.5	146.5	152.1	142.3
1946: January	144.4	135.9	133.6	146.5	140.4	136.6	132.9	142.2	145.8	150.4	143.1
February	141.7	135.2	131.8	144.6	139.1	134.4	131.0	141.7	143.9	147.6	140.3
March	140.8	137.0	132.5	143.9	139.9	135.9	131.1	142.5	144.1	148.0	141.5
April	143.1	136.8	134.6	146.8	141.8	138.6	131.9	143.5	145.8	149.4	141.7
May	144.6	136.9	136.8	148.1	141.2	139.5	133.6	145.8	147.3	151.7	143.1
June	147.9	140.4	139.5	151.3	144.9	142.5	137.3	151.7	150.1	154.4	145.3
July	164.9	160.6	161.4	172.2	165.3	160.6	159.0	166.4	174.1	174.8	164.6
August	170.0	163.7	167.8	183.5	173.4	165.5	161.6	171.8	181.1	183.2	177.4
September	170.9	166.8	171.0	183.8	175.9	165.7	164.6	175.4	179.8	186.6	179.2
October	179.5	173.9	178.2	188.9	184.1	172.5	176.2	180.6	181.7	189.2	184.3
November	181.7	179.0	184.1	190.3	186.7	176.9	180.1	191.9	194.9	198.5	200.0
December	180.4	179.1	182.9	186.2	184.0	176.8	177.7	190.6	191.6	195.5	195.3
1947: January	178.5	177.3	178.2	187.1	183.8	177.4	173.1	183.9	193.4	193.3	192.6
February	176.5	174.1	178.3	183.9	180.5	174.3	172.3	184.1	194.5	190.1	189.6
March	185.3	181.4	183.2	197.2	189.8	180.3	179.1	186.8	202.3	199.6	199.2
April	183.3	178.5	183.2	198.3	185.5	178.4	176.6	189.2	201.7	198.7	197.2
May	181.1	180.5	183.8	195.1	186.1	180.5	176.8	189.3	200.2	195.3	191.8
June	184.1	186.4	187.4	201.7	194.2	185.2	178.5	192.6	203.5	197.3	194.4
July	186.1	187.8	187.2	205.5	199.3	187.4	179.3	192.2	205.9	199.8	195.0
August	190.0	191.2	191.1	211.4	200.6	192.2	183.4	197.6	211.0	201.8	199.0
September	196.8	196.1	197.9	212.9	208.2	195.5	192.1	200.7	217.1	213.8	205.8
October	194.6	193.8	195.6	212.3	206.5	192.3	191.0	199.4	213.6	213.8	208.4
November	197.4	193.4	198.1	220.3	206.1	194.9	191.2	202.6	213.2	215.1	207.1
December	199.4	198.9	202.6	224.1	210.5	200.1	195.9	209.7	217.3	221.6	211.3

TABLE D-4: Indexes of retail prices of foods, by group, 1923–47

[1935-39=100]

Period	All oods	Cereals and bakery products	Meats	Dairy products	Eggs	Fruits and vegetables	Beverages	Fats and oils	Sugar
1923	124.0	105.5	101.2	129.4	136.1	169.5	131.5	126.2	175.4
1924	122.8	107.2	102.4	124.1	139.0	159.5	147.6	134.1	159.1
1925	132.9	116.0	111.3	128.2	151.2	185.1	170.3	149.1	124.6
1926	137.4	115.7	117.8	127.4	141.7	210.8	170.4	145.0	120.0
1927	132.3	113.3	116.0	130.7	133.2	183.8	163.3	132.8	127.2
1928	130.8	110.1	123.1	131.4	137.3	161.4	165.2	128.3	123.1
1929	132.5	107.6	127.1	131.0	143.8	169.0	164.8	127.2	114.3
1930	126.0	104.3	119.1	121.0	121.4	177.5	143.4	119.2	107.4
1931	103.9	91.4	101.1	102.8	95.6	125.7	124.6	96.0	99.1
1932	86.5	82.6	79.3	84.9	82.3	103.5	112.6	71.1	89.6
1933	84.1	84.7	68.9	82.8	77.9	113.8	102.4	66.4	94.3
1934	93.7	98.3	78.9	90.9	88.6	119.1	107.6	76.4	97.9
1935	100.4	101.8	99.9	97.5	104.2	99.7	104.0	110.3	100.7
1936	101.3	100.7	98.9	101.6	103.3	104.8	99.4	102.8	99.6
1937	105.3	103.3	105.8	105.4	101.2	107.9	103.6	105.8	101.2
1938	97.8	99.8	98.9	99.6	100.3	93.2	97.7	93.5	97.9
1939[1]	95.2	94.5	96.6	95.9	91.0	94.5	95.5	87.7	100.6
1940	96.6	96.8	95.8	101.4	93.8	96.5	92.5	82.2	96.8
1941	105.5	97.9	107.5	112.0	112.2	103.2	101.5	94.0	106.4
1942	123.9	105.1	126.0	125.4	136.5	130.8	122.1	119.6	126.5
1943	138.0	107.6	133.8	134.6	161.9	168.8	124.8	126.1	127.1
1944	136.1	108.4	129.9	133.6	153.9	168.2	124.3	123.3	126.5
1945	139.1	109.0	131.2	133.9	164.4	177.1	124.7	124.0	126.5
1946	159.6	125.0	161.3	165.1	168.8	182.4	139.6	152.1	143.9
1941: January	97.8	94.9	101.1	105.1	97.4	93.3	90.9	80.3	95.3
February	97.9	95.0	102.5	104.4	85.0	95.6	91.5	81.1	96.0
March	98.4	95.1	102.5	104.6	83.0	97.1	93.5	81.3	98.1
April	100.6	95.2	103.5	106.3	92.0	100.6	95.0	85.1	104.6
May	102.1	95.4	104.2	107.7	94.3	103.5	96.1	88.0	106.9
June	105.9	95.9	106.8	109.7	104.4	112.1	98.7	92.5	107.4
July	106.7	96.2	108.7	112.3	114.7	107.0	101.4	96.6	107.8
August	108.0	99.0	111.2	114.5	120.7	103.4	103.8	99.2	109.0
September	110.7	100.9	115.5	118.5	132.9	100.5	109.2	103.0	111.8
October	111.6	102.2	112.9	119.9	137.3	104.0	111.0	105.6	112.5
November	113.1	102.2	110.4	120.9	146.1	110.3	112.9	106.7	112.9
December	113.1	102.5	111.1	120.5	138.1	110.5	114.1	108.5	114.4
1942: January	116.2	103.2	116.4	121.5	130.9	117.2	115.5	110.6	118.5
February	116.8	104.3	118.5	121.8	119.0	117.7	117.2	114.0	127.7
March	118.6	104.8	120.5	121.7	112.1	123.4	119.6	116.8	128.5
April	119.6	105.1	121.5	122.3	111.3	125.6	122.6	119.9	128.1
May	121.6	105.2	124.3	123.3	115.4	128.7	124.6	122.4	127.1
June	123.2	105.1	126.6	122.1	119.7	133.8	122.6	120.0	126.7
July	124.6	105.1	127.5	122.8	130.2	135.7	122.8	120.0	126.6
August	126.1	105.3	129.5	125.8	145.7	133.1	123.5	120.4	126.7
September	126.6	105.4	130.6	127.7	155.2	129.7	123.8	120.7	127.0
October	129.6	105.7	131.2	131.2	164.7	137.1	124.1	121.2	126.9
November	131.1	105.7	131.9	131.8	166.3	141.5	124.6	124.2	127.0
December	132.7	105.8	133.2	132.3	167.2	146.6	124.5	125.3	127.7
1943: January	133.0	105.9	134.7	134.2	166.5	144.1	124.4	126.2	127.4
February	133.6	106.5	136.1	135.9	144.1	148.9	124.8	126.1	127.4
March	137.4	107.0	137.3	137.0	142.4	164.9	124.9	126.4	127.9
April	140.6	107.5	138.0	137.1	141.3	179.5	124.9	126.6	128.4
May	143.0	107.6	138.3	136.9	142.1	190.8	124.5	126.3	127.6
June	141.9	107.5	138.3	133.7	146.2	187.8	124.5	126.5	126.5
July	139.0	107.8	130.9	133.4	153.6	180.5	124.5	126.5	126.4
August	137.2	108.1	129.7	133.4	167.4	169.8	125.3	126.5	126.6
September	137.4	108.2	129.9	133.5	177.5	167.0	125.2	126.5	126.8
October	138.2	108.3	130.6	133.5	190.1	166.4	125.1	126.5	126.8
November	137.3	108.3	130.4	133.5	190.8	162.6	124.8	125.0	126.6
December	137.1	108.4	130.9	133.5	181.0	163.7	124.7	124.3	126.7

See footnote at end of table.

TABLE D-4: Indexes of retail prices of foods, by group, 1923–47—Continued

[1935-39 = 100]

Period	All foods	Cereals and bakery products	Meats	Dairy products	Eggs	Fruits and vegetables	Beverages	Fats and oils	Sugar
1944: January	136.1	108.5	131.0	133.5	154.0	166.7	124.4	124.0	126.6
February	134.5	108.1	130.5	133.5	142.5	163.0	124.3	123.8	126.6
March	134.1	108.0	130.6	133.6	135.5	162.9	124.4	123.5	126.5
April	134.6	108.0	130.0	133.6	127.6	168.8	124.4	123.5	126.6
May	135.5	108.1	130.3	133.5	127.1	172.8	124.4	123.3	126.5
June	135.7	108.4	129.8	133.5	129.1	174.0	124.3	123.1	126.5
July	137.4	108.6	129.3	133.6	148.9	176.9	124.3	122.9	126.6
August	137.7	108.5	129.0	133.6	159.4	175 7	124.3	122.7	126.5
September	137.0	108.6	129.0	133.6	168.0	169.9	124.3	123.0	126.3
October	136.4	108.6	129.4	133.6	179.0	162.9	124.3	123.1	126.4
November	136.5	108.6	129.7	133.6	186.7	160.7	124.3	123.2	126.5
December	137.4	108.6	129.9	133.5	188.5	164.2	124.3	123.3	126.4
1945: January	137.3	108.7	130.2	133.5	169.6	168.9	124.4	123.4	126.3
February	136.5	108.7	130.7	133.5	153.2	168.9	124.5	123.5	126.3
March	135.9	108.7	130.8	133.5	140.7	169.5	124.5	123.7	126.5
April	136.6	108.9	130.8	133.5	139.9	173.3	124.6	123.8	126.4
May	138.8	109.0	131.6	133.5	140.7	182.5	124.6	123.9	126.5
June	141.1	109.1	131.6	133.4	145.1	192.6	124.6	123.9	126.4
July	141.7	109.1	131.6	133.4	157.2	191.8	124.7	124.0	126.5
August	140.9	109.1	131.8	133.4	171.4	183.5	124.7	124.0	126.6
September	139.4	109.1	131.6	133.4	183.9	172.5	124.7	124.1	126.5
October	139.3	109.1	131.0	133.3	185.5	172.5	124.7	124.0	126.5
November	140.1	109.1	131.0	135.9	192.1	172.3	124.9	124.4	126.5
December	141.4	109.2	131.2	136.2	193.2	177.3	124.9	125.1	126.6
1946: January	141.0	109.4	131.4	136.4	172.5	180.8	124.9	125.5	126.5
February	139.6	109.8	131.3	136.6	144.2	181.1	124.9	125.4	126.9
March	140.1	110.3	131.3	137.0	139.0	183.4	124.9	125.9	132.4
April	141.7	113.3	132.8	137.4	137.7	185.9	124.9	126.1	135.3
May	142.6	115.2	133.4	138.6	140.3	185.7	125.4	126.1	135.9
June	145.6	122.1	134.0	147.8	147.1	183.5	125.4	126.4	136.2
July	165.7	126.1	173.7	179.1	161.0	188.4	126.0	137.9	138.5
August	171.2	135.4	186.6	180.1	173.6	178.3	126.6	180.3	140.3
September	174.1	137.3	188.5	186.6	193.3	176.4	162.0	151.4	141.5
October	180.0	138.5	190.7	202.4	214.6	176.5	166.5	147.9	167.5
November	187.7	140.6	203.6	198.5	201.6	184.5	167.8	244.4	170.5
December	185.9	141.7	197.8	200.9	201.1	185.0	176.2	207.3	175.3
1947: January	183.8	143.4	199.0	190.1	181.7	187.9	178.3	201.9	176.2
February	182.3	144.1	196.7	183.2	169.9	191.7	182.8	201.3	178.1
March	189.5	148.1	207.6	187.5	174.7	199.6	186.9	219.1	178.6
April	188.0	153.4	202.6	178.9	176.3	200.4	189.5	227.8	179.3
May	187.6	154.2	203.9	171.5	178.9	207.0	188.9	200.5	179.3
June	190.5	154.6	216.9	171.5	183.0	205.0	181.3	188.3	179.7
July	193.1	155.0	220 2	178.8	203.0	202.0	180.8	182.0	179.7
August	196 5	155.7	228.4	183.8	212.3	199.8	181.7	178.5	179.8
September	203.5	157.8	240.6	195.2	235.9	198.2	187.0	176 6	181.1
October	201.6	160.3	235.5	190 1	232.7	196.6	190.8	190.0	181.8
November	202 7	167.9	227.0	198.4	224.7	199.6	194.7	196 4	183.2
December	206.9	170.5	227.3	204.9	236.1	205.3	198.5	208.2	183.7

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[1] For August 1939, the month before World War II started, the indexes were: all foods, 93.5; cereals and bakery products, 93.4; meats, 95.7; dairy products, 93.1; eggs, 90.7; fruits and vegetables, 92.4; beverages, 94.9; fats and oils, 84.5; and sugar, 95.6.

City Worker's Family Budget

In accordance with a directive of the 79th Congress, the Bureau of Labor Statistics determined the annual dollar cost of a worker's family budget and the relative differences between cities, as shown in table D-5. The 34 large cities in the United States which are covered in the Consumers' Price Index were selected for study and the budget was priced for March 1946 and June 1947. The budget includes food, clothing, housing, medical care, transportation, other goods and services, and an allowance for other essential needs such as taxes, insurance, union dues, and charity donations.

The budget represents the estimated cost in dollars for a city worker's family of four persons to maintain an adequate level of living according to prevailing United States standards of the needs for health, efficiency, nurture of children, and participation in community activities. It is neither a "subsistence" nor a "luxury" budget. It provides a modest and adequate American standard of living based upon the kinds and quantities of goods and services that workers actually select.

In formulating the budget, the basic problem was to determine for each group of goods or services the dividing point in consumption between what families considered to be an adequate or an inadequate level of living—the point in the scale of family consumption below which reduction meets greater and greater resistance and above which expansion becomes more and more limited. This was determined by a study of changes in family consumption with changes in purchasing power, as described in the preprint from the Monthly Labor Review for February 1948, Serial No. R 1909, The City Worker's Family Budget. Family expenditure records obtained in earlier Bureau surveys, particularly in 1934–36 and again in 1941 and 1944, were used for this purpose.

The list of items and quantities in the budget was determined under the guidance of a technical committee. In general, existing scientific standards were used. It was necessary to translate these standards into a list of commodities and services usually purchased by American families. For the food budget, a diet was selected which approximates the nutritional standards recommended by the Food and Nutrition Board of the National Research Council. The housing budget meets the standards fixed by the American Public Health Association and by the Federal Public Housing Administration.

Representative articles were priced for March 1946 and June 1947 by personal visit of Bureau of Labor Statistics agents, according to the regular procedure used in pricing for the Consumers' Price Index. However, prices were obtained from more sources and for more items than is usual. For each city actual prices were collected for over 85 percent of the goods and services included in the budget; others were estimated on the basis of established relationships to the prices of other commodities in a few selected cities.

The type of family chosen—in some respects an arbitrary choice—consists specifically of four persons living in a separate house or apartment. Family composition is an employed father aged 38 years, a housewife of 36 not gainfully employed, a boy of 13 in high school, and a girl of 8 in grade school.

Although detailed budget studies have not been made for families of sizes other than four persons, the Bureau of Labor Statistics has made the following estimate of costs:

	Percent of cost for 4 persons
2-person family	65
3-person family	84
5-person family	114

For cities other than those covered in the study, a procedure is available in the Bureau of Labor Statistics for use in estimating the cost of the budget on the basis of a short list of items.

Table D–5: City worker's budget for family of 4 persons and relative differences in costs in 34 large cities, March 1946 and June 1947

[Cost in Washington, D.C. = 100]

City and State	Dollar costs										Relative differences in costs (Washington, D.C. = 100)							
	Estimated total cost of budget		Goods and services		Food[1]		Clothing[2]		Housing[3]		Goods and services		Food[1]		Clothing[2]		Housing[3]	
	June 1947	March 1946	June 1947	March 1946	June 1947	March 1946	June 1947	March 1946	June 1947	March 1946	June 1947	March 1946	June 1947	March 1946	June 1947	March 1946	June 1947	March 1946
Washington, D.C.	$3,458	$2,985	$3,111	$2,718	$1,040	$807	$462	$409	$868	$840	100	100	100	100	100	100	100	100
Seattle, Wash.	3,388	2,913	3,054	2,660	1,094	854	459	404	725	683	98	98	105	106	99	99	84	81
New York, N.Y.	3,347	2,820	3,019	2,583	1,095	850	473	397	783	764	97	95	105	105	102	97	90	91
Milwaukee, Wis.	3,317	2,811	2,988	2,575	1,029	800	460	382	766	734	96	95	99	99	100	93	88	87
Boston, Mass.	3,310	2,842	2,981	2,598	1,064	844	420	363	738	702	96	96	102	105	91	89	85	84
Detroit, Mich.	3,293	2,813	2,974	2,578	1,060	821	445	385	707	679	96	95	102	102	96	94	82	81
Pittsburgh, Pa.	3,291	2,761	2,973	2,535	1,063	818	453	384	716	689	96	93	102	101	98	94	82	82
Minneapolis, Minn.	3,282	2,779	2,965	2,550	1,026	799	477	396	772	731	95	94	99	99	103	97	89	87
Chicago, Ill.	3,282	2,793	2,965	2,561	1,055	820	451	386	787	762	95	94	101	102	98	94	91	91
San Francisco, Calif.	3,317	2,853	2,964	2,582	1,057	830	449	382	678	665	95	95	102	103	97	93	78	79
Baltimore, Md.	3,260	2,797	2,944	2,565	1,050	815	415	384	773	740	95	94	101	101	90	94	89	88
St. Louis, Mo.	3,247	2,824	2,928	2,580	1,036	814	420	369	762	742	94	95	100	101	91	90	88	88
Mobile, Ala.	2,276	2,826	2,925	2,557	1,047	847	416	343	771	730	94	94	101	105	90	84	89	87
Norfolk, Va.	3,241	2,804	2,919	2,563	1,048	823	433	381	703	684	94	94	101	102	94	93	81	81
Memphis, Tenn.	3,220	2,750	2,912	2,524	1,054	815	423	362	727	699	94	93	101	101	92	89	84	83
Los Angeles, Calif.	3,251	2,766	2,910	2,512	1,050	822	427	356	651	626	94	92	101	102	92	87	75	75
Birmingham, Ala.	3,251	2,781	2,904	2,521	1,057	824	425	357	702	671	93	93	102	102	92	87	81	80
Richmond, Va.	3,223	2,776	2,904	2,542	1,019	805	416	357	772	746	93	94	98	100	90	87	89	89
Cleveland, Ohio	3,200	2,712	2,897	2,495	1,046	810	459	402	667	635	93	92	101	100	99	98	77	76
Portland, Maine	3,200	2,735	2,894	2,511	1,068	836	416	372	708	676	93	92	103	104	90	91	82	80
Denver, Colo.	3,168	2,711	2,870	2,494	1,040	811	434	389	683	659	92	92	100	100	94	95	79	78
Philadelphia, Pa.	3,203	2,681	2,867	2,442	1,063	828	432	376	683	644	92	90	102	103	94	92	79	77
Scranton, Pa.	3,163	2,623	2,866	2,422	1,052	817	453	358	659	628	92	89	101	101	98	88	76	75
Savannah, Ga.	3,150	2,721	2,855	2,502	1,056	826	392	355	720	697	92	92	102	102	85	87	83	83
Portland, Oreg.	3,161	2,748	2,854	2,521	1,020	819	417	384	672	631	92	93	98	101	90	94	77	75
Atlanta, Ga.	3,150	2,691	2,853	2,475	1,044	811	414	371	713	678	92	91	100	100	90	91	82	81
Jacksonville, Fla.	3,135	2,677	2,843	2,466	1,035	820	415	344	668	648	91	91	100	102	90	84	77	77
Manchester, N.H.	3,132	2,700	2,837	2,481	1,063	832	411	377	668	637	91	91	102	103	89	92	77	76
Cincinnati, Ohio	3,119	2,678	2,830	2,467	1,000	792	444	387	686	664	91	91	96	98	96	95	79	79
Buffalo, N.Y.	3,095	2,615	2,810	2,415	1,042	822	434	368	633	599	90	89	100	102	94	90	73	71
Indianapolis, Ind.	3,098	2,667	2,790	2,440	1,010	797	413	366	671	652	90	90	97	99	89	89	77	78
Kansas City, Mo.	3,010	2,603	2,739	2,405	1,021	803	410	364	610	598	88	88	98	100	89	89	70	71
Houston, Texas	3,007	2,532	2,735	2,345	1,025	804	403	331	620	591	88	86	99	100	87	81	71	70
New Orleans, La.	3,004	2,573	2,734	2,381	1,058	836	424	365	563	549	88	88	102	104	92	89	65	65

[1] Includes meals and between-meal food and beverages purchased and consumed away from home.
[2] Includes shoe repairs, dry cleaning, and supplies for home cleaning and mending.
[3] Rent, heating fuel, utilities, housefurnishings, and household supplies.

Wholesale Prices

The wholesale price index of the Bureau of Labor Statistics is designed to measure the average change in commodity prices at primary market levels. It is derived from more than 800 price series which are combined into 49 subgroups, 10 major groups, and 5 important economic groups.

In general, the prices used for the index are those charged by representative manufacturers or producers to types of distributors or industrial consumers which are characteristic of the particular industry. Insofar as feasible, prices used for the index are f.o.b. point of production or sale. For farm products and some foods, prices quoted in organized commodity markets are used.

A commodity may be priced at several stages of production. For example, cotton appears in the index as raw cotton, cotton yarn, cotton grey goods, cotton piece goods, and cotton clothing. For each of these stages a representative commodity sample has been selected and prices obtained at the primary market level of distribution.

Commodities are priced in terms of a given specification at stated terms of trade to the type of purchaser accounting for the greatest volume of purchases. Shifts in the relative importance of sales to different types of purchaser or the distribution pattern of the industry, changes in the relative importance of sellers, and major variations in the specification of the commodities are handled so as to cause no movement in the index.

A majority of the more than 800 price series are represented by a single quotation, since for many articles price movements of major producers are closely related. This is not true for about 150 commodities for each of which quotations from 2 to 50 sellers are used. In all, a total of about 1,700 quotations go into the index each period.

If commodities have a recognized market price, quotations are taken from trade journals. For other commodities, including most manufactured goods, prices are obtained directly from sellers.

The index is calculated as a fixed base weighted aggregate, using prices in 1926 as 100. Current weights reflect quantities marketed in 1929–31. These weights have been used since 1934 with minor changes dictated by changing market conditions. Wholesale price indexes by groups of commodities shown in table D–6, cover the period 1890–1947.

TABLE D-6: Indexes of wholesale prices by group of commodities, 1890–1947[1]

[1926=100]

Period	All commodities	Farm products	Foods	Hides and leather products	Textile products	Fuel and lighting materials	Metals and metal products	Building materials	Chemicals and allied products	House furnishing goods	Miscellaneous	Raw materials	Semimanufactured articles	Manufactured products	All commodities other than farm products	All commodities other than farm products and foods
1890	56.2	50.4	55.5	47.5	57.8	38.1	105.3	46.5	73.2	49.9	97.9	....	....	....	....	....
1891	55.8	54.2	54.8	47.9	54.6	37.0	92.2	44.2	74.0	50.4	94.3	....	....	....	....	....
1892	52.2	49.5	51.0	47.2	55.2	34.8	84.0	41.7	74.6	48.1	86.6	....	....	....	....	....
1893	53.4	51.3	54.7	45.1	54.1	35.3	76.8	41.6	72.7	48.1	89.0	....	....	....	....	....
1894	47.9	44.6	48.2	43.0	46.1	34.3	65.7	39.8	65.5	45.3	86.4	....	....	....	....	....
1895	48.8	43.9	47.3	49.4	44.3	40.3	70.4	38.8	64.7	43.5	88.9	....	....	....	....	....
1896	46.5	39.6	44.1	45.2	43.1	39.5	71.2	38.9	65.0	43.4	90.2	....	....	....	....	....
1897	46.6	42.5	45.5	45.9	42.9	33.9	65.0	37.4	70.9	42.5	92.5	....	....	....	....	....
1898	48.5	44.9	47.8	48.3	44.9	34.5	65.3	39.6	77.4	44.0	93.4	....	....	....	....	....
1899	52.2	45.8	47.7	49.4	47.7	41.2	100.0	43.6	81.1	45.0	97.4	....	....	....	....	....
1900	56.1	50.5	50.8	49.4	53.3	46.3	98.0	46.2	82.1	48.9	102.0	....	....	....	....	....
1901	55.3	52.8	50.5	48.9	48.1	44.6	93.1	44.3	84.2	48.9	93.4	....	....	....	....	....
1902	58.9	58.4	53.3	50.8	49.4	51.8	91.0	45.3	86.5	49.2	88.1	....	....	....	....	....
1903	59.6	55.6	52.0	49.9	52.8	60.3	90.2	46.7	84.1	50.9	98.9	....	....	....	....	....
1904	59.7	58.5	54.0	49.7	52.9	53.3	79.9	45.0	84.1	50.3	109.5	....	....	....	....	....
1905	60.1	56.4	55.1	53.9	54.1	49.6	89.1	48.1	82.3	49.7	117.4	....	....	....	....	....
1906	61.8	57.3	53.4	57.7	58.7	52.0	102.4	54.0	76.8	51.3	115.3	....	....	....	....	....
1907	65.2	62.2	57.0	58.0	63.5	54.4	109.8	56.8	78.5	55.0	108.2	....	....	....	....	....
1908	62.9	62.2	58.7	55.6	54.8	53.7	86.3	52.0	79.6	51.6	97.8	....	....	....	....	....
1909	67.6	69.6	62.6	61.5	56.5	51.6	84.5	53.7	79.9	51.7	129.6	....	....	....	....	....
1910	70.4	74.3	64.9	60.2	58.4	47.6	85.2	55.3	82.0	54.0	152.7	....	....	....	....	....
1911	64.9	66.8	62.0	58.8	55.5	46.7	80.8	55.3	81.6	52.7	108.6	....	....	....	....	....
1912	69.1	72.6	66.8	64.5	55.7	51.4	89.5	55.9	80.7	53.0	106.4	....	....	....	....	....
1913	69.8	71.5	64.2	68.1	57.3	61.3	90.8	56.7	80.2	56.1	93.1	68.8	74.9	69.4	69.0	70.0
1914	68.1	71.2	64.7	70.9	54.6	56.6	80.2	52.7	81.4	56.5	89.9	67.6	70.0	67.8	66.8	66.4
1915	69.5	71.5	65.4	75.5	54.1	51.8	86.3	53.5	112.0	56.0	86.9	67.2	81.2	68.9	68.5	68.0
1916	85.5	84.4	75.7	93.4	70.4	74.3	116.5	67.6	160.7	61.4	100.6	82.6	118.3	82.3	85.3	88.3
1917	117.5	129.0	104.5	123.8	98.7	105.4	150.6	88.2	165.0	74.2	122.1	122.6	150.4	109.2	113.1	14.2
1918	131.3	148.0	119.1	125.7	137.2	109.2	136.5	98.6	182.3	93.3	134.4	135.8	153.8	124.7	125.1	124.6
1919	138.6	157.6	129.5	174.1	135.3	104.3	130.9	115.6	157.0	105.9	139.1	145.9	157.9	130.6	131.6	128.8
1920	154.4	150.7	137.4	171.3	164.8	163.7	149.4	150.1	164.7	141.8	167.5	151.8	198.2	149.8	154.8	161.3
1921	97.6	88.4	90.6	109.2	94.5	96.8	117.5	97.4	115.0	113.0	109.2	88.3	96.1	103.3	100.1	104.9
1922	96.7	93.8	87.6	104.6	100.2	107.3	102.9	97.3	100.3	103.5	92.8	96.0	98.9	96.5	97.3	102.4
1923	100.6	98.6	92.7	104.2	111.3	97.3	109.3	108.7	101.1	108.9	99.7	98.5	118.6	99.2	100.9	104.3
1924	98.1	100.0	91.0	101.5	106.7	92.0	106.3	102.3	98.9	104.9	93.6	97.6	108.7	96.3	97.1	99.7
1925	103.5	109.8	100.2	105.3	108.3	96.5	103.2	101.7	101.8	103.1	109.0	106.7	105.3	100.6	101.4	102.6
1926	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927	95.4	99.4	96.7	107.7	95.6	88.3	96.3	94.7	96.1	97.5	91.0	96.5	94.3	95.0	94.6	94.0
1928	96.7	105.9	101.0	121.4	95.5	84.3	97.0	94.1	95.0	95.1	85.4	99.1	94.5	95.9	94.8	92.9
1929	95.3	104.9	99.9	109.1	90.4	83.0	100.5	95.4	94.0	94.3	82.6	97.5	93.9	94.5	93.3	91.6
1930	86.4	88.3	90.5	100.0	80.3	78.5	92.1	89.9	88.7	92.7	77.7	84.3	81.8	88.0	85.9	85.2
1931	73.0	64.8	74.6	86.1	66.3	67.5	84.5	79.2	79.3	84.9	69.8	65.6	69.0	77.0	74.6	75.0
1932	64.8	48.2	61.0	72.9	54.9	70.3	80.2	71.4	73.9	75.1	64.4	55.1	59.3	70.3	68.3	70.2
1933	65.9	51.4	60.5	80.9	64.8	66.3	79.8	77.0	72.1	75.8	62.5	56.5	65.4	70.5	69.0	71.2
1934	74.9	65.3	70.5	86.6	72.9	73.3	86.9	86.2	75.3	81.5	69.7	68.6	72.8	78.2	76.9	78.4
1935	80.0	78.8	83.7	89.6	70.9	73.5	86.4	85.3	79.0	80.6	68.3	77.1	73.6	82.2	80.2	77.9
1936	80.8	80.9	82.1	95.4	71.5	76.2	87.0	86.7	78.7	81.7	70.5	79.9	75.9	82.0	80.7	79.6
1937	86.3	86.4	85.5	104.6	76.3	77.6	95.7	95.2	82.6	89.7	77.8	84.8	85.3	87.2	86.2	85.3
1938	78.6	68.5	73.6	92.8	66.7	76.5	95.7	90.3	77.0	86.8	73.3	72.0	75.4	82.2	80.6	81.7
1939	77.1	65.3	70.4	95.6	69.7	73.1	94.4	90.5	76.0	86.3	74.8	70.2	77.0	80.4	79.5	81.3
1940	78.6	67.7	71.3	100.8	73.8	71.7	95.8	94.8	77.0	88.5	77.3	71.9	79.1	81.6	80.8	83.0
1941	87.3	82.4	82.7	108.3	84.8	76.2	99.4	103.2	84.4	94.3	82.0	83.5	86.9	89.1	88.3	89.0
1942	98.8	105.9	99.6	117.7	96.9	78.5	103.8	110.2	95.5	102.4	89.7	100.6	92.6	98.6	97.0	95.5
1943	103.1	122.6	106.6	117.5	97.4	80.8	103.8	111.4	94.9	102.7	92.2	112.1	92.9	100.1	98.7	96.9
1944	104.0	123.3	104.9	116.7	98.4	83.0	103.8	115.5	95.2	104.3	93.6	113.2	94.1	100.8	99.6	98.5
1945	105.8	128.2	106.2	118.1	100.1	84.0	104.7	117.8	95.2	104.5	94.7	116.8	95.9	101.8	100.8	99.7
1946	121.1	148.9	130.7	137.2	116.3	90.1	115.5	132.6	101.4	111.6	100.3	134.7	110.8	116.1	114.9	109.5
1947	152.1	181.2	168.7	182.4	141.7	108.7	145.0	179.7	127.3	131.1	115.5	165.6	148.5	146.0	145.5	135.2

See footnote at end of table.

TABLE D-6: Indexes of wholesale prices by group of commodities, 1890-1947[1]—Continued

[1926 = 100]

Period	All commodities	Farm products	Foods	Hides and leather products	Textile products	Fuel and lighting materials	Metals and metal products	Building materials	Chemicals and allied products	House furnishing goods	Miscellaneous	Raw materials	Semimanufactured articles	Manufactured products	All commodities other than farm products	All commodities other than farm products and foods
1939: January	76.9	67.2	71.5	93.1	65.9	72.8	94.4	89.5	76.1	85.4	73.2	70.9	74.9	80.0	78.9	80.2
February	76.9	67.2	71.5	91.9	66.1	73.0	94.3	89.6	75.8	85.2	73.5	70.9	74.4	80.2	78.9	80.2
March	76.7	65.8	70.2	91.8	66.6	73.1	94.3	89.8	76.0	85.2	74.1	70.1	74.6	80.2	79.0	80.4
April	76.2	63.7	68.6	90.9	66.9	73.4	94.0	89.6	75.6	85.4	74.4	68.5	74.4	80.1	78.8	80.5
May	76.2	63.7	68.2	91.6	67.5	73.9	93.5	89.5	75.6	85.5	74.2	68.9	74.3	79.9	78.8	80.6
June	75.6	62.4	67.6	92.3	67.3	73.0	93.2	89.5	75.2	85.6	73.8	67.7	74.1	79.6	78.4	80.2
July	75.4	62.6	67.5	92.5	67.6	72.8	93.2	89.7	74.5	85.6	73.4	67.8	74.4	79.2	78.1	80.2
August	75.0	61.0	67.2	92.7	67.8	72.6	93.2	89.6	74.2	85.6	73.3	66.5	74.5	79.1	77.9	80.1
September	79.1	68.7	75.1	98.5	71.7	72.8	94.8	90.9	76.6	86.6	76.6	72.6	81.8	81.9	81.3	82.1
October	79.4	67.1	73.3	104.6	75.5	73.9	95.8	92.8	77.6	87.8	77.6	72.3	83.1	82.3	82.0	83.8
November	79.2	67.3	72.3	104.0	76.4	74.1	96.0	93.0	77.4	88.4	77.0	72.4	82.1	82.0	81.6	84.0
December	79.2	67.6	71.9	103.7	78.0	72.8	96.0	93.0	77.7	88.5	77.4	73.3	82.0	81.7	81.6	83.9
1940: January	79.4	69.1	71.7	103.6	77.9	72.7	95.8	93.4	77.7	87.9	77.7	73.8	81.7	81.7	81.5	83.9
February	78.7	68.7	71.1	102.4	75.4	72.4	95.3	93.2	77.5	88.0	77.3	72.7	79.9	81.4	80.8	83.2
March	78.4	67.9	70.2	101.8	74.0	72.2	95.5	93.3	77.0	88.0	76.9	72.0	79.7	81.1	80.5	82.9
April	78.6	69.4	71.6	101.8	72.9	71.8	94.5	92.5	76.8	88.4	77.7	73.0	78.2	81.2	80.5	82.5
May	78.4	67.9	71.4	101.3	72.9	71.7	94.5	92.5	76.7	88.5	77.7	72.0	78.3	81.3	80.5	82.5
June	77.5	66.2	70.3	99.2	72.6	71.4	94.7	92.4	76.1	88.5	77.3	70.7	77.9	80.5	79.8	82.2
July	77.7	66.5	70.3	99.0	72.4	71.1	95.1	92.5	77.0	88.5	77.7	70.7	77.8	80.9	80.0	82.3
August	77.4	65.6	70.1	96.9	72.3	71.1	94.9	93.3	76.7	88.5	76.7	69.8	77.0	81.0	79.9	82.0
September	78.0	66.2	71.5	98.3	72.5	71.0	95.4	95.6	76.8	88.5	76.5	70.5	77.6	81.5	80.4	82.3
October	78.7	66.4	71.1	100.4	73.6	71.6	97.3	97.8	76.9	88.6	76.9	71.4	79.4	82.1	81.3	83.5
November	79.6	68.2	72.5	102.3	74.5	71.9	97.6	98.9	77.5	88.6	77.5	72.6	80.7	82.6	81.9	84.1
December	80.0	69.7	73.5	102.3	74.8	71.7	97.6	99.3	77.7	88.9	77.3	73.6	80.7	82.8	82.1	84.1
1941: January	80.8	71.6	73.7	102.4	75.2	72.1	97.7	99.6	78.6	89.0	77.1	74.6	81.3	83.5	82.7	84.3
February	80.6	70.3	73.5	101.6	76.4	72.1	97.6	99.3	78.5	89.1	76.9	74.0	81.6	83.5	82.7	84.4
March	81.5	71.6	75.2	102.6	78.4	72.0	97.7	99.5	79.8	89.5	77.6	75.3	83.4	84.2	83.6	84.9
April	83.2	74.4	77.9	103.9	81.0	72.9	97.9	100.1	81.8	90.4	78.6	77.5	85.1	85.5	85.0	85.9
May	84.9	76.4	79.5	106.4	83.0	75.6	98.1	100.4	83.6	91.4	79.6	79.7	86.4	87.1	86.6	87.4
June	87.1	82.1	83.1	107.8	84.5	77.9	98.3	101.0	83.8	93.1	80.6	83.6	87.6	88.6	88.0	88.6
July	88.8	85.8	84.7	109.4	86.2	78.5	98.5	103.1	85.2	94.4	82.0	86.1	87.9	90.1	89.3	89.7
August	90.3	87.4	87.2	110.2	88.3	79.5	98.6	105.5	86.0	95.4	83.7	87.6	89.5	91.5	90.7	90.8
September	91.8	91.0	89.5	111.3	89.7	79.2	98.6	106.4	87.4	97.2	85.1	90.0	90.3	92.8	91.9	91.6
October	92.4	90.0	88.9	112.6	90.9	79.6	103.1	107.3	88.8	99.5	86.4	89.7	89.9	93.9	92.8	93.4
November	92.5	90.6	89.3	114.8	91.1	78.8	103.3	107.5	88.8	100.6	87.3	90.2	89.7	93.8	92.7	93.5
December	93.6	94.7	90.5	114.8	91.8	78.4	103.3	107.8	90.4	101.1	87.6	92.3	90.1	94.6	93.3	93.7
1942: January	96.0	100.8	93.7	114.9	93.6	78.2	103.5	109.3	94.9	102.4	89.3	96.1	91.7	96.4	94.8	94.6
February	96.7	101.3	94.6	115.3	95.2	78.0	103.6	110.1	95.9	102.5	89.3	97.0	92.0	97.0	95.5	94.9
March	97.6	102.8	96.1	116.7	96.6	77.7	103.8	110.5	96.1	102.6	89.7	98.2	92.3	97.8	96.2	95.2
April	98.7	104.5	98.7	119.2	97.7	77.7	103.8	110.2	96.1	102.8	90.3	100.0	92.8	98.7	97.2	95.6
May	98.8	104.4	98.9	118.8	98.0	78.0	103.9	110.1	96.5	102.9	90.5	99.7	92.9	99.0	97.4	95.7
June	98.6	104.4	99.3	118.2	97.6	78.4	103.9	110.1	96.4	102.9	90.2	99.8	92.8	98.6	97.1	95.6
July	98.7	105.3	99.2	118.2	97.1	79.0	103.8	110.3	95.8	102.8	89.8	100.1	92.8	98.6	97.0	95.7
August	99.2	106.1	100.8	118.2	97.3	79.0	103.8	110.3	95.4	102.7	88.9	101.2	92.7	98.9	97.5	95.6
September	99.6	107.8	102.4	118.1	97.1	79.0	103.8	110.4	95.3	102.5	88.8	102.2	92.9	99.2	97.7	95.5
October	100.0	109.0	103.4	117.8	97.1	79.0	103.8	110.4	95.3	102.5	88.6	103.0	92.7	99.4	97.9	95.5
November	100.3	110.5	103.5	117.8	97.1	79.1	103.8	110.1	94.1	102.5	90.1	103.9	92.6	99.4	97.9	95.8
December	101.0	113.8	104.3	117.8	97.2	79.2	103.8	110.0	94.1	102.5	90.5	106.1	92.5	99.6	98.1	95.9
1943: January	101.9	117.0	105.2	117.8	97.3	79.3	103.8	109.8	94.8	102.5	90.7	108.2	92.8	100.1	98.5	96.0
February	102.5	119.0	105.8	117.8	97.3	79.8	103.8	110.2	94.9	102.6	90.9	109.6	92.9	100.3	98.7	96.2
March	103.4	122.8	107.4	117.8	97.3	80.3	103.8	110.4	94.6	102.6	91.4	112.0	93.0	100.5	99.0	96.5
April	103.7	123.9	108.4	117.8	97.4	80.6	103.8	110.3	94.7	102.6	91.6	112.8	93.1	100.6	99.1	96.6
May	104.1	125.7	110.5	117.8	97.4	80.8	103.8	110.5	94.8	102.7	91.9	114.0	93.0	100.7	99.2	96.7
June	103.8	126.2	109.6	117.8	97.4	81.0	103.8	110.6	94.7	102.8	91.8	114.3	92.8	100.1	98.7	96.8
July	103.2	125.0	107.2	117.8	97.4	81.0	103.7	110.7	94.8	102.6	92.3	113.6	92.8	99.6	98.3	96.9
August	103.1	123.5	105.8	117.8	97.4	80.9	103.7	112.2	94.9	102.6	92.6	112.7	92.9	99.7	98.5	97.1
September	103.1	123.1	105.0	117.8	97.5	81.0	103.7	112.5	94.9	102.6	93.0	112.4	92.9	99.9	98.6	97.2
October	103.0	122.2	105.1	117.8	97.6	81.0	103.7	112.7	95.0	102.6	93.1	111.9	92.9	100.0	98.7	97.3
November	102.9	121.4	105.8	116.5	97.7	81.2	103.8	113.1	95.0	102.8	93.2	111.3	92.9	100.2	98.8	97.4
December	103.2	121.8	105.6	117.0	97.7	82.1	103.8	113.4	95.0	102.8	93.3	112.1	93.1	100.2	99.0	97.6

See footnote at end of table.

Table D-6: Indexes of wholesale prices by group of commodities, 1890–1947[1]—Continued

[1926 = 100]

Period	All commodities	Farm products	Foods	Hides and leather products	Textile products	Fuel and lighting materials	Metals and metal products	Building materials	Chemicals and allied products	House furnishing goods	Miscellaneous	Raw materials	Semimanufactured articles	Manufactured products	All commodities other than farm products	All commodities other than farm products and foods
1944: January	103.3	121.8	104.9	117.2	97.7	82.3	103.7	113.5	95.0	104.5	93.2	112.2	93.2	100.2	99.1	97.8
February	103.6	122.5	104.5	116.9	97.7	83.1	103.7	113.6	95.0	104.2	93.4	112.8	93.4	100.4	99.3	98.0
March	103.8	123.6	104.6	116.9	97.8	83.0	103.7	114.2	95.0	104.3	93.5	113.4	93.7	100.5	99.3	98.1
April	103.9	123.2	104.9	116.9	97.8	83.0	103.7	115.2	95.5	104.3	93.5	113.2	93.6	100.8	99.6	98.4
May	104.0	122.9	105.0	117.0	97.8	83.2	103.7	115.7	95.5	104.3	93.5	113.0	93.7	100.9	99.7	98.5
June	104.3	125.0	106.5	116.4	97.8	83.3	103.7	115.9	95.3	104.3	93.5	114.2	93.8	100.9	99.6	98.5
July	104.1	124.1	105.8	116.2	98.0	83.2	103.7	115.9	95.5	104.3	93.6	113.6	93.9	100.9	99.6	98.5
August	103.9	122.6	104.8	116.0	98.4	83.2	103.8	116.0	95.5	104.4	93.6	112.7	94.1	100.9	99.7	98.6
September	104.0	122.7	104.2	116.0	99.2	83.0	103.8	116.0	94.9	104.4	93.6	112.8	94.7	100.9	99.7	98.6
October	104.1	123.4	104.2	116.2	99.4	82.9	103.7	116.3	95.0	104.4	93.6	113.2	94.8	101.0	99.8	98.7
November	104.4	124.4	105.1	116.2	99.4	83.1	103.7	116.4	94.8	104.4	94.0	113.8	94.8	101.1	99.9	98.8
December	104.7	125.5	105.5	117.4	99.5	83.1	103.8	116.4	94.8	104.4	94.2	114.6	94.8	101.1	100.0	98.9
1945: January	104.9	126.2	104.7	117.5	99.6	83.3	104.0	116.8	94.9	104.5	94.2	115.1	94.9	101.3	100.1	99.1
February	105.2	127.0	104.7	117.6	99.7	83.3	104.2	117.0	94.9	104.5	94.6	115.6	95.0	101.5	100.2	99.2
March	105.3	127.2	104.6	117.8	99.7	83.4	104.2	117.1	94.9	104.5	94.6	115.7	95.0	101.6	100.4	99.2
April	105.7	129.0	105.8	117.9	99.6	83.5	104.2	117.1	94.9	104.5	94.8	116.8	95.0	101.8	100.5	99.3
May	106.0	129.9	107.0	117.9	99.6	83.7	104.3	117.3	94.9	104.5	94.8	117.7	95.0	101.8	100.6	99.4
June	106.1	130.4	107.5	118.0	99.6	83.9	104.7	117.4	95.0	104.5	94.8	118.2	95.4	101.8	100.7	99.6
July	105.9	129.0	106.9	118.0	99.6	84.3	104.7	117.5	95.3	104.5	94.8	117.5	95.3	101.8	100.7	99.7
August	105.7	126.9	106.4	118.0	99.6	84.8	104.7	117.8	95.3	104.5	94.8	116.3	95.5	101.8	100.9	99.9
September	105.2	124.3	104.9	118.7	109.1	84.1	104.9	118.0	95.3	104.6	94.8	114.8	96.5	101.7	100.9	99.8
October	105.9	127.3	105.7	118.6	101.0	84.2	105.0	118.3	95.5	104.7	94.8	116.6	96.8	101.9	101.0	100.1
November	106.8	131.1	107.9	118.8	101.1	84.6	105.2	118.7	95.7	104.7	94.8	118.9	96.9	102.2	101.3	100.2
December	107.1	131.5	108.6	118.9	101.4	84.8	105.6	119.5	96.1	104.7	94.8	119.2	97.6	102.5	101.6	100.5
1946: January	107.1	129.9	107.3	119.4	101.6	84.9	105.7	120.0	96.0	106.2	95.3	118.3	97.6	102.9	101.9	100.8
February	107.7	130.8	107.8	119.6	102.2	85.1	106.6	120.9	95.9	106.5	95.6	118.9	98.8	103.4	102.5	101.3
March	108.9	133.4	109.4	119.8	104.7	85.0	108.4	124.9	96.0	106.9	95.6	120.5	100.4	104.5	103.4	102.2
April	110.2	135.4	110.8	119.8	107.9	86.1	108.8	126.5	96.1	107.5	95.7	122.2	101.1	105.5	104.5	103.3
May	111.0	137.5	111.5	120.4	108.8	86.1	109.4	127.8	96.5	108.3	97.0	123.6	101.9	106.1	105.1	103.9
June	112.9	140.1	112.9	122.4	109.2	87.8	112.2	129.9	96.4	110.4	98.5	126.3	105.7	107.3	106.7	105.6
July	124.7	157.0	140.2	141.2	118.1	90.3	113.3	132.1	99.3	111.9	101.3	141.7	110.2	118.9	117.5	109.5
August	129.1	161.0	149.0	138.9	124.0	94.4	114.0	132.7	98.4	112.6	102.0	145.7	111.9	123.9	121.9	111.6
September	124.0	151.3	131.9	141.6	125.7	94.3	114.2	133.8	98.4	113.6	102.1	141.4	115.0	117.2	117.2	112.2
October	134.1	165.3	157.9	142.4	128.6	94.2	125.8	134.8	99.9	115.3	104.0	148.7	118.2	129.6	127.1	115.8
November	139.7	169.8	165.4	172.5	131.6	94.5	130.2	145.5	118.9	118.2	106.5	153.4	129.1	134.7	132.9	120.7
December	140.9	163.1	169.1	176.7	134.7	96.1	134.7	157.8	125.7	120.2	108.9	153.2	136.2	135.7	134.8	124.7
1947: January	142.0	165.0	156.6	176.2	138.2	97.7	139.0	170.2	128.3	126.5	110.9	152.3	140.8	137.3	136.8	128.4
February	145.2	170.4	162.3	174.1	139.5	98.2	139.6	174.8	129.3	128.3	111.7	154.9	144.2	140.5	139.4	129.4
March	150.0	182.6	167.9	175.1	140.5	100.7	141.1	177.5	132.2	129.0	115.6	163.1	147.2	143.8	142.6	131.7
April	148.0	176.9	162.4	172.1	140.3	103.2	141.3	178.1	133.5	129.1	116.1	160.1	147.5	142.1	141.5	132.4
May	147.3	175.4	159.6	171.5	139.9	103.4	141.9	176.2	127.1	129.5	116.9	158.4	146.0	142.0	140.9	132.3
June	147.7	177.8	161.8	173.8	139.9	104.0	142.0	174.1	120.8	129.7	113.5	160.2	145.1	142.0	140.9	131.6
July	150.6	181.4	167.1	179.1	140.5	109.0	143.1	175.5	118.8	129.8	113.2	165.3	146.1	144.2	143.7	133.5
August	153.7	181.6	172.3	182.8	141.8	112.6	148.5	179.6	117.5	129.9	113.1	167.0	148.8	147.9	147.3	136.2
September	157.4	186.4	179.2	185.6	142.4	114.2	150.1	183.4	122.3	131.3	115.9	170.9	150.5	151.8	150.8	138.3
October	158.5	189.7	177.7	193.1	143.4	116.1	150.5	185.8	128.6	132.4	117.1	175.2	152.6	151.2	151.5	140.1
November	159.6	187.9	177.9	202.5	145.2	118.2	150.8	187.7	135.8	137.5	118.8	175.5	154.9	152.4	153.1	142.1
December	163.2	196.7	178.4	203.4	148.0	124.6	151.5	191.0	135.0	139.4	121.5	182.0	156.5	154.9	155.6	145.5

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[1] Commodity groups covered by the index are: Farm products—grains, livestock and poultry, and other; foods—dairy products, cereal products, fruits and vegetables, meats, and other; hides and leather products—shoes, hides and skins, leather, and other; textile products—clothing, cotton goods, hosiery and underwear, rayon, silk, woolen and worsted goods, and other; fuel and lighting materials—anthracite, bituminous coal, coke, electricity, gas, and petroleum products; metals and metal products—agricultural implements, iron and steel, motor vehicles, nonferrous metals, and plumbing and heating; building materials—brick and tile, cement, lumber, paint and paint materials, plumbing and heating, structural steel, and other; chemicals and allied products—chemicals, drugs and pharmaceuticals, fertilizer materials, mixed fertilizers, and oils and fats; housefurnishing goods—furnishings and furniture; and miscellaneous commodities—automobile tires and tubes, cattle feed, paper and pulp, crude rubber, and other.

Section E: Industrial Relations

By act of Congress, the Commissioner of Labor was "specially charged to investigate the causes of, and facts relating to, all controversies and disputes between employers and employees." Currently, the Bureau of Labor Statistics is the governmental agency which covers the whole field of statistics dealing with work stoppages. Information on trade-union membership and the extent of collective bargaining is also made available by the Bureau. Series of all three types are included in this section. In addition, summaries are presented on the handling of cases by the Conciliation Service of the United States Department of Labor (recently replaced by the independent Federal Mediation and Conciliation Service) and by the National Labor Relations Board.

Membership of Labor Unions

In the absence of official Government statistics covering trade-union membership for the United States, the Bureau of Labor Statistics has combined membership series from reports and statements issued by the trade-union organizations in their official journals, reports, or convention proceedings.

Union membership is defined differently by various unions. However, the totals reasonably reflect year-to-year changes within each major union group.[1]

American Federation of Labor figures are those reported annually by the Federation's secretary-treasurer. These membership data are defined by the AFL as the "total paid membership of the affiliated national and international organizations and the directly chartered trade and federal labor unions" based "on the actual per capita tax" remitted by affiliated unions.

The Congress of Industrial Organizations, which was formally organized in 1938, and existed as a Committee for Industrial Organization from November 1935 to November 1938, has never published a consecutive membership series. The figures shown, therefore, are based upon reports or statements of CIO officials as to total membership or reported gains over a specified period; footnotes indicate sources.

The third broad category of union members consists of those who belong to labor organizations which are not affiliated with either the AFL or the CIO. In general, this group of independent or unaffiliated unions includes all bona fide national labor organizations and excludes those which are either purely local in character or of which the jurisdiction does not extend beyond the employees of a single employer. In addition to the four long-established train- and engine-service railroad brotherhoods, this group includes a relatively large but fluctuating number of small labor organizations. Recent changes in affiliation of certain large labor organizations, such as the United Mine Workers of America and the International Association of Machinists, have also influenced the membership totals of the different groups.

For the period 1897 through 1934, membership figures for the independent or unaffiliated group of labor organizations are those compiled in Ebb and Flow in Trade Unionism.[2] For the period 1929–34, these data have been adjusted to include membership figures, also compiled by Mr. Wolman, covering unions affiliated with the Trade Union Unity League. Data for some unaffiliated unions for the years since 1934 are fragmentary and the totals presented are estimates of the Bureau of Labor Statistics based upon available sources.

In conjunction with membership statistics of the three main groups described above (insofar as available from 1897 through 1947), the number of affiliated unions of the AFL and CIO as compiled from official union sources are also given in table E–1, which gives membership by years 1897–1947. Similar data for independent unions are not available.

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[1] Many unions which have headquarters in the United States also have locals outside the continental United States, primarily in Canada. Separate statistics of membership, by countries, are not, however, available and the data therefore include a union's total membership irrespective of where located. The Thirty-fifth Annual Report on Labor Organizations in Canada, published by the Canadian Department of Labor and covering the calendar year 1946, reported 573,258 Canadian workers as members of International unions having principal offices in the United States.

[2] Ebb and Flow in Trade Unionism, by Leo Wolman, New York, National Bureau of Economic Research, 1936.

Table E–1: Membership of labor unions, 1897–1947

Period	American Federation of Labor		Congress of Industrial Organizations		Independent or unaffiliated unions	All unions
	Number of affiliated unions[1]	Total membership[2] (thousands)	Number of affiliated unions[3]	Total membership (thousands)	Total membership[4] (thousands)	Total membership (thousands)
1897	58	265	....	....	175	440
1898	67	278	....	....	189	467
1899	73	349	....	....	201	550
1900	82	548	....	....	243	791
1901	87	788	....	....	270	1,058
1902	97	1,024	....	....	311	1,335
1903	113	1,466	....	....	358	1,824
1904	120	1,676	....	....	391	2,067
1905	118	1,494	....	....	424	1,918
1906	119	1,454	....	....	438	1,892
1907	117	1,539	....	....	538	2,077
1908	116	1,587	....	....	505	2,092
1909	119	1,483	....	....	482	1,965
1910	120	1,562	....	....	554	2,116
1911	115	1,762	....	....	556	2,318
1912	112	1,770	....	....	635	2,405
1913	111	1,996	....	....	665	2,661
1914	110	2,021	....	....	626	2,647
1915	110	1,946	....	....	614	2,560
1916	111	2,073	....	....	649	2,722
1917	111	2,371	....	....	605	2,976
1918	111	2,726	....	....	642	3,368
1919	111	3,260	....	....	786	4,046
1920	110	4,079	....	....	955	5,034
1921	110	3,907	....	....	815	4,722
1922	112	3,196	....	....	754	3,950
1923	108	2,926	....	....	703	3,629
1924	107	2,866	....	....	683	3,549
1925	107	2,877	....	....	689	3,566
1926	107	2,804	....	....	788	3,592
1927	106	2,813	....	....	787	3,600
1928	107	2,896	....	....	671	3,567
1929	105	2,934	....	....	691	3,625
1930	104	2,961	....	....	671	3,632
1931	105	2,890	....	....	636	3,526
1932	106	2,532	....	....	694	3,226
1933	108	2,127	....	....	730	2,857
1934	109	2,608	....	....	641	3,249
1935	109	3,045	....	....	683	3,728
1936	111	3,422	....	....	742	4,164
1937	100	2,861	32	[5]3,718	639	7,218
1938	102	3,623	42	[5]4,038	604	8,265
1939	104	4,006	45	[6]4,000	974	8,980
1940	105	4,247	42	[7]3,625	1,072	8,944
1941	106	4,569	41	[8]5,000	920	10,489
1942	102	5,483	39	[9]4,195	1,084	10,762
1943	99	6,564	40	[9]5,285	1,793	13,642
1944	100	6,807	41	[9]5,935	1,879	14,621
1945	102	6,931	40	[10]6,000	1,865	14,796
1946	102	7,152	40	[11]6,000	1,822	14,974
1947	105	7,578	41	[12]6,000	1,836	15,414

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[1] Data for 1897, 1898, and 1933-47 were compiled from proceedings of annual conventions of the AFL for those years; data for other years are from The American Federation of Labor, by Lewis L. Lorwin, Washington, Brookings Institution, 1935 (p.488).

[2] Source: Proceedings, 66th Convention of the AFL, 1947, (p.151).

[3] Data are compiled from proceedings of annual conventions of the CIO.

[4] Statistics for period 1897 to 1934 are from Ebb and Flow in Trade Unionism, by Leo Wolman, New York, National Bureau of Economic Research, 1936 (pp. 138-139). Figures for 1929-34 are adjusted to include membership of unions in the Trade Union Unity League, shown in Wolman (p. 144). Figures for 1935-46 are estimates of the Bureau of Labor Statistics.

[5] Proceedings, First Constitutional Convention, 1938 (p.36).

[6] Proceedings, Second Constitutional Convention, 1939 (p. 80).

[7] Based upon the number of votes accorded the various CIO affiliates represented at the Third Constitutional Convention, 1940. See Proceedings, (pp. 25-30, 113-115, and 170).

[8] Proceedings, Fourth Constitutional Convention, 1941 (p. 162).

[9] CIO membership for 1943 was reported as 5,285,000 (Proceedings, Sixth Constitutional Convention of the CIO, 1943, p. 115). It was also reported that the CIO had gained 1,090,503 members over 1942 (Ibid, p. 47), thus indicating a membership of approximately 4,195,000 for 1942. In 1944, a gain of 650,000 over 1943 was reported (Proceedings, Seventh Constitutional Convention, 1944, p. 56), indicating a 1944 membership total of 5,935,000.

[10] Economic Outlook, November 1945, CIO Department of Research and Education.

[11] Statement of President Philip Murray to the 1946 Convention of the United Steelworkers of America, CIO. (Proceedings, Third Constitutional Convention of the United Steelworkers of America, p. 62).

[12] Statement, Daily Proceedings, 1947 CIO Convention.

Extent of Collective Bargaining

Information on the extent of collective bargaining and the prevalence of union recognition clauses has been made available on a comparable basis by the Bureau of Labor Statistics annually, from 1942 through 1946. During each year, an attempt was made to obtain as many current collective-bargaining agreements as possible. As agreements are supplied voluntarily and no accurate data exist on the number of union agreements, the proportion of agreements actually on file cannot be checked against the number in effect. Union publications, National Labor Relations Board elections, newspapers, and other sources of information on the signing of union agreements or the revision of previous agreements are used. For each agreement, a record is kept of the name of the company, the union, the effective and expiration dates, the industry classification, and the type of union-security clause.

In analyzing union agreements for union security, seven characteristics, which are defined as follows, were considered:[3]

(1) Under the closed shop, all employees must be members of the union at the time of hiring and they must remain members in good standing during their period of employment. Hiring through the union (unless the union is unable to supply the required number of workers within a given period) is required under most of the closed-shop agreements and those employees who are hired through other procedures must join the union before they start to work.

(2) Workers employed under a union-shop agreement need not be union members when hired, but they must join the union within a specified time, usually 30 to 60 days, and remain members during the period of employment. When the union-shop agreements specify that union members shall be given preference in hiring or that the hiring shall be done through the union, the effect is very much the same as the closed-shop agreement. Union shop clauses with preferential hiring have been combined with closed shop clauses in the categories shown in table E–2. In some cases, the union shop is modified so that those who were employed before the union shop was established are not required to become union members.

(3) Maintenance of membership, as a general rule, requires that all employees who are members of the union a specified time after the agreement is signed and all who later join the union must remain members in good standing for the duration of the agreement. Following the pattern of the maintenance-of-membership clause established by the National War Labor Board, most of the agreements with this type of union-security clause provide for a 15-day period during which members may withdraw from the union if they do not wish to remain members during the life of the agreement.

(4) Under preferential hiring no union membership is required but union members must be hired, if available. When the union cannot supply workers, the employer may hire nonmembers and they are not required to join the union as a condition of employment.

(5) Sole bargaining exists under some agreements which have no requirement for union membership or for hiring through the union. The union is the sole bargaining agent for all employees and negotiates the agreement covering all workers in the bargaining unit whether they are members of the union or not.

(6) During 1946, a few agreements covering workers employed by large companies, which had specified maintenance of membership in 1945, were modified to provide sole bargaining with the check-off of union dues for all union members, as a condition of employment.

(7) A few agreements stipulate that the union shall act as bargaining agent for its members only, and the agreement does not cover other workers.

In the preparation of the report on the extent of collective bargaining and union recognition, the total number of workers under union agreements is estimated from all available sources and classified by industry.

Figures on employment issued by the Bureau of Labor Statistics, the Bureau of Agricultural Economics, and the Bureau of the Census are used as a basis for estimating the potential number of workers subject to union agreements. The potential coverage (i.e., the number eligible for union-agreement coverage) excludes all self-employed, domestic workers, agricultural wage earners on farms employing fewer than 6 persons, and Federal and State government employees, teachers, and elected and appointed officials of local governments. The adjustments covering the proportions of potential workers under union agreement that were determined from the 1940 Census data have continued in use. When further information becomes available the necessary revisions will be made.

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[3] These union security descriptions relate to types of collective bargaining provisions prevailing prior to enactment of the Labor Management Relations Act of 1947. They do not reflect changes in union security clauses necessitated by the 1947 act.

After having calculated the number of workers potentially under union agreement, those actually under such agreements, and the number under agreements providing certain types of union security, the ratios are calculated.

Changes in the proportion of workers under union agreement and in the prevalence of each type of union recognition are shown in table E-2 for the period 1942 through 1946. The series was started in 1941, when the calculations were made on a somewhat different basis. As the resultant figures are not strictly comparable with those for later years, they were omitted from table E-2.

Table E–2: Changes in union recognition, 1942–46

Item	1942	1943	1944	1945	1946
Eligible for union-agreement coverage:					
Number (in millions)	31	31	30.25	29	31.2
Percent under agreement	40	45	47	48	48
	Percentage distribution[1]				
Workers under agreements providing for—					
Closed shop	45	30	28	30	33
Union shop		20	18	15	17
Maintenance of membership	15	20	27	29	25
Preferential hiring	5	2	2	3	3
Other[2]	35	28	25	23	22
Total	100	100	100	100	100

[1] Percentages are not strictly comparable from year to year because of slight changes in the volume of employment during the period.

[2] No membership or hiring requirements are mentioned in these agreements, which have clauses specifying sole bargaining, maintenance of union dues, and bargaining for members only.

Work Stoppages

Statistical series on the number of work stoppages due to labor-management disputes, the workers involved, and the man-days of idleness caused by stoppages are compiled by the Bureau of Labor Statistics.

Work stoppages caused by labor-management disputes is the term used in recent years to describe the statistical series including strikes and lock-outs. However, use of this term does not represent a departure in coverage from that under the historical and more popular terminology of strikes and lock-outs. The definition of these terms as used by the Bureau is as follows:

> A strike is a temporary stoppage of work by a group of employees in order to express a grievance or to enforce a demand.
>
> A lock-out is a temporary withholding of work from a group of employees by an employer (or group of employers) in order to coerce them into accepting the employer's terms.[4]

Although the above definitions were first used in the middle 1930's the substance of the definitions has been used as a guide throughout the period covered by the series. The individual strike or lock-out—one concerted action—is the unit counted, irrespective of the number of unions or employers jointly involved in the controversy.

Stoppages involving fewer than 6 workers or lasting less than a full shift are excluded from the series. Such minor disputes usually have little appreciable effect on production, and the difficulties of obtaining adequate data make their inclusion in a statistical series impractical.

The figures on number of workers involved and number of man-days idle include data for all workers made idle in the establishments in which a strike or lock-out occurred. The data do not measure indirect or secondary idleness in other establishments which suspend or curtail operations owing to material or service shortages resulting from a work stoppage.

It is believed that the Bureau's figures on work stoppages, especially in late years, include substantially all strikes and lock-outs of any consequence. Initial notices are obtained from the press and from various Federal and State agencies dealing with labor-management disputes. The Bureau of Labor Statistics in 1947 obtained reports on strikes from over 250 daily newspapers and from many union and trade journals. Information is also obtained from the Federal Mediation and Conciliation Service and from several State labor agencies. Beginning with 1927, the Bureau has also obtained first-hand information through detailed questionnaires sent to the companies and unions involved. Previously, the number of workers involved was reported for only about two-thirds of the stoppages.

Estimates of the number of stoppages, number of workers involved, and number of man-days idle are given in table E–3 for 1916–47. Annual trends in work stoppages are shown from 1916 through 1947 and the monthly trends beginning in 1945. Also indicated are the average length of the stoppages each year (unweighted by the number of workers) expressed in terms of calendar days and in terms of the number of working days lost per worker involved.

The industry groups for which work-stoppage data are given in table E–4, covering 1935–47, are as defined by the Bureau of the Census for the year 1935 through 1941 and as defined by the Federal Government's Standard Industrial Classification Manual for 1942–47. Establishments involved in stoppages are classified by industry on the basis of their most important products or services in terms of number of employees producing them. In late years, the establishments were classified on the basis of their prewar products. An automobile plant, for example, which was converted to the production of aircraft during World War II was classified in the automobile industry throughout the period.

Work stoppages that occurred in 1935–47 are grouped in table E–5 according to major issues and by duration. Because many disputes involved varied and complex issues, the policy followed was to classify stoppages according to the major or most important issues. The duration of each stoppage was measured in terms of calendar days from the time the stoppage began until a settlement was reached. In a few instances, the date of termination, for statistical purposes, was determined by such factors as a substantial resumption of plant operations through use of nonstrikers, or the employer's liquidation of his business.

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[4] United States Bureau of Labor Statistics, Bulletin No. 651, Strikes in the United States, 1880–1936 (p. 3).

Data by States (table E–6) include, except as noted below, all known stoppages in each State for the years 1935–47. Interstate stoppages are counted as separate stoppages in each State affected and the appropriate number of workers involved and man-days idle are allocated to the respective States. A few such interstate stoppages occurred which could not be so allocated owing to lack of information in the following years: 1935, 25 stoppages involving 16,300 workers; 1936, 2 stoppages involving 130; 1937, 5 involving 3,970; 1938, 5 involving 4,720 workers.

Work stoppages in 30 selected cities are shown in table E–7 for the prewar year 1939, the "defense" year, 1941, and the 3 most recent years, 1945, 1946, and 1947. Intercity stoppages affecting these cities were included, except as noted below, in the separate totals for each city affected, and the workers involved and man-days idle have been allocated to the respective cities. In 1946, it was impossible to obtain detailed information on 5 intercity stoppages with sufficient accuracy to permit allocations to the cities involved. The largest of these was the Nation-wide railroad strike in May. The others were smaller stoppages in the West Coast States. In 1947, also, it was impossible to allocate workers and man-days for 5 stoppages; three were construction workers' strikes in the Detroit, Mich., area, in the Lehigh Valley area near Allentown, Pa., and in northern New Jersey cities; one was a strike of retail grocery store clerks in the Los Angeles area; and one, a strike of bus drivers in several western States.

The extent to which each of the three major groups of unions (AFL, CIO, and independent or unaffiliated) were involved in stoppages from 1935 to 1947 is indicated in table E–8. The data do not include a few stoppages in which unions of different affiliation were jointly involved, those in which single-firm unions were involved, or those of unorganized workers.

Union involved in each case means the union directly participating in the stoppage.

Workers involved includes all workers made idle by the stoppage in the plant or establishment irrespective of union membership.

A chronological list of the stoppages involving 10,000 or more workers which occurred in the 13-year period 1935–47 appears in table E–9.

Table E–3: Extent of work stoppages, 1916–47

Period	Work stoppages beginning in period				Man-days idle (all stoppages)			Indexes (1935-39=100)		
	Number	Average duration (calendar days)	Workers involved		Number (thousands)	Percent of estimated working time[3]	Per worker involved	Work stoppages	Workers involved	Man-days idle
			Number[1] (thousands)	Percent of total employed[2]						
1916	3,789	...	1,600	8.4	...	...	...	132	142	...
1917	4,450	...	1,230	6.3	...	...	...	155	109	...
1918	3,353	...	1,240	6.2	...	...	...	117	110	...
1919	3,630	...	4,160	20.8	...	...	...	127	370	...
1920	3,411	...	1,460	7.2	...	...	...	119	130	...
1921	2,385	...	1,100	6.4	...	...	...	83	98	...
1922	1,112	...	1,610	8.7	...	...	...	39	143	...
1923	1,553	...	757	3.5	...	...	...	54	67	...
1924	1,249	...	655	3.1	...	...	...	44	58	...
1925	1,301	...	428	2.0	...	...	...	45	38	...
1926	1,035	...	330	1.5	...	...	...	36	29	...
1927	707	26.5	330	1.4	26,200	0.37	79.5	25	29	155
1928	604	27.6	314	1.3	12,600	.17	40.2	21	28	75
1929	921	22.6	289	1.2	5,350	.07	18.5	32	26	32
1930	637	22.3	183	.8	3,320	.05	18.1	22	16	20
1931	810	18.8	342	1.6	6,890	.11	20.2	28	30	41
1932	841	19.6	324	1.8	10,500	.23	32.4	29	29	62
1933	1,695	16.9	1,170	6.3	16,900	.36	14.4	59	104	100
1934	1,856	19.5	1,470	7.2	19,600	.38	13.4	65	130	116
1935	2,014	23.8	1,120	5.2	15,500	.29	13.8	70	99	91
1936	2,172	23.3	789	3.1	13,900	.21	17.6	76	70	82
1937	4,740	20.3	1,860	7.2	28,400	.43	15.3	166	165	168
1938	2,772	23.6	688	2.8	9,150	.15	13.3	97	61	54
1939	2,613	23.4	1,170	4.7	17,800	.28	15.2	91	104	105
1940	2,508	20.9	577	2.3	6,700	.10	11.6	88	51	40
1941	4,288	18.3	2,360	8.4	23,000	.32	9.8	150	210	136
1942	2,968	11.7	840	2.8	4,180	.05	5.0	104	75	25
1943	3,752	5.0	1,980	6.9	13,500	.15	66.8	131	176	80
1944	4,956	5.6	2,120	7.0	8,720	.09	4.1	173	188	51
1945	4,750	9.9	3,470	12.2	38,000	.47	11.0	166	308	224
1946	4,985	24.2	4,600	14.5	116,000	1.43	25.2	174	408	684
1947	3,693	25.6	2,170	6.5	34,600	.41	15.9	129	193	204
1945										
January	234	...	47	...	199	.03	...	...	...	...
February	279	...	111	...	388	.06	...	...	...	...
March	382	...	197	...	775	.10	...	...	...	...
April	431	...	306	...	1,470	.20	...	...	...	...
May	433	...	333	...	2,220	.29	...	...	...	...
June	482	...	332	...	1,890	.25	...	...	...	...
July	523	...	325	...	1,770	.24	...	...	...	...
August	447	...	271	...	1,710	.24	...	...	...	...
September	573	...	526	...	4,340	.73	...	...	...	...
October	474	...	551	...	8,610	1.39	...	...	...	...
November	358	...	420	...	6,940	1.20	...	...	...	...
December	134	...	50	...	7,720	1.39	...	...	...	...
1946										
January	337	...	1,370	...	19,700	3.13	...	...	...	...
February	290	...	134	...	22,900	4.19	...	...	...	...
March	440	...	147	...	13,800	2.28	...	...	...	...
April	504	...	566	...	14,300	2.19	...	...	...	...
May	376	...	569	...	13,700	2.06	...	...	...	...
June	388	...	181	...	4,580	.75	...	...	...	...
July	563	...	228	...	3,970	.58	...	...	...	...
August	560	...	227	...	3,900	.56	...	...	...	...
September	499	...	356	...	4,880	.77	...	...	...	...
October	516	...	307	...	6,220	.85	...	...	...	...
November	344	...	435	...	4,980	.77	...	...	...	...
December	168	...	76	...	3,130	.46	...	...	...	...
1947										
January	321	...	105	...	1,340	.19	...	...	...	...
February	296	...	75	...	1,230	.19	...	...	...	...
March	361	...	96	...	1,100	.16	...	...	...	...
April	479	...	624	...	8,540	1.19	...	...	...	...
May	471	...	230	...	6,730	.97	...	...	...	...
June	379	...	448	...	3,960	.57	...	...	...	...
July	315	...	242	...	3,970	.54	...	...	...	...
August	336	...	113	...	2,520	.35	...	...	...	...
September	219	...	79	...	1,970	.28	...	...	...	...
October	219	...	64	...	1,780	.23	...	...	...	...
November	178	...	57	...	829	.13	...	...	...	...
December	119	...	32	...	590	.08	...	...	...	...

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[1] Information on the number of workers involved in some strikes which occurred from 1916 to 1926 is not available. However, the missing information is for the smaller disputes, and it is believed that the totals here given are fairly accurate.

[2] "Total employed workers" as used here refers to all workers except those in occupations and professions in which there is little if any union organization or in which strikes rarely if ever occur. In most industries, it includes all wage and salary workers except those in executive, managerial, or high supervisory positions or those performing professional work the nature of which makes union organization or group action impracticable. It excludes all self-employed, domestic workers, agricultural wage workers on farms employing fewer than 6 persons, all Federal and State government employees, and the officials, both elected and appointed, in local governments.

[3] "Estimated working time" was computed for purposes of this table by multiplying the average number of employed workers each year by the number of days worked by most employees during the year.

TABLE E–4: Work stoppages in selected industry groups, 1935–47

Industry group	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947
MANUFACTURING													
Iron and steel and their products:													
Stoppages beginning in year:													
Number	67	69	226	85	57	121	332	330	650	998	817	478	(1)
Workers involved (thousands)	16.6	21.6	186.0	29.4	14.5	40.0	244.0	95.9	351.0	369.0	425.0	859.0	(1)
Man-days idle, all stoppages (thousands)	315	484	3,410	397	213	403	1,440	270	726	1,226	3,730	23,500	(1)
Nonferrous metals and their products:													
Stoppages beginning in year:													
Number	44	31	117	38	32	52	129	71	133	148	142	134	(1)
Workers involved (thousands)	7.5	9.5	29.0	7.7	6.2	16.0	43.7	29.1	46.6	49.5	75.0	78.2	(1)
Man-days idle, all stoppages (thousands)	187	153	678	150	168	253	413	69.7	89.6	143	600	4,280	(1)
Automobiles and automobile equipment:													
Stoppages beginning in year:													
Number	34	36	127	39	44	29	77	50	153	228	184	132	67
Workers involved (thousands)	32.0	41.0	332.0	79.7	129.0	25.6	251.0	42.5	186.0	389.0	474.0	163.0	95.9
Man-days idle, all stoppages (thousands)	336	390	3,830	288	2,540	104	1,230	64.4	441	1,360	7,310	15,000	466
Transportation equipment (except automobiles)													
Stoppages beginning in year:													
Number	8	17	38	10	12	22	108	65	192	321	223	61	39
Workers involved (thousands)	6.6	13.3	40.8	3.0	4.3	24.0	143.0	54.6	155.0	363.0	361.0	59.2	74.9
Man-days idle, all stoppages (thousands)	307	328	895	30.4	121	166	1,060	146	382	897	2,430	2,340	3,735
Machinery (except electrical):													
Stoppages beginning in year:													
Number	39	58	191	60	65	96	222	130	210	311	335	324	252
Workers involved (thousands)	12.4	27.0	61.7	16.8	20.4	26.7	108.0	46.8	62.1	141.0	228.0	244.0	114.0
Man-days idle, all stoppages (thousands)	293	878	806	535	337	417	1,740	104	139	508	2,970	13,700	2,910
Stone, clay, and glass products:													
Stoppages beginning in year:													
Number	35	39	106	42	53	65	136	116	109	122	104	136	94
Workers involved (thousands)	11.8	24.7	24.2	8.0	11.4	12.6	39.7	33.4	27.9	37.9	60.4	32.0	27.1
Man-days idle, all stoppages (thousands)	347	724	612	250	137	206	656	227	145	204	1,200	1,180	563
Food and kindred products:													
Stoppages beginning in year:													
Number	103	106	266	168	148	152	261	178	135	160	212	278	183
Workers involved (thousands)	26.7	13.9	52.4	55.5	29.6	16.9	69.8	29.6	26.6	36.0	83.9	167.0	54.2
Man-days idle, all stoppages (thousands)	842	245	673	670	395	155	988	210	98.6	178	959	2,220	648
Chemicals and allied products:													
Stoppages beginning in year:													
Number	8	20	66	38	39	36	88	67	76	116	120	122	94
Workers involved (thousands)	.8	14.0	11.3	4.0	13.7	14.4	21.4	31.2	21.3	26.1	43.6	48.1	30.8
Man-days idle, all stoppages (thousands)	5.7	231	310	78.1	392	192	316	103	68.4	116	427	1,190	439
Rubber products:													
Stoppages beginning in year:													
Number	7	43	39	29	19	18	42	28	73	77	123	89	41
Workers involved (thousands)	1.3	76.7	53.8	25.6	9.7	8.5	39.2	15.6	89.3	39.5	258.0	99.4	47.0
Man-days idle, all stoppages (thousands)	19	477	674	166	73.9	97.2	155	33.3	260	114	1,520	813	382
Leather and leather products:													
Stoppages beginning in year:													
Number	78	72	142	59	46	39	92	87	93	95	111	100	81
Workers involved (thousands)	16.3	20.5	41.6	14.3	9.5	7.0	27.9	27.8	27.5	24.0	50.6	45.6	24.9
Man-days idle, all stoppages (thousands)	259	219	630	159	184	125	220	241	148	116	248	583	223
Textiles:													
Stoppages beginning in year:													
Number	202	168	231	108	92	91	198	198	177	184	187	188	82
Workers involved (thousands)	75.2	43.9	89.7	41.0	30.5	26.2	82.0	93.5	54.4	55.3	107.0	50.7	35.5
Man-days idle, all stoppages (thousands)	1,820	1,430	1,660	661	606	273	874	464	306	471	1,460	1,360	976
Apparel:													
Stoppages beginning in year:													
Number	295	287	449	428	447	257	309	175	142	100	118	173	131
Workers involved (thousands)	125.0	84.7	137.0	68.3	60.2	51.0	62.8	25.7	54.5	14.5	15.4	24.3	10.7
Man-days idle, all stoppages (thousands)	1,820	1,350	2,190	764	715	406	810	193	175	70.5	177	574	199
NONMANUFACTURING													
Mining:													
Stoppages beginning in year:													
Number	90	83	111	63	61	65	143	156	463	893	670	570	478
Workers involved (thousands)	480.0	56.0	163.0	37.5	383.0	42.3	737.0	83.3	610.0	278.0	678.0	974.0	517.0
Man-days idle, all stoppages (thousands)	4,020	1,240	2,620	529	7,460	269	7,230	516	9,370	1,410	6,230	21,400	2,440
Construction:													
Stoppages beginning in year:													
Number	139	230	328	315	320	310	395	239	188	168	206	351	382
Workers involved (thousands)	17.8	33.0	71.9	44.4	70.1	71.3	186.0	31.0	35.7	22.5	45.8	146.0	175.0
Man-days idle, all stoppages (thousands)	182	345	848	405	633	493	923	164	141	120	447	1,450	2,770
Trade:													
Stoppages beginning in year:													
Number	138	164	523	339	283	275	421	260	119	139	182	385	336
Workers involved (thousands)	15.7	30.5	80.1	39.6	26.2	44.4	50.8	30.3	25.5	31.5	34.8	64.1	60.6
Man-days idle, all stoppages (thousands)	219	327	1,040	826	426	584	1,030	304	90.7	270	336	882	1,010
Railroad transportation:													
Stoppages beginning in year:													
Number	1	2	6	1	–	1	5	9	8	12	13	17	7
Workers involved (thousands)	(2)	.6	1.1	(2)	–	(2)	1.2	1.3	3.3	3.2	5.8	356.0	13.9
Man-days idle, all stoppages (thousands)	(2)	22.9	26.4	.1	–	.6	22.2	17.5	9.2	25.6	56.9	912	298
Transportation, other:													
Stoppages beginning in year:													
Number	191	162	346	205	248	169	253	187	252	298	305	414	250
Workers involved (thousands)	64.0	82.6	133.0	75.8	86.2	44.1	48.4	35.6	48.8	58.2	133.0	500.0	74.9
Man-days idle, all stoppages (thousands)	959	2,070	1,840	719	836	585	400	141	165	264	1,400	7,360	992
Communications and other public utilities:													
Stoppages beginning in year:													
Number	6	1	18	5	4	12	10	25	24	25	22	48	25
Workers involved (thousands)	.2	(2)	1.5	.5	.4	.9	.8	5.4	3.5	12.0	18.7	167.0	378.8
Man-days idle, all stoppages (thousands)	.5	.9	7.3	1.0	20.8	8.1	2.6	12.4	8.5	55.1	99.2	745	10,191

[1] Comparable data not available due to change in industry classification.
[2] Less than 100.

Table E–5: Work stoppages by major issues involved and duration, 1935–47

MAJOR ISSUES INVOLVED

Major issues and period	Work stoppages		Workers involved		Man-days idle	
	Number	Percent of total for year	Number	Percent of total for year	Number	Percent of total for year
All issues:						
1935	2,003	100.0	1,100,000	100.0	14,900,000	100.0
1936	2,156	100.0	710,000	100.0	11,400,000	100.0
1937	4,720	100.0	1,950,000	100.0	30,300,000	100.0
1938	2,772	100.0	688,000	100.0	8,930,000	100.0
1939	2,639	100.0	1,180,000	100.0	18,500,000	100.0
1940	2,493	100.0	573,000	100.0	6,680,000	100.0
1941	4,314	100.0	2,360,000	100.0	23,000,000	100.0
1942	3,026	100.0	852,000	100.0	4,740,000	100.0
1943	3,734	100.0	1,970,000	100.0	13,300,000	100.0
1944	4,958	100.0	2,130,000	100.0	8,880,000	100.0
1945	4,616	100.0	3,970,000	100.0	24,400,000	100.0
1946	4,990	100.0	4,940,000	100.0	124,000,000	100.0
1947	3,693	100.0	2,170,000	100.0	34,600,000	100.0
Wages and hours:[1]						
1935	760	37.9	663,000	60.2	6,400,000	42.9
1936	756	35.1	251,000	35.3	3,690,000	32.2
1937	1,410	29.9	436,000	22.4	4,840,000	15.7
1938	776	28.0	252,000	36.7	3,110,000	34.8
1939	699	26.5	352,000	29.9	3,310,000	17.9
1940	753	30.2	235,000	41.0	3,090,000	46.3
1941	1,535	35.6	1,110,000	46.9	10,400,000	45.4
1942	1,423	46.8	429,000	50.4	2,070,000	43.5
1943	1,906	51.0	1,220,000	61.9	10,700,000	80.4
1944	2,146	43.3	810,000	38.1	3,380,000	38.0
1945	1,956	42.4	1,340,000	43.7	10,800,000	44.4
1946	2,238	44.9	3,710,000	75.1	101,000,000	81.9
1947	1,707	46.3	805,000	37.2	15,200,000	43.9
Union organization, wages and hours:						
1935 to 1941	(1)	(1)	(1)	(1)	(1)	(1)
1942	531	17.5	104,000	12.2	1,240,000	26.1
1943	232	6.2	57,300	2.9	272,000	2.0
1944	247	5.0	66,100	3.1	496,000	5.6
1945	366	7.9	158,000	5.1	2,120,000	8.7
1946	914	18.3	439,000	8.9	16,600,000	13.4
1947	559	15.1	840,000	38.8	15,200,000	43.9
Union organization:[1]						
1935	945	47.2	288,000	26.1	7,050,000	42.3
1936	1,083	50.2	365,000	51.4	6,830,000	60.2
1937	2,728	57.8	1,160,000	59.8	23,600,000	76.4
1938	1,385	50.0	224,000	32.6	3,960,000	44.4
1939	1,411	53.5	641,000	54.4	13,800,000	74.7
1940	1,243	49.9	190,000	33.1	2,730,000	40.8
1941	2,138	49.5	744,000	31.5	10,100,000	43.8
1942	412	13.7	87,000	10.2	407,000	8.6
1943	353	9.5	169,000	8.6	471,000	3.5
1944	561	11.3	329,000	15.5	1,540,000	17.3
1945	580	12.6	513,000	16.7	5,050,000	20.7
1946	703	14.1	129,000	2.6	2,190,000	1.8
1947	543	14.7	91,000	4.2	1,790,000	5.1
Other working conditions:[2]						
1935	298	14.9	151,000	13.7	1,470,000	9.8
1936	317	14.7	94,000	13.3	865,000	7.6
1937	582	12.3	347,000	17.8	2,430,000	7.9
1938	611	22.0	211,000	30.7	1,360,000	20.8
1939	529	20.0	185,000	15.7	1,370,000	7.4
1940	497	19.9	148,000	25.9	859,000	12.9
1941	641	14.9	512,000	21.6	2,490,000	10.8
1942	497	16.4	158,000	18.5	590,000	12.6
1943	1,094	29.3	462,000	23.5	1,400,000	10.6
1944	1,800	36.3	807,000	37.9	2,580,000	29.1
1945	1,510	32.7	888,000	29.0	5,020,000	20.6
1946	879	17.6	425,000	8.6	2,500,000	2.0
1947	695	18.8	387,000	17.8	1,580,000	4.6
Inter- or intra-union matters:						
1935 to 1941	(2)	(2)	(2)	(2)	(2)	(2)
1942	173	5.6	74,300	8.7	434,000	9.2
1943	149	4.0	61,100	3.1	463,000	3.5
1944	204	4.1	115,000	5.4	886,000	10.0
1945	194	4.2	169,000	5.5	1,350,000	5.6
1946	246	4.9	236,000	4.8	1,140,000	.9
1947	159	4.3	32,000	1.5	845,000	2.4

See footnotes at end of table.

TABLE E-5: Work stoppages by major issues involved and duration, 1935–47—Continued

DURATION OF STOPPAGES

Duration and period	Work stoppages		Workers involved		Man-days idle	
	Number	Percent of total for year	Number	Percent of total for year	Number	Percent of total for year
Less than 1 week:						
1935	709	35.5	569,000	51.5	2,320,000	15.6
1936	753	35.0	225,000	31.6	545,000	4.8
1937	1,728	36.6	663,000	34.0	1,600,000	5.2
1938	1,031	37.2	290,000	42.2	715,000	8.0
1939	952	36.1	232,000	19.7	535,000	2.9
1940	989	39.7	239,000	41.6	551,000	8.3
1 day:						
1935 to 1940	(3)	(3)	(3)	(3)	(3)	(3)
1941	403	9.3	296,000	12.5	296,000	1.3
1942	463	15.3	159,000	18.6	159,000	3.4
1943	943	25.3	296,000	15.1	296,000	2.2
1944	1,066	21.5	235,000	11.1	235,000	2.6
1945	705	15.3	262,000	8.5	262,000	1.1
1946	394	7.9	241,000	4.9	241,000	.2
1947	354	9.4	228,000	10.3	228,000	.6
2-3 days:						
1935 to 1940	(3)	(3)	(3)	(3)	(3)	(3)
1941	691	16.0	339,000	14.3	654,000	2.8
1942	808	26.5	273,000	32.2	557,000	11.8
1943	1,325	35.5	645,000	32.8	1,220,000	9.2
1944	1,714	34.6	767,000	36.1	1,460,000	16.5
1945	1,220	26.4	628,000	20.6	1,310,000	5.4
1946	775	15.5	692,000	14.0	1,390,000	1.1
1947	484	12.8	178,000	8.1	354,000	.9
4 days and less than 1 week:						
1935 to 1940	(3)	(3)	(3)	(3)	(3)	(2)
1941	634	14.7	385,000	16.3	1,190,000	5.2
1942	570	18.8	154,000	18.1	509,000	10.7
1943	716	19.2	373,000	19.0	1,250,000	9.4
1944	1,051	21.2	505,000	23.7	1,630,000	18.4
1945	924	20.0	646,000	21.2	2,320,000	9.5
1946	749	15.0	321,000	6.5	1,160,000	.9
1947	493	13.1	165,000	7.5	525,000	1.3
1 week and less than ½ month:						
1935	437	21.8	190,000	17.3	1,300,000	8.7
1936	512	23.7	143,000	20.1	928,000	8.1
1937	1,067	22.6	322,000	16.6	2,240,000	7.3
1938	630	22.7	154,000	22.3	993,000	11.1
1939	593	22.5	143,000	12.1	965,000	5.2
1940	556	22.3	123,000	21.5	821,000	12.3
1941	1,069	24.8	475,000	20.1	3,180,000	13.8
1942	615	20.3	170,000	19.9	1,120,000	23.5
1943	506	13.6	151,000	7.7	933,000	7.0
1944	759	15.3	399,000	18.7	2,490,000	28.1
1945	919	19.9	649,000	21.2	4,310,000	17.7
1946	1,045	20.9	672,000	13.6	4,350,000	3.5
1947	802	21.3	656,000	29.8	3,620,000	9.1
½ and less than 1 month:						
1935	347	17.3	103,000	9.4	1,470,000	9.9
1936	382	17.7	157,000	22.1	2,160,000	18.9
1937	915	19.4	327,000	16.8	4,570,000	14.8
1938	483	17.4	112,000	16.3	1,350,000	15.1
1939	460	17.4	260,000	22.1	2,180,000	11.8
1940	422	16.9	106,000	18.5	1,460,000	21.9
1941	775	18.0	314,000	13.3	3,940,000	17.1
1942	336	11.1	59,000	7.0	837,000	17.7
1943	177	4.7	492,000	25.0	9,300,000	69.9
1944	260	5.2	188,000	8.8	1,790,000	20.1
1945	494	10.7	484,000	15.8	6,270,000	25.7
1946	818	16.4	730,000	14.8	9,560,000	7.7
1947	672	17.8	191,000	8.7	2,820,000	7.1
1 and less than 2 months:						
1935	284	14.2	112,000	10.2	3,500,000	23.5
1936	291	13.5	86,300	12.2	2,600,000	22.7
1937	675	14.3	361,000	18.6	9,810,000	31.8
1938	344	12.4	79,700	11.6	2,020,000	22.6
1939	380	14.4	486,000	41.2	11,200,000	60.6
1940	312	12.5	72,800	12.7	1,850,000	27.6
1941	496	11.5	482,000	20.4	9,260,000	40.3
1942	155	5.1	23,000	2.7	668,000	14.1
1943	60	1.6	8,490	.4	268,000	2.0
1944	85	1.7	18,800	.9	662,000	7.5
1945	261	5.7	349,000	11.4	7,260,000	29.8
1946	642	12.9	1,450,000	29.2	46,600,000	37.6
1947	542	14.4	567,000	25.7	15,200,000	38 0
2 and less than 3 months:						
1935	127	6.3	44,200	4.0	1,990,000	13.3
1936	106	4.9	60,200	8.5	1,920,000	16.8
1937	195	4.1	188,000	9.7	6,340,000	20.5
1938	130	4.7	22,300	3.2	1,080,000	12.1
1939	116	4.4	33,000	2.8	1,090,000	5.9
1940	108	4.3	19,000	3.3	850,000	12.7
1941	122	2.8	49,000	2.1	2,030,000	8.8
1942	33	1.1	2,070	.2	108,000	2.3
1943	5	.1	400	(4)	22,700	.2
1944	23	.5	14,700	.7	608,000	6.8
1945	71	1.5	35,000	1.2	1,710,000	7.0
1946	264	5.3	168,000	3.4	8,740,000	7.1
1947	210	5.6	92,100	4.2	3,790,000	9.5
3 months or more:						
1935	99	4.9	83,700	7.6	4,340,000	29.0
1936	112	5.2	38,900	5.5	3,280,000	28.7
1937	140	3.0	84,000	4.3	6,280,000	20.4
1938	154	5.6	30,300	4.4	2,770,000	31.1
1939	138	5.2	24,600	2.1	2,510,000	13.6
1940	106	4.3	13,600	2.4	1,150,000	17.2
1941	124	2.9	24,800	1.0	2,470,000	10.7
1942	56	1.8	11,100	1.3	784,000	16.5
1943	2	(4)	60	(4)	7,500	.1
1944	....	....	....	....	....	....
1945	22	.5	15,700	.1	923,000	3.8
1946	303	6.1	671,000	13.6	51,800,000	41.9
1947	212	5 6	126,000	5 7	13,400,000	33.5

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[1] For the years 1935 to 1941 stoppages primarily over union organization matters but which also involved wage and hour issues were classified under "union organization."

[2] For the years 1935 to 1941 the stoppages primarily over inter- or intra-union matters (jurisdictional and rival union disputes) were classified under "other working conditions."

[3] Not available separately. Included above as "less than 1 week."

[4] Less than one-tenth of 1 percent.

Table E–6: Work stoppages by State, 1935–47

State and period	Work stoppages beginning in year			Man-days idle (all stoppages)	
	Number	Workers involved: Number	Workers involved: Percent of total for year	Number	Percent of total for year
Alabama:					
1935	59	38,300	3.4	1,120,000	7.3
1936	31	10,100	1.3	279,000	2.0
1937	50	21,700	1.3	547,000	1.0
1938	41	6,630	1.0	367,090	4.0
1939	20	14,400	1.2	495,000	2.8
1940	34	5,290	.9	31,690	.5
1941	80	112,000	4.8	862,000	3.7
1942	39	23,400	2.8	79,100	1.9
1943	72	53,800	2.7	826,000	6.1
1944	209	56,900	2.7	180,000	2.1
1945	147	74,800	2.2	459,000	1.2
1946	118	121,000	2.6	2,060,000	1.8
1947	110	64,300	3.0	571,000	1.7
Arizona:					
1935	2	260	(1)	6,650	(1)
1936	2	940	.1	1,880	(1)
1937	3	160	(1)	1,090	(1)
1938	8	820	.1	8,190	.1
1939	7	540	(1)	8,320	(1)
1940	9	1,030	.2	12,800	.2
1941	14	2,940	.1	17,500	.1
1942	11	1,510	.2	5,220	.1
1943	13	2,920	.1	6,930	.1
1944	5	310	(1)	1,460	(1)
1945	11	4,100	.1	59,000	.2
1946	20	6,980	.2	257,000	.2
1947	19	9,300	.4	182,000	.5
Arkansas:					
1935	7	6,370	.6	49,200	.3
1936	4	2,830	.4	64,600	.5
1937	15	4,800	.3	119,000	.4
1938	7	2,080	.3	10,500	.1
1939	12	2,190	.2	40,700	.2
1940	20	2,810	.5	82,600	1.2
1941	30	7,060	.3	64,300	.3
1942	26	2,110	.3	20,600	.5
1943	15	4,820	.2	77,900	.6
1944	33	4,300	.2	18,500	.2
1945	21	3,200	.1	32,000	.1
1946	40	14,300	.3	226,000	.2
1947	25	8,600	.4	231,000	.7
California:					
1935	137	29,500	2.6	480,000	3.1
1936	194	70,000	8.9	2,040,000	14.7
1937	259	79,300	4.3	1,940,000	6.8
1938	168	45,800	6.7	967,000	10.6
1939	215	83,700	7.1	1,040,000	5.8
1940	219	32,700	5.7	458,000	6.8
1941	384	114,000	4.8	1,790,000	7.8
1942	147	26,300	3.1	224,000	5.4
1943	109	29,600	1.5	83,500	.6
1944	103	26,600	1.3	127,000	1.5
1945	150	121,000	3.5	2,780,000	7.3
1946	246	258,000	5.6	6,090,000	5.2
1947	247	108,000	5.0	2,440,000	7.1
Colorado:					
1935	5	8,170	.7	56,800	.4
1936	8	1,710	.2	13,100	.1
1937	17	1,410	.1	36,000	.1
1938	11	1,920	.3	15,100	.2
1939	17	8,620	.7	76,000	.4
1940	5	210	(1)	2,790	(1)
1941	10	5,730	.2	57,600	.2
1942	10	760	.1	2,180	.1
1943	9	7,360	.4	99,200	.7
1944	21	2,290	.1	13,400	.2
1945	28	13,900	.4	86,000	.2
1946	26	26,200	.6	590,000	.5
1947	27	11,400	.5	217,000	.6
Connecticut:					
1935	44	12,700	1.1	194,000	1.3
1936	45	9,440	1.2	179,000	1.3
1937	93	18,500	1.0	268,000	.9
1938	45	7,770	1.1	94,900	1.0
1939	38	10,600	.9	92,500	.5
1940	34	6,180	1.2	69,800	1.0
1941	84	33,600	1.4	273,000	1.2
1942	33	7,880	.9	23,000	.5
1943	36	9,100	.5	23,200	.2
1944	44	24,700	1.2	76,500	.9
1945	79	39,300	1.1	750,000	2.0
1946	86	59,200	1.3	3,160,000	2.7
1947	57	12,000	.6	146,000	.4
Delaware:					
1935	2	350	(1)	1,970	(1)
1936	6	250	(1)	2,820	(1)
1937	12	1,120	0.1	13,700	(1)
1938	4	270	(1)	3,690	(1)
1939	5	250	(1)	3,770	(1)
1940	8	1,050	.2	14,100	0.2
1941	14	4,640	.2	46,100	.2
1942	10	1,710	.2	2,590	.1
1943	14	1,560	.1	5,210	(1)
1944	14	8,460	.4	12,000	.1
1945	13	3,600	.1	49,000	.1
1946	17	5,890	.1	95,000	.1
1947	8	2,100	.1	61,200	.2
District of Columbia:					
1935	13	4,400	.4	10,500	.1
1936	16	1,230	.2	22,500	.2
1937	27	4,280	.2	35,800	.1
1938	26	1,550	.2	20,600	.2
1939	23	5,880	.5	65,000	.4
1940	25	3,430	.6	19,000	.3
1941	21	2,560	.1	21,100	.1
1942	12	5,090	.6	12,800	.3
1943	8	970	(1)	2,560	(1)
1944	9	1,930	.1	7,090	.1
1945	12	5,100	.1	35,000	.1
1946	29	21,800	.5	180,000	.2
1947	14	10,500	.5	246,000	.7
Florida:					
1935	9	7,050	.6	200,000	1.9
1936	7	1,490	.2	13,900	.1
1937	28	7,810	.4	57,100	.2
1938	11	2,030	.3	15,200	.2
1939	20	2,330	.2	80,800	.5
1940	28	9,280	1.6	96,500	1.4
1941	33	7,350	.3	43,000	.2
1942	16	3,330	.4	14,800	.4
1943	38	29,400	1.5	99,300	.7
1944	39	10,300	.5	176,000	2.0
1945	29	13,000	.4	143,000	.4
1946	42	17,200	.4	152,000	.1
1947	37	14,700	.7	226,000	.7
Georgia:					
1935	16	6,690	.6	182,000	1.2
1936	10	2,560	.3	64,900	.5
1937	17	5,700	.3	134,000	.5
1938	16	1,910	.3	17,600	.2
1939	17	2,130	.2	73,100	.4
1940	14	1,750	.3	41,400	.6
1941	32	6,980	.3	98,500	.4
1942	12	1,610	.2	25,100	.6
1943	35	5,690	.3	80,600	.6
1944	33	6,710	.3	33,900	.4
1945	42	15,300	.4	149,000	.4
1946	61	27,700	.6	540,000	.5
1947	25	10,700	.5	285,000	.8
Idaho:					
1935	5	1,620	.1	6,370	(1)
1936	5	2,620	.3	123,000	.9
1937	6	1,090	.1	26,600	.1
1938	4	360	.1	5,340	.1
1939	2	120	(1)	1,560	(1)
1940	3	150	(1)	2,890	(1)
1941	8	340	(1)	10,500	(1)
1942	3	250	(1)	1,590	(1)
1943	5	1,530	.1	6,880	.1
1944	7	1,130	.1	6,860	.1
1945	12	1,900	.1	75,000	.2
1946	13	3,200	.1	33,100	(1)
1947	7	5,300	.2	203,000	.8
Illinois:					
1935	106	37,500	6.6	834,000	5.4
1936	98	24,100	3.1	410,000	2.9
1937	272	99,400	5.3	1,430,000	5.0
1938	138	27,400	4.0	490,000	4.4
1939	151	74,000	6.3	607,000	3.4
1940	133	27,500	4.8	462,000	6.9
1941	226	111,000	4.7	1,590,000	6.9
1942	279	66,800	7.9	291,000	7.0
1943	343	132,000	6.7	772,000	5.7
1944	492	152,000	7.2	745,000	8.5
1945	491	275,000	7.9	2,560,000	6.7
1946	439	345,000	7.5	9,100,000	7.8
1947	374	154,000	7.1	1,790,000	5.2

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[1] Less than one-tenth of 1 percent.

TABLE E-6: Work stoppages by State, 1935–47—Continued

State and period	Work stoppages beginning in year			Man-days idle (all stoppages)		State and period	Work stoppages beginning in year			Man-days idle (all stoppages)	
	Number	Workers involved					Number	Workers involved			
		Number	Percent of total for year	Number	Percent of total for year			Number	Percent of total for year	Number	Percent of total for year
Indiana:						Maryland:					
1935	41	46,400	4.2	350,000	2.3	1935	27	9,460	0.8	49,700	0.3
1936	34	11,700	1.5	154,000	1.1	1936	27	19,100	2.4	203,000	1.5
1937	138	56,400	3.0	968,000	3.4	1937	44	12,600	.7	190,000	.7
1938	67	14,500	2.1	240,000	2.6	1938	25	9,470	1.4	64,700	.7
1939	79	30,800	2.6	381,000	2.1	1939	31	14,600	1.2	270,000	1.5
1940	67	16,600	2.9	279,000	4.2	1940	29	14,800	2.6	141,000	1.2
1941	161	80,300	3.4	657,000	2.9	1941	66	37,200	1.6	207,000	.9
1942	93	32,200	3.8	221,000	5.3	1942	34	6,360	.8	28,500	.7
1943	130	80,100	4.0	434,000	3.2	1943	36	18,500	.9	114,000	.8
1944	195	93,500	4.4	354,000	4.1	1944	48	8,840	.4	24,000	.3
1945	203	150,000	4.3	1,810,000	4.8	1945	57	33,300	1.0	246,000	.6
1946	171	178,000	3.9	5,470,000	4.7	1946	53	80,700	1.8	1,400,000	1.2
1947	134	65,000	3.0	720,000	2.1	1947	36	49,600	2.3	1,620,000	4.7
Iowa:						Massachusetts:					
1935	13	11,100	1.0	79,800	.5	1935	110	26,300	2.4	605,000	3.9
1936	10	1,210	.2	45,300	.3	1936	111	34,200	4.3	432,000	3.1
1937	47	15,500	.8	332,000	1.2	1937	277	55,400	3.0	602,000	2.1
1938	36	4,780	.7	123,000	1.3	1938	123	14,900	2.2	185,000	2.0
1939	42	8,670	.7	85,100	.5	1939	116	34,800	3.0	346,000	1.9
1940	25	960	.2	32,800	.5	1940	104	21,900	3.8	256,000	3.8
1941	49	10,200	.4	220,000	1.0	1941	175	57,400	2.4	530,000	2.3
1942	38	5,680	.7	28,500	.7	1942	151	74,600	8.9	408,000	9.7
1943	26	9,210	.5	57,600	.4	1943	127	37,300	1.9	254,000	1.9
1944	34	9,360	.4	537,000	.6	1944	156	48,400	2.3	406,000	4.7
1945	43	18,200	.5	256,000	.7	1945	239	60,700	1.7	397,000	1.0
1946	66	40,700	.9	561,000	.5	1946	266	111,000	2.4	3,230,000	2.8
1947	38	119,000	5.5	322,000	.9	1947	177	56,400	2.6	1,250,000	3.6
Kansas:						Michigan:					
1935	7	4,850	.4	39,500	.3	1935	55	17,200	1.5	187,000	1.2
1936	5	270	(1)	1,000	(1)	1936	45	27,000	3.4	214,000	1.5
1937	16	1,630	.1	15,400	.1	1937	306	354,000	19.1	3,920,000	13.8
1938	10	2,070	.3	17,500	.2	1938	95	77,000	11.2	350,000	3.8
1939	11	7,480	.6	30,200	.2	1939	89	130,000	11.2	2,500,000	14.1
1940	9	530	.1	8,980	.1	1940	73	25,800	4.5	195,000	2.9
1941	19	3,170	.1	19,400	.1	1941	252	334,000	14.2	1,900,000	8.2
1942	12	1,040	.1	4,320	.1	1942	261	115,000	13.7	259,000	6.2
1943	12	1,900	.1	17,100	.1	1943	413	275,000	13.9	592,000	4.4
1944	15	4,520	.2	7,530	.1	1944	562	569,000	27.1	1,840,000	20.9
1945	14	6,000	.2	43,000	.1	1945	478	528,000	15.2	6,140,000	16.2
1946	33	31,400	.7	290,000	.2	1946	311	248,000	5.4	10,600,000	9.2
1947	19	8,800	.4	232,000	.7	1947	188	180,000	8.3	2,550,000	7.4
Kentucky:						Minnesota:					
1935	13	14,900	1.3	403,000	2.6	1935	35	6,000	.5	177,000	1.1
1936	9	1,310	.2	359,000	2.6	1936	54	14,200	1.8	250,000	1.8
1937	66	23,700	1.3	384,000	1.4	1937	75	24,700	1.3	510,000	1.8
1938	18	2,940	.4	48,400	.5	1938	57	8,650	1.3	142,000	1.5
1939	19	61,200	5.2	1,240,000	7.0	1939	26	18,700	1.6	107,000	.6
1940	39	9,170	1.6	65,300	1.0	1940	25	3,220	.6	99,200	1.5
1941	53	72,500	3.1	773,000	3.4	1941	47	7,460	.3	98,900	.4
1942	48	7,340	.9	65,700	1.6	1942	26	5,880	.7	65,300	1.6
1943	133	78,100	3.9	1,090,000	8.1	1943	13	670	(1)	5,060	(1)
1944	147	34,200	1.6	143,000	1.6	1944	19	6,770	.3	42,700	.5
1945	149	99,100	2.9	964,000	2.5	1945	29	10,900	.3	246,000	.6
1946	166	139,000	3.0	2,970,000	2.6	1946	55	45,100	1.0	873,000	.8
1947	122	76,700	3.5	681,000	2.0	1947	50	24,000	1.1	358,000	1.0
Louisiana:						Mississippi:					
1935	12	5,360	.5	138,000	.9	1935	8	3,600	.3	62,400	.4
1936	17	3,080	.4	31,900	.2	1936	3	290	(1)	2,800	(1)
1937	23	2,110	.1	32,300	.1	1937	8	2,150	.1	50,000	.2
1938	27	15,400	2.2	161,000	1.8	1938	2	200	(1)	1,110	(1)
1939	23	1,670	.1	22,000	.1	1939	7	3,540	.3	39,800	.2
1940	28	3,640	.6	51,300	.8	1940	6	1,200	.2	8,360	.1
1941	47	6,960	.3	55,600	.2	1941	11	6,070	.3	22,100	.1
1942	23	6,890	.8	53,500	1.3	1942	8	3,210	.4	13,400	.3
1943	20	11,800	.6	51,200	.4	1943	18	8,300	.4	36,400	.3
1944	29	10,300	.5	60,400	.7	1944	14	3,300	.2	58,700	.7
1945	50	20,700	.6	251,000	.7	1945	15	9,100	.3	44,000	.1
1946	50	29,000	.6	372,000	.3	1946	26	14,600	.3	147,000	.1
1947	26	15,500	.7	373,000	1.1	1947	17	7,800	.4	201,000	.6
Maine:						Missouri:					
1935	7	2,300	.2	25,700	.2	1935	45	16,400	1.5	230,000	1.5
1936	7	830	.1	5,810	(1)	1936	35	9,820	1.2	158,000	1.1
1937	16	5,300	.3	217,000	.8	1937	142	43,800	2.4	965,000	3.4
1938	8	940	.1	24,800	.3	1938	68	8,900	1.3	184,000	2.1
1939	10	1,990	.2	15,400	.1	1939	67	13,300	1.1	244,000	1.4
1940	10	1,580	.3	5,420	.1	1940	70	23,100	4.0	259,000	3.9
1941	23	6,260	.2	44,100	.2	1941	119	51,400	2.2	314,000	1.4
1942	13	13,100	1.6	34,600	.8	1942	90	15,400	1.8	65,600	1.6
1943	12	8,800	.4	19,300	.1	1943	106	32,300	1.6	145,000	1.1
1944	13	8,830	.4	13,600	.2	1944	157	70,100	3.3	240,000	2.8
1945	11	14,300	.4	203,000	.5	1945	148	70,600	2.0	961,000	2.4
1946	22	10.500	.2	44,800	(1)	1946	168	73,800	1.0	1,750,000	1.5
1947	17	3,700	.2	46,800	.1	1947	108	45,000	2.1	908,000	2.6

[1] Less than one tenth of 1 percent.

TABLE E-6: Work stoppages by State, 1935–47—Continued

State and period	Work stoppages beginning in year			Man-days idle (all stoppages)	
	Number	Workers involved		Number	Percent of total for year
		Number	Percent of total for year		
Montana:					
1935	7	2,130	0.2	26,900	0.2
1936	6	1,220	.2	10,600	.1
1937	13	3,320	.2	32,900	.1
1938	7	740	.1	30,900	.3
1939	6	5,590	.5	20,300	.1
1940	4	410	.1	7,910	.1
1941	7	220	(1)	6,590	(1)
1942	7	200	(1)	2,950	.1
1943	5	1,530	.1	15,200	.1
1944	7	680	(1)	3,750	(1)
1945	9	3,000	.1	171,000	.5
1946	15	11,300	.2	223,000	.2
1947	18	2,400	.1	35,600	.1
Nebraska:					
1935	2	280	(1)	2,610	(1)
1936	5	290	(1)	1,720	(1)
1937	10	4,350	.2	47,500	.2
1938	15	2,210	.3	107,000	1.2
1939	6	590	.1	29,100	.2
1940	5	290	(1)	1,620	(1)
1941	5	290	(1)	3,930	(1)
1942	8	1,940	.2	6,350	.2
1943	6	480	(1)	2,810	(1)
1944	11	1,150	.1	6,430	.1
1945	11	4,000	.1	52,000	.1
1946	19	15,500	.3	235,000	.2
1947	8	6,300	.3	131,000	.4
Nevada:					
1935	2	1,290	.1	12,900	.1
1936	3	170	(1)	250	(1)
1937	3	140	(1)	600	(1)
1938	1	40	(1)	650	(1)
1939	2	300	(1)	850	(1)
1940	3	50	(1)	1,060	(1)
1941	6	1,010	(1)	4,080	(1)
1942	1	20	(1)	70	(1)
1943	2	210	(1)	210	(1)
1944	3	110	(1)	280	(1)
1945	5	400	(1)	3,000	(1)
1946	9	2,260	(1)	17,000	(1)
1947	8	700	(1)	18,600	.1
New Hampshire:					
1935	8	1,550	.1	30,800	.2
1936	5	1,000	.1	13,300	.1
1937	12	1,980	.1	26,600	.1
1938	6	13,330	.2	11,200	.1
1939	9	1,500	.1	10,800	.1
1940	5	1,140	.2	6,700	.1
1941	13	3,230	.1	16,300	.1
1942	14	2,030	.2	8,829	.2
1943	20	7,710	.4	15,700	.1
1944	21	4,610	.2	25,200	.3
1945	13	5,800	.2	63,000	.2
1946	23	5,540	.1	130,000	.1
1947	19	7,600	.3	62,700	.2
New Jersey:					
1935	123	47,200	4.2	1,090,000	7.1
1936	126	30,000	3.8	561,000	4.0
1937	309	65,800	3.5	935,000	3.3
1938	198	49,300	7.2	385,000	4.2
1939	190	29,600	2.5	539,000	3.0
1940	179	34,400	5.9	382,000	5.7
1941	264	91,300	3.9	1,060,000	4.6
1942	174	39,300	4.7	198,000	4.7
1943	177	57,300	2.9	169,000	1.3
1944	202	93,300	4.4	333,000	3.8
1945	252	168,000	4.8	1,780,000	4.7
1946	245	193,000	4.2	6,530,000	5.6
1947	161	99,400	4.6	2,890,000	8.4
New Mexico:					
1935	3	2,500	.2	16,900	.1
1936	4	890	.1	35,200	.3
1937	......	......	......	......	......
1938	6	1,100	.2	9,410	.1
1939	6	2,980	.3	20,500	.1
1940	3	220	(1)	6,040	.1
1941	11	3,170	.1	26,500	.1
1942	12	1,960	.2	15,800	.4
1943	6	2,870	.1	37,500	.3
1944	6	660	(1)	3,600	(1)
1945	10	1,600	(1)	22,000	.1
1946	15	5,870	.1	103,000	.1
1947	12	4,000	.2	28,900	.1
New York:					
1935	349	140,000	12.6	1,500,000	9.7
1936	393	161,000	20.5	1,940,000	14.0
1937	897	221,000	11.9	3,180,000	11.2
1938	764	122,000	17.7	1,790,000	19.8
1939	726	136,000	11.7	1,240,000	6.9
1940	553	104,000	18.0	1,250,000	18.8
New York—Continued					
1941	763	204,000	8.6	2,170,000	9.4
1942	372	57,800	6.9	376,000	9.0
1943	296	91,300	4.6	307,000	2.3
1944	265	51,000	2.4	219,000	2.5
1945	361	175,000	5.0	1,400,000	3.7
1946	682	433,000	9.4	9,350,000	8.1
1947	466	163,000	7.5	3,960,000	11.2
North Carolina:					
1935	16	5,220	.5	46,900	.3
1936	13	5,320	.7	85,700	.6
1937	29	7,440	.4	85,500	.3
1938	18	7,000	1.0	56,900	.6
1939	15	7,940	.7	102,000	.6
1940	23	4,920	.9	93,200	1.4
1941	34	18,700	.8	105,000	.5
1942	26	4,830	.6	24,300	.6
1943	57	18,500	.9	103,000	.8
1944	45	11,100	.5	68,100	.8
1945	37	17,500	.5	438,000	1.2
1946	56	14,400	.3	452,000	.4
1947	37	16,000	.7	542,000	1.6
North Dakota:					
1935	3	1,620	.1	7,860	.1
1936	4	650	.1	1,880	(1)
1937	15	770	(1)	9,190	(1)
1938	5	80	(1)	780	(1)
1939	7	1,560	.1	20,500	.1
1940	7	90	(1)	1,140	(1)
1941	7	360	(1)	3,140	(1)
1942	2	110	(1)	320	(1)
1943	4	110	(1)	320	(1)
1944	1	200	(1)	1,800	(1)
1945	2	400	(1)	12,000	(1)
1946	9	4,250	.1	61,000	.1
1947	5	1,800	.1	22,600	.1
Ohio:					
1935	173	88,600	7.9	1,300,000	8.4
1936	177	125,000	15.9	1,740,000	12.5
1937	298	207,000	11.1	3,940,000	13.9
1938	116	46,800	6.8	322,000	3.5
1939	96	50,500	4.3	769,000	4.3
1940	149	29,800	5.2	323,000	4.8
1941	341	164,000	7.0	1,310,000	5.7
1942	238	64,000	7.6	317,000	7.6
1943	467	297,000	15.0	1,020,000	7.5
1944	549	216,000	10.2	705,000	8.1
1945	477	418,000	12.1	3,440,000	9.0
1946	395	449,000	9.8	10,600,000	9.2
1947	274	129,000	5.9	2,140,000	6.2
Oklahoma:					
1935	15	5,640	.5	121,000	.8
1936	6	870	.1	40,400	.3
1937	19	4,060	.2	100,000	.4
1938	13	1,700	.2	20,900	.2
1939	13	3,080	.3	71,200	.4
1940	13	330	.1	7,950	.1
1941	16	830	(1)	21,000	.1
1942	15	1,240	.1	6,090	.1
1943	25	6,000	.3	41,900	.3
1944	24	2,850	.1	16,000	.2
1945	23	5,300	.2	73,000	.2
1946	42	16,800	.4	389,000	.3
1947	22	12,700	.6	296,000	.9
Oregon:					
1935	21	13,800	1.2	539,000	3.5
1936	53	16,000	2.0	391,000	2.8
1937	50	12,000	.6	424,000	1.5
1938	19	9,270	1.3	229,000	2.5
1939	39	11,500	1.0	139,000	.8
1940	41	7,060	1.2	117,000	1.7
1941	51	6,990	.3	201,000	.9
1942	44	6,770	.8	75,800	1.8
1943	31	4,720	.2	13,900	.1
1944	49	20,100	.9	125,000	1.4
1945	36	25,900	.7	954,000	2.5
1946	45	21,400	.5	272,000	.2
1947	42	11,000	.5	242,000	.7
Pennsylvania:					
1935	320	245,000	21.9	2,330,000	15.1
1936	365	118,000	15.0	2,020,000	14.5
1937	641	323,000	17.4	3,700,000	13.0
1938	352	115,000	16.6	1,410,000	15.4
1939	315	179,000	15.4	3,040,000	17.2
1940	301	105,000	18.1	905,000	13.7
1941	545	488,000	20.9	4,140,000	17.7
1942	410	163,000	19.4	764,000	18.0
1943	571	414,000	21.2	4,270,000	31.7
1944	821	328,000	15.5	1,380,000	15.8
1945	743	599,000	17.5	5,920,000	15.6
1946	639	877,000	19.1	20,100,000	17.3
1947	457	319,000	14.9	3,030,000	8.8

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[1] Less than one-tenth of 1 percent.

TABLE E-6: Work stoppages by State, 1935–47—Continued

State and period	Work stoppages beginning in year			Man-days idle (all stoppages)	
	Number	Workers involved		Number	Percent of total for year
		Number	Percent of total for year		
Rhode Island:					
1935	21	3,510	0.3	79,600	0.5
1936	27	5,810	.7	82,300	.6
1937	93	30,000	1.6	293,000	1.0
1938	22	3,150	.5	49,000	.5
1939	18	7,590	.6	117,000	.7
1940	14	2,940	.5	19,200	.3
1941	39	8,890	.4	87,900	.4
1942	32	10,400	1.2	28,100	.7
1943	45	18,600	.9	64,500	.5
1944	43	23,500	1.1	110,000	1.3
1945	47	22,900	.7	456,000	1.2
1946	45	11.400	.2	257,000	.2
1947	35	6,000	.3	165,000	.5
South Carolina:					
1935	11	5,050	.5	184,000	1.2
1936	16	4,450	.6	257,000	1.9
1937	9	3,320	.2	26,600	.1
1938	9	3,110	.5	55,200	.6
1939	12	4,790	.4	108,000	.6
1949	16	8,580	1.5	76,200	1.1
1941	17	5,140	.2	14,500	.1
1942	23	7,180	.9	47,200	1.1
1943	16	5,800	.3	37,900	.3
1944	10	1,950	.1	28.200	.3
1945	14	7,200	.2	200,000	.5
1946	19	10,200	.2	388,000	.3
1947	10	3,100	.1	155,000	.4
South Dakota:					
1935	3	2,520	.2	25,800	.2
1936	......	....	......	....	......
1937	3	170	(1)	1,210	(1)
1938	2	60	(1)	510	(1)
1939	3	50	(1)	220	(1)
1940	4	50	(1)	240	(1)
1941	5	330	(1)	6,130	(1)
1942	4	150	(1)	520	(1)
1943	1	30	(1)	440	(1)
1944	2	140	(1)	1,160	(1)
1945	3	700	(1)	12,000	(1)
1946	7	2,300	(1)	13,700	(1)
1947	3	1,400	.1	28,100	.1
Tennessee:					
1935	27	4,150	.4	126,000	.8
1936	23	2,760	.3	62,300	.4
1937	69	23,500	1.3	541,000	1.9
1938	28	3,540	.5	82,200	.9
1939	33	10,500	.9	240,000	1.3
1940	25	7,560	1.3	40,600	.6
1941	85	34,700	1.5	565,000	2.5
1942	53	8,870	1.1	62,200	1.5
1943	105	32,200	1.6	228,000	1.7
1944	127	35,200	1.7	200,000	2.3
1945	118	69,800	2.0	461,000	1.2
1946	131	64,900	1.4	1,110,000	1.0
1947	75	36,900	1.7	526,000	1.5
Texas:					
1935	24	7,620	.7	156,000	1.0
1936	38	7,060	.9	93,600	.7
1937	64	9,610	.5	198,000	.7
1938	50	9,190	1.3	197,000	2.2
1939	46	6,210	.5	133,000	.7
1940	40	5,800	1.0	87,100	1.3
1941	55	11,800	.5	129,000	.6
1942	28	3,070	.4	17,900	.4
1943	34	5,000	.3	29,700	.2
1944	65	24,200	1.1	81,000	.9
1945	72	73,800	2.1	510,000	1.3
1946	97	94,800	2.1	2,010,000	1.7
1947	70	46,700	2.2	1,090,000	3.1
Utah:					
1935	3	2,830	.3	13,700	.1
1936	4	3,380	.4	137,000	1.0
1937	14	1,010	.1	9,870	(1)
1938	8	530	.1	2,810	(1)
1939	10	4,710	.4	39,200	.2
1940	7	200	(1)	1,590	(1)
1941	13	2,810	.1	44,300	.2
1942	9	1,140	.1	4,920	.1
1943	6	4,900	.2	43,500	.3
1944	10	2,070	.1	7,860	(1)
1945	19	3,100	.1	16,000	(1)
1946	17	16,700	.4	782,000	.7
1947	13	9,600	.4	99,100	.3
Vermont:					
1935	6	1,960	0.2	32,800	0.2
1936	3	170	(1)	57,000	.4
1937	6	210	(1)	2,580	(1)
1938	2	2,660	.4	38,900	.4
1939	2	1,010	.1	8,180	(1)
1940	3	270	(1)	2,920	(1)
1941	6	800	(1)	15,000	.1
1942	3	1,290	.2	31,600	.8
1943	4	470	(1)	1,730	(1)
1944	5	800	(1)	1,930	(1)
1945	2	20	(1)	80	(1)
1946	7	2,600	.1	16,100	(1)
1947	7	1,900	.1	87,100	.3
Virginia:					
1935	12	12,800	1.1	85,300	.6
1936	7	1,660	.2	8,310	.1
1937	50	18,700	1.0	343,000	1.2
1938	23	2,410	.4	27,500	.3
1939	26	14,200	1.2	308,000	1.7
1940	29	7,230	1.3	144,000	2.1
1941	39	17,200	.7	223,000	1.0
1942	28	5,910	.7	40,200	1.0
1943	54	30,000	1.5	365,000	2.7
1944	99	24,300	1.2	77,600	.9
1945	88	40,300	1.2	255,000	.7
1946	108	72,200	1.6	1,240,000	1.1
1947	69	26,300	1.2	244,000	.7
Washington:					
1935	61	33,800	3.0	1,040,000	6.7
1936	82	28,100	3.6	847,000	6.1
1937	89	19,700	1.1	613,000	2.2
1938	51	18,800	2.7	445,000	4.9
1939	66	21,900	1.9	439,000	2.5
1940	77	33,100	5.7	393,090	5.9
1941	60	35,700	1.5	707,000	3.1
1942	47	12,300	1.5	103,000	2.5
1943	27	10,300	.5	64,400	.5
1944	46	32,400	1.5	285,000	3.3
1945	38	32,500	.9	852,000	2.2
1946	79	49,600	1.1	884,000	.8
1947	62	35,200	1.6	802,000	2.3
West Virginia:					
1935	17	104,000	9.3	570,000	3.7
1936	30	7,330	.9	141,000	1.0
1937	25	6,870	.4	201,000	.7
1938	13	4,100	.6	55,800	.6
1939	26	94,600	8.2	2,170,000	12.2
1940	28	3,810	.7	42,800	.6
1941	57	163,000	6.9	1,940,000	8.4
1942	47	12,300	1.5	63,100	1.5
1943	110	123,000	6.2	1,700,000	12.6
1944	121	41,800	2.0	260,000	3.0
1945	128	157,000	4.5	1,660,000	4.4
1946	150	229,000	5.0	5,600,000	4.8
1947	107	134,000	6.2	908,000	2.6
Wisconsin:					
1935	46	10,300	.9	267,000	1.7
1936	50	16,400	2.1	233,000	1.7
1937	190	45,000	2.4	857,000	3.0
1938	88	21,600	3.1	303,000	3.3
1939	55	39,400	3.4	366,000	2.1
1940	49	5,330	.9	99,000	1.5
1941	65	17,500	.7	521,000	2.3
1942	45	7,090	.8	37,500	.9
1943	29	4,790	.2	33,100	.2
1944	88	36,200	1.7	144,000	1.6
1945	96	44,100	1.3	600,000	1.9
1946	91	73,700	1.6	4,820,000	4.2
1947	58	24,400	1.1	1,070,000	3.1
Wyoming:					
1935	2	3,690	.3	18,100	.1
1936	3	800	.1	12,100	.1
1937	4	310	(1)	1,160	(1)
1938	......	....	......	....	......
1939	1	4,000	.3	20,000	.1
1940	1	30	(1)	150	(1)
1941	3	400	(1)	4,600	(1)
1942	3	170	(1)	1,740	(1)
1943	3	3,890	.2	43,800	.3
1944	2	40	(1)	210	(1)
1945	5	500	(1)	3,000	(1)
1946	10	10,600	.2	205,000	.2
1947	8	5,200	.2	44,200	.1

[1] Less than one-tenth of 1 percent.

TABLE E-7: Work stoppages in 30 cities, selected periods, 1939–47

City and period	Stoppages beginning in year		Man-days idle (all stoppages)
	Number	Workers involved	
Akron, Ohio:			
1939	7	4,370	9,730
1941	11	18,300	28,000
1945	57	160,000	904,000
1946	42	43,600	343,000
1947	20	17,300	182,000
Atlanta, Ga.:			
1939	11	900	1,240
1941	19	4,320	48,200
1945	17	3,250	34,200
1946	26	9,140	365,000
1947	8	5,060	135,000
Baltimore, Md.:			
1939	16	2,120	20,400
1941	40	22,200	106,000
1945	19	9,000	118,000
1946	28	39,100	788,000
1947	18	30,400	1,130,000
Birmingham, Ala.:			
1939	4	70	2,530
1941	21	8,770	61,100
1945	28	10,800	79,800
1946	25	31,500	675,000
1947	13	3,700	77,100
Boston, Mass.:			
1939	29	14,400	114,000
1941	32	12,100	146,000
1945	44	6,090	63,800
1946	55	19,100	353,000
1947	32	13,000	266,000
Buffalo, N.Y.:			
1939	17	3,040	16,900
1941	27	9,870	56,700
1945	22	3,660	45,500
1946	34	38,500	1,040,000
1947	20	8,000	94,000
Chicago, Ill.:			
1939	49	8,690	122,000
1941	90	36,300	610,000
1945	170	110,000	986,000
1946	141	93,500	2,530,000
1947	126	42,700	655,000
Cincinnati, Ohio:			
1939	8	1,480	36,700
1941	25	3,540	50,700
1945	48	15,400	129,000
1946	37	23,000	562,000
1947	28	9,030	145,000
Cleveland, Ohio:			
1939	26	9,760	91,900
1941	100	36,200	263,000
1945	89	28,400	424,000
1946	83	79,000	2,210,000
1947	53	25,000	585,000
Denver, Colo.:			
1939	9	1,670	17,500
1941	5	240	1,180
1945	14	6,400	59,700
1946	14	5,100	160,000
1947	10	3,550	134,000
Detroit, Mich.:			
1939	51	115,000	2,290,000
1941	120	101,000	566,000
1945	223	288,000	2,550,000
1946	134	139,000	3,290,000
1947	98	123,000	1,080,000
Houston, Tex.:			
1939	17	510	9,880
1941	16	1,320	28,500
1945	21	11,300	84,500
1946	18	33,300	1,040,000
1947	19	6,580	205,000
Indianapolis, Ind.:			
1939	22	2,280	28,300
1941	20	2,790	39,100
1945	23	12,600	204,000
1946	16	12,300	675,000
1947	25	10,800	174,000
Kansas City, Mo.:			
1939	13	930	24,800
1941	24	3,330	30,900
1945	16	10,200	138,000
1946	33	12,900	447,000
1947	19	12,100	327,000
Los Angeles, Calif.:			
1939	71	11,800	145,000
1941	107	19,200	162,000
1945	50	44,000	510,000
1946	87	67,600	1,160,000
1947	78	24,600	972,000
Memphis, Tenn.:			
1939	5	460	4,860
1941	23	2,190	22,400
1945	28	24,500	68,400
1946	24	13,000	173,000
1947	12	5,250	52,000
Milwaukee, Wis.:			
1939	18	16,800	97,400
1941	28	3,000	38,600
1945	37	15,200	298,000
1946	26	16,700	367,000
1947	14	11,500	240,000
Minneapolis, Minn.:			
1939	20	10,500	63,500
1941	27	6,660	74,300
1945	13	2,870	41,100
1946	21	9,950	187,000
1947	19	5,830	122,000
Newark, N.J.:			
1939	28	5,460	60,500
1941	55	6,770	54,700
1945	48	15,300	192,000
1946	57	18,900	517,000
1947	26	6,860	145,000
New Orleans, La.:			
1939	12	910	10,300
1941	20	3,150	28,400
1945	23	13,300	108,000
1946	23	15,900	220,000
1947	15	7,170	179,000
New York, N.Y.:			
1939	597	116,000	1,030,000
1941	579	150,000	1,650,000
1945	226	96,600	762,000
1946	451	222,000	3,930,000
1947	340	110,000	2,750,000
Philadelphia, Pa.:			
1939	95	27,700	249,000
1941	141	29,800	418,000
1945	76	43,700	727,000
1946	118	105,000	2,440,000
1947	51	25,900	417,000
Pittsburgh, Pa.:			
1939	35	3,880	67,700
1941	70	18,200	227,000
1945	69	26,000	177,000
1946	64	129,000	2,690,000
1947	53	24,400	429,000
Portland, Oreg.:			
1939	12	2,900	21,000
1941	19	2,630	146,000
1945	6	6,090	119,000
1946	18	10,300	170,000
1947	18	6,640	160,000
Providence, R.I.:			
1939	8	4,000	57,600
1941	11	500	5,910
1945	15	9,180	253,000
1946	18	5,430	89,000
1947	12	1,120	14,400
St. Louis, Mo.:			
1939	36	4,870	63,500
1941	62	32,800	184,000
1945	93	45,500	514,000
1946	83	21,200	998,000
1947	56	22,400	437,000
San Francisco, Calif.:			
1939[1]	58	26,300	349,000
1941	44	17,500	305,000
1945	18	30,300	1,110,000
1946	31	31,800	1,780,000
1947	23	19,300	283,000
Seattle, Wash.:			
1939	25	4,250	38,300
1941	16	4,210	35,700
1945	11	7,120	154,000
1946	38	22,900	380,000
1947	27	19,600	400,000
Toledo, Ohio:			
1939	10	6,080	56,200
1941	27	3,460	27,000
1945	43	30,100	420,000
1946	42	16,800	233,000
1947	22	4,740	160,000
Washington, D.C.:			
1939	23	5,880	65,000
1941	21	2,560	21,100
1945	12	5,060	35,000
1946	27	15,600	162,000
1947	14	10,500	246,000

[1] The 1939 figures include data for the Oakland–East Bay area.

Table E–8: Work stoppages by major union affiliation, 1935–47*

Period	Stoppages		Workers involved		Man-days idle	
	Number	Percent of total for year	Number	Percent of total for year	Number	Percent of total for year
	American Federation of Labor					
1935	1,551	77.5	972,000	88.3	12,800,000	85.6
1936[1]	1,780	82.5	590,000	83.1	10,100,000	88.0
1937	2,301	48.7	583,000	30.0	10,900,000	35.2
1938	1,385	50.1	243,000	35.3	3,210,000	36.0
1939	1,312	49.7	372,000	31.6	4,060,000	21.9
1940	1,541	61.9	307,000	53.5	3,630,000	54.5
1941	2,343	54.3	584,000	24.7	6,970,000	30.3
1942	1,620	53.3	340,000	39.9	2,200,000	46.5
1943	1,395	37.3	385,000	19.6	1,430,000	10.7
1944	1,696	34.2	457,000	21.5	2,450,000	27.6
1945	1,720	37.2	608,000	19.8	6,060,000	24.9
1946	2,734	54.9	1,680,000	33.9	35,300,000	28.5
1947	2,137	57.9	968,000	44.6	10,000,000	29.0
	Congress of Industrial Organizations					
1937	1,825	38.7	1,160,000	59.8	18,400,000	59.8
1938	1,121	40.4	377,000	54.9	4,640,000	52.0
1939	764	29.0	704,000	59.7	13,300,000	71.7
1940	689	27.6	223,000	38.9	2,670,000	39.9
1941	1,581	36.6	1,640,000	69.5	14,900,000	64.8
1942	1,034	34.1	384,000	45.1	1,840,000	38.9
1943	1,368	36.6	871,000	44.3	2,130,000	16.0
1944	1,946	39.2	1,110,000	52.2	3,410,000	38.5
1945	1,864	40.3	1,510,000	49.3	9,630,000	39.5
1946	1,663	33.3	2,070,000	41.7	73,100,000	59.1
1947	1,200	32.5	568,000	26.2	11,900,000	34.3
	Independent					
1935	258	13.0	86,300	7.9	1,660,000	11.1
1936	161	7.5	79,200	11.2	1,110,000	9.7
1937	122	2.6	88,700	4.6	672,000	2.2
1938	86	3.1	26,900	3.9	243,000	2.7
1939	434	16.4	60,000	5.1	607,000	3.3
1940	141	5.6	22,300	3.9	215,000	3.2
1941	71	1.7	26,400	1.1	262,000	1.1
1942	116	3.8	53,700	6.3	237,000	5.0
1943[2]	593	15.9	641,000	32.6	9,440,000	71.1
1944[2]	1,000	20.2	414,000	19.5	2,050,000	23.1
1945[2]	795	17.3	839,000	27.3	8,040,000	33.0
1946	311	6.2	646,000	13.1	4,650,000	3.8
1947	212	5.7	487,000	22.5	11,700,000	33.9

*Stoppages in which single-firm unions, two or more rival unions, and no union were involved have been excluded from this table. Therefore, the percentages for any given year do not add to 100.

[1] Figures include strikes in which the 10 international unions suspended by the AFL in Sept. 1936 were involved. These unions were suspended for their activities in forming the Committee for Industrial Organization.

[2] During this period the United Mine Workers of America was affiliated with neither the AFL nor CIO.

TABLE E-9: Work stoppages involving 10,000 or more workers, 1935–47

Business and location	Beginning date	Approximate duration (calendar days)	Union involved	Approximate number of workers involved
1935:				
Shirt manufacturers, New York, New Jersey, Pennsylvania, and Connecticut.	Jan. 21	11	Amalgamated Clothing Workers (AFL)	15,000
Trucking companies, New York City	Jan. 28	1	Brotherhood of Teamsters (AFL)	20,000
Cotton dress companies, Chicago, Ill.	Feb. 20	50	International Ladies' Garment Workers' Union (AFL)	10,000
Dress manufacturers, New York, New Jersey, Pennsylvania, and Connecticut.	April 9	8	International Ladies' Garment Worker's Union (AFL)	17,000
Lumber industry, Washington and Oregon	May 6	104	Sawmill and Timber Workers (AFL)	32,000
General strike, Terre Haute, Ind.	July 22	2	General strike (AFL Unions)	26,000
Dress manufacturers, New York City	Sept. 3	9	International Ladies' Garment Workers' Union (AFL)	10,000
Bituminous-coal mines, 23 States	Sept. 23	6	United Mine Workers (AFL)	366,000
Bituminous-coal mines, Alabama	Sept. 23	56	United Mine Workers (AFL)	20,000
1936:				
Millinery companies, New York City	Feb. 4	7	United Hatters, Cap and Millinery Workers (AFL)	20,000
Goodyear Tire & Rubber Co., Akron, Ohio	Feb. 17	34	United Rubber Workers (AFL)	14,000
Realty owners, New York City	Mar. 1	15	Building Service Employees (AFL)	36,000
Barber shops, New York City	Apr. 27	71	The Journeymen Barbers (AFL)	20,000
Goodyear Tire & Rubber Co., Akron, Ohio	June 10	1	United Rubber Workers (AFL)	12,000
Painting contractors, New York City	Aug. 27	9	Brotherhood of Painters (AFL)	10,000
Maritime industry, Pacific Coast	Oct. 30	98	International Longshoremen's Association (AFL), Marine Engineers' Beneficial Association (Ind.), Masters, Mates and Pilots (AFL), Marine Firemen, Oilers, Watertenders and Wipers Association (Ind.), Marine Cooks and Stewards (AFL), American Radio Telegraphists Association (Ind.), and Sailors Union of the Pacific (Ind.).	37,000
Maritime industry, Atlantic and Gulf Coasts	Nov. 1	85	International Seamen's Union (AFL)	20,000
1937:				
General Motors Corp., 6 States	Jan. 1	42	United Automobile Workers (CIO)	48,000
B. F. Goodrich Co., Akron, Ohio	Jan. 28	3	United Rubber Workers (CIO)	10,000
Shirt manufacturers, New York, New Jersey, Connecticut, and Pennsylvania.	Feb. 16	10	Amalgamated Clothing Workers (CIO)	12,000
Shoe manufacturers, Massachusetts	Feb. 23	9	United Shoe and Leather Workers (CIO)	11,500
Firestone Tire & Rubber Co., Akron, Ohio	Mar. 3	59	United Rubber Workers (CIO)	10,500
Chrysler Corp., Detroit, Mich.	Mar. 8	30	United Automobile Workers (CIO)	63,000
Hudson Motor Car Co., Detroit, Mich.	Mar. 8	34	United Automobile Workers (CIO)	10,000
General Motors Corp., Flint, Mich.	Mar. 8	1	United Automobile Workers (CIO)	13,000
General Motors Corp., Flint, Mich.	Apr. 1	3	United Automobile Workers (CIO)	14,000
Bituminous-coal mines, Alabama	Apr. 2	43	United Mine Workers (CIO)	15,000
Caterpillar Tractor Co., Peoria, Ill.	Apr. 6	3	Amalgamated Association of Iron, Steel and Tin Workers (CIO-SWOC).	11,000
Anthracite mines, Pennsylvania	May 3	23	United Mine Workers (CIO)	15,000
Jones and Laughlin Steel Corp., Aliquippa and Pittsburgh, Pa.	May 12	3	Steel Workers Organizing Committee (CIO)	25,000
Independent steel companies, Republic, Youngstown Sheet & Tube, Inland, and Bethlehem.	May 26	64	Steel Workers Organizing Committee (CIO)	92,000
General strike, Lansing, Mich.	June 7	1	United Automobile Workers (CIO)	15,000
General Motors Corp., Detroit, Mich.	June 8	8	United Automobile Workers (CIO)	11,000
Shipyards, New York and New Jersey	June 11	69	Industrial Union of Marine and Shipbuilding Workers (CIO)	15,000
Captive coal mines, Pennsylvania and West Virginia	June 14	45	United Mine Workers (CIO)	10,000
Trucking companies, Philadelphia, Pa.	July 2	2	Brotherhood of Teamsters (AFL)	20,000
Cloak manufacturers, New York and New Jersey	July 8	5	International Ladies' Garment Workers' Union (CIO)	12,000
Bituminous-coal mines, Illinois	July 31	28	Progressive Mine Workers (Ind.)	16,000
Chrysler Corp., Detroit, Mich.	Aug. 4	4	United Automobile Workers (CIO) and Independent Association of Chrysler Employees (Ind.).	10,000
Silk manufacturers, New York, New Jersey, and Pennsylvania	Aug. 9	23	Textile Workers Organizing Committee (CIO)	31,000
Painting contractors, New York City	Aug. 26	20	Brotherhood of Painters (AFL)	13,000
Hudson Motor Car Co., Detroit, Mich.	Nov. 9	1	United Automobile Workers (CIO)	10,500
Goodyear Tire & Rubber Co., Akron, Ohio	Nov. 19	3	United Rubber Workers (CIO)	13,500
1938:				
Hosiery mills, New York, New Jersey, and Pennsylvania	Feb. 28	4	American Federation of Hosiery Workers (CIO)	21,000
Trucking companies, New Jersey and New York City	Sept. 15	19	Brotherhood of Teamsters (AFL)	18,000
1939:				
Chrysler Corp., Detroit, Mich.	Feb. 22	2	United Automobile Workers (CIO)	10,000
Bituminous-coal mines, 23 States	Apr. 1	48	United Mine Workers (CIO)	330,000
Bituminous-coal mines, Harlan County, Ky.	May 19	62	United Mine Workers (CIO)	14,000
Briggs Manufacturing Co., Detroit, Mich.	May 22	17	United Automobile Workers (CIO)	15,000
W. P. A. projects, 38 States	July 5	16	Workers Alliance (Ind.)	123,000
Building and construction industry, Philadelphia, Pa.	Aug. 29	10	Philadelphia Building Trades Council and Plumbers and Steamfitters (AFL).	15,000
Chrysler Corp., Detroit, Mich.	Oct. 6	55	United Automobile Workers (CIO)	50,000
Cotton growers, California	Oct. 9	53	Cannery, Agricultural, Packing and Allied Workers (CIO)	15,000
1940:				
Clothing industry, New York	July 11	2	International Ladies' Garment Workers' Union (AFL)	15,000
Painting contractors, New York, Connecticut, and District of Columbia.	Aug. 26	32	Brotherhood of Painters (AFL)	15,000
Building and construction industry, St. Louis, Mo.	Oct. 25	4	St. Louis Building and Construction Trades Council (AFL)	15,000
Lumber companies, Oregon and Washington	Dec. 2	15	Lumber and Sawmill Workers (AFL)	12,000
1941:				
International Harvester Co., Illinois, and Indiana	Jan. 17	73	Farm Equipment Organizing Committee (CIO)	16,000
Bethlehem Steel Corp., Lackawanna, N. Y.	Feb. 27	2	Steel Workers Organizing Committee (CIO)	12,000
Bethlehem Steel Corp., Bethlehem, Pa.	Mar. 24	4	Steel Workers Organizing Committee (CIO)	10,000
Bethlehem Steel Corp., Johnstown, Pa.	Mar. 28	3	Steel Workers Organizing Committee (CIO)	10,000
Bituminous-coal mines, Illinois	Apr. 1	15	Progressive Mine Workers (AFL)	15,000
Bituminous-coal mines, Alabama, Illinois, and Iowa	Apr. 1	44	United Mine Workers (CIO)	49,000
Bituminous-coal mines, 14 States	Apr. 1	30	United Mine Workers (CIO)	269,000
Ford Motor Co., Dearborn, Mich.	Apr. 1	11	United Automobile Workers (CIO)	85,000
Lumber industry, Washington	May 9	37	International Woodworkers (CIO)	12,000
Building and construction industry, Detroit, Mich. and vicinity	May 9	9	Detroit Building Trades Council (AFL)	15,000
General Motors Corp., Flint, Saginaw, and Detroit, Mich.	May 15	2	United Automobile Workers (CIO)	40,000
Anthracite mines, Pennsylvania	May 19	1	United Mine Workers (CIO)	91,000
Ravenna Ordnance Plant, Ravenna, Ohio	May 21	3	Hod Carriers, Building and Common Laborers (AFL)	10,000
North American Aviation Inc., Inglewood, Calif.	June 5	5	United Automobile Workers (CIO)	11,000
Building and construction industry, New York City	June 27	5	Greater New York City Building and Construction Trades Council (AFL).	30,000

TABLE E-9: Work stoppages involving 10,000 or more workers, 1935–47—Continued

Business and location	Beginning date	Approximate duration (calendar days)	Union involved	Approximate number of workers involved
41—Continued				
ilding and construction industry, New York City	July 29	12	Electrical Workers (AFL)—Supported by other AFL unions	28,000
ssouri ordnance plants	Aug. 2	9	AFL Building and Construction Trades Council	16,000
deral Shipbuilding & Drydock Co., Kearny, N. J.	Aug. 7	18	Industrial Union of Marine and Shipbuilding Workers (CIO)	15,500
uminous-coal mines, Alabama	Sept. 2	6	United Mine Workers (CIO)	22,000
thracite mines, Pennsylvania	Sept. 9	30	United Mine Workers (CIO)	26,000
ptive coal mines, 6 States	Sept. 14	(1)	United Mine Workers (CIO)	53,000
nnessee Coal, Iron & R. R. Co., Alabama	Sept. 27	2	Steel Workers Organizing Committee (CIO)	15,000
rysler Corp., Detroit, Mich.	Sept. 30	1	United Automobile Workers (CIO)	19,000
rnegie-Illinois Steel Corp., Gary, Ind.	Oct. 5	2	Steel Workers Organizing Committee (CIO)	17,500
F. Goodrich Co., Akron, Ohio	Oct. 7	1	United Rubber Workers (CIO)	16,000
ipyards, California and Washington	Oct. 17	20	United Welders and Burners (Dissident members of various AFL Craft Unions.)	12,000
uminous-coal mines, Alabama	Oct. 20	5	United Mine Workers (CIO)	20,000
rd Motor Co., Dearborn, Mich.	Nov. 7	1	United Automobile Workers (CIO)	20,000
uminous-coal mines, 6 States	Nov. 17	6	United Mine Workers (CIO)	115,000
42:				
xtile mills, New Bedford, Mass.	Feb. 23	1	United Textile Workers (AFL)	13,000
xtile mills, Fall River, Mass.	Mar. 24	14	Textile Workers Union (CIO) and American Federation of Textile Operators (Ind.)	16,000
llow Truck & Coach Mfg. Co., Pontiac, Mich.	June 25	2	United Automobile Workers (CIO)	12,000
estern Cartridge Co. and East Alton Mfg. Co., East Alton, Ill.	Sept. 8	4	Chemical Workers' Union No. 22574 (AFL)	10,500
abama Drydock & Shipbuilding Co., Mobile, Ala.	Sept. 17	3	Industrial Union of Marine and Shipbuilding Workers (CIO)	12,000
estern Cartridge Co. and East Alton Mfg. Co., East Alton, Ill.	Oct. 10	3	Molders and Foundry Workers (AFL)	11,000
43:				
thracite mines, Pennsylvania	Jan. 4	18	United Mine Workers (Ind.)	20,000
ess manufacturers, New York, New Jersey, Pennsylvania, and Connecticut.	Jan. 26	2	International Ladies' Garment Workers' Union (AFL)	16,000
tuminous-coal mines, industry-wide	Apr. 26	(2)	United Mine Workers (Ind.)	360,000
thracite mines, Pennsylvania	May 1	(3)	United Mine Workers (Ind.)	74,000
rysler Corp., Detroit, Mich.	May 20	4	United Automobile Workers (CIO)	27,000
odyear Tire & Rubber Co., Firestone Tire & Rubber Co., General Tire, and B. F. Goodrich Co., Akron, Ohio.	May 22	6	United Rubber Workers (CIO)	49,000
ckard Motor Car Co., Detroit, Mich.	June 2	6	United Automobile Workers (CIO)	24,000
dies' clothing industry, New York City	June 24	2	International Ladies' Garment Workers' Union (AFL)	15,000
amp Shipbuilding Co., Philadelphia, Pa.	Oct. 15	3	Industrial Union of Marine and Shipbuilding Workers (CIO)	17,000
eel industry, 10 States	Dec. 25	3	United Steelworkers (CIO)	134,000
44:				
amp Shipbuilding Co., Philadelphia, Pa.	Jan. 5	5	Industrial Union of Marine and Shipbuilding Workers (CIO)	14,000
tomotive machinery and other metal working companies	Feb. 4	4	Mechanics Educational Society of America (Ind.)	19,000
iggs Manufacturing Co., Detroit, Mich.	Feb. 25	2	United Automobile Workers (CIO)	11,000
rwood Manufacturing Co., Briggs Manufacturing Co., Hudson Motor Car Co., Murray Corp., and Packard Motor Car Co., Detroit, Mich.	May 1	19	Foremen's Association of America (Ind.)	55,000
rysler Corp., Detroit, Mich.	May 16	8	United Automobile Workers (CIO)	11,000
orthwest lumber industry, Washington, Oregon, and Montana	May 19	14	Lumber and Sawmill Workers (AFL) and International Woodworkers (CIO).	30,000
rd Motor Co., Ypsilanti, Mich.	July 15	2	United Automobile Workers (CIO)	25,000
right Aeronautical Corp., New Jersey	Aug. 7	4	United Automobile Workers (CIO)	10,000
ectric Boat Co., Groton, Conn.	Aug. 14	4	Shipbuilding and Marine Engineers' Union (Ind.)	10,000
tuminous-coal mines, Kentucky, Pennsylvania, and West Virginia	Aug. 17	(4)	United Clerical, Technical, and Supervisory Employees, District 50, United Mine Workers (Ind.)	30,000
rd Motor Co., Ypsilanti, Mich.	Sept. 7	3	United Automobile Workers (CIO)	19,000
odd-Houston Shipbuilding Corp., Houston, Tex.	Sept. 11	2	Brotherhood of Boilermakers (AFL)	11,000
att & Whitney Corp., Kansas City, Mo.	Oct. 2	1	Machinists (AFL)	13,000
utomotive and ordnance plants, Detroit area	Oct. 4	2	United Automobile Workers	50,000
ackard Motor Car Co., Detroit, Mich.	Nov. 3	14	United Automobile Workers (CIO)	28,000
right Aeronautical Corp., New Jersey	Nov. 13	3	Wright Aircraft Supervisory Association (Ind.)	23,000
45;				
hrysler Corp., Dodge main, and DeSoto plants, Detroit and Hamtramck, Mich.	Feb. 23	11	United Automobile Workers (CIO)	16,000
riggs Manufacturing Co., Detroit and Hamtramck, Mich.	Mar. 1	10	United Automobile Workers (CIO)	11,000
. C. Spark Plug Division of General Motors, Flint, Mich.	Mar. 26	3	United Automobile Workers (CIO)	11,000
udson Motor Car Co., Detroit, Mich.	Mar. 28	4	United Automobile Workers (CIO)	13,000
ituminous-coal mines, 13 States	Apr. 3	13	United Mine Workers (Ind.)	100,000
. F. Goodrich Co., Akron, Ohio	Apr. 5	3	Foremen's Association of America (Ind.)	16,000
ackard Motor Car Co., Detroit, Mich.	Apr. 9	6	United Automobile Workers (CIO)	12,000
. F. Goodrich Co., Akron, Ohio	Apr. 20	4	United Rubber Workers (CIO)	15,000
nthracite mines, Pennsylvania	May 1	20	United Mine Workers (Ind.)	63,000
ituminous-coal mines, 12 States	May 1	3	United Mine Workers (Ind.)	64,000
2 bituminous-coal mines, Pennsylvania and West Virginia	May 14	18	United Clerical, Technical, and Supervisory Employees, District 50, United Mine Workers (Ind.).	10,000
hrysler Corp., Ford Motor Co., Packard Motor Car Co., Budd Wheel Co., Detroit and Dearborn, Mich.	June 14	17	United Automobile Workers (CIO) and AFL Building Trades	47,000
ibby-Owens-Ford Glass Co. and Pittsburgh Plate Glass Co., Illinois, Louisiana, Ohio, Oklahoma, and West Virginia.	June 15	20	Federation of Glass, Ceramic and Silica Sand Workers (CIO)	16,000
oodyear Tire & Rubber Co., Akron, Ohio	June 16	20	United Rubber Workers (CIO)	21,000
rucking companies, Chicago, Ill. and East Chicago, Ind.	June 16	10	Chicago Truck Drivers, Chauffeurs, and Helpers (Ind.) and Brotherhood of Teamsters (AFL)	10,000
irestone Tire & Rubber Co., Akron, Ohio	July 1	14	United Rubber Workers (CIO)	17,000
right Aeronautical Corp., Paterson, East Paterson, Fair Lawn, and Wood Ridge, N. J.	July 20	8	United Automobile Workers (CIO)	24,000
hrysler Corp., Chicago, Ill.	July 25	4	United Automobile Workers (CIO)	19,000
right Aeronautical Corp., Lockland, Ohio	Aug. 3	5	United Automobile Workers (CIO)	27,000
onsolidated Steel Corp., Orange, Tex.	Sept. 1	6	AFL Craft Unions	11,000
oodyear Tire & Rubber Co., Akron, Ohio	Sept. 3	1	United Rubber Workers (CIO)	16,000
. F. Goodrich Co., Akron, Ohio	Sept. 4	22	Foremen's Association of America (Ind.)	14,000
estinghouse Electric Corp., Maryland, Massachusetts, New Jersey, New York, Ohio, and Pennsylvania.	Sept. 10	19	Federation of Westinghouse Independent Salaried Unions (Ind.)	40,000
il refineries, 20 States	Sept. 17	20	Oil Workers (CIO)	43,000
ituminous-coal mines, 8 States	Sept. 21	30	United Clerical, Technical, and Supervisory Employees, District 50, United Mine Workers (Ind.).	[5]209,000
idtown realty owners, New York City	Sept. 24	6	Building Service Employees (AFL)	15,000

See footnotes at end of table.

TABLE E-9: Work stoppages involving 10,000 or more workers, 1935-47—Continued

Business and location	Beginning date	Approximate duration (calendar days)	Union involved	Approximate number of workers involved
1945—Continued:				
New York Shipbuilding Corp., Camden, N. J.	Sept. 24	4	Industrial Union of Marine and Shipbuilding Workers (CIO)	17,000
Northwest lumber industry, California, Idaho, Montana, Oregon, and Washington.	Sept. 24	(6)	Lumber and Sawmill Workers (AFL)	44,000
Textile printing companies, Connecticut, New Jersey, New York, Pennsylvania, and Rhode Island.	Sept. 27	13	Federation of Dyers, Finishers, Printers, and Bleachers (CIO)	16,000
Consolidated Steel Corp., Los Angeles, Calif.	Oct. 1	3	Operating Engineers (AFL) and Machinists (AFL)	10,000
General Motors Corp., Frigidaire Division, Dayton, Ohio	Oct. 1	6	United Electrical Workers (CIO)	12,000
New York Shipping Association, New York City, Hoboken, and Newark, N. J.	Oct. 1	19	International Longshoremen's Association (AFL)	30,000
Libby-Owens-Ford Glass Co., and Pittsburgh Plate Glass Co., 7 States.	Oct. 16	102	Federation of Glass, Ceramic, and Silica Sand Workers (CIO)	13,000
Firestone Tire & Rubber Co., Akron, Ohio	Oct. 29		United Rubber Workers (CIO)	15,000
Machine shops, shipyards, etc., San Francisco Bay area, Calif.	Oct. 29	140	Machinists (AFL) and United Steelworkers (CIO)	37,000
Textile mills, Connecticut, Maine, Massachusetts, New Hampshire, and Rhode Island.	Nov. 1	133	Textile Workers Union (CIO)	18,000
Goodyear Tire & Rubber Co., Akron, Ohio	Nov. 6	2	United Rubber Workers (CIO)	15,000
Midwest Truck Operators Association, 21 States	Nov. 12	81	Brotherhood of Teamsters (AFL)	10,000
Leather manufacturers, 15 States	Nov. 15	1	Fur and Leather Workers Union (CIO)	25,000
Illinois Bell Telephone Co., Illinois and Indiana	Nov. 19	6	Illinois Telephone Traffic Union (Ind.)	14,000
General Motors Corp., 11 States	Nov. 21	(7)	United Automobile Workers (CIO)	200,000
Steamship and stevedoring companies, Pacific, Atlantic, and Gulf ports.	Dec. 3	1	Maritime Unions (CIO)	13,000
1946:				
Western Electric Co., New Jersey and New York	Jan. 3	65	Western Electric Employees Association—affiliated with National Federation of Telephone Workers (Ind.).	24,000
Western Electric Co., Nation-wide	Jan. 9	7	Association of Communication Equipment Workers—affiliated with National Federation of Telephone Workers (Ind.).	142,000
Electrical manufacturing: General Motors, General Electric, and Westinghouse plants.	Jan. 15	(8)	United Electrical Workers (CIO)	174,000
Meat-packing industry, several States	Jan. 16	19	Packinghouse Workers (CIO) and Amalgamated Meat Cutters (AFL).	93,000
Steel, industry-wide	Jan. 21	(9)	United Steelworkers of America (CIO)	750,000
International Harvester Co., Illinois, Indiana, Iowa, and New York.	Jan. 21	86	United Farm Equipment and Metal Workers (CIO)	29,000
Caterpillar Tractor Co., Feoria, Ill.	Jan. 29	29	United Farm Equipment and Metal Workers (CIO)	17,000
American Brass Co., and Chase Brass Co., Connecticut and N. Y.	Feb. 4	(10)	International Union of Mine, Mill and Smelter Workers (CIO)	16,000
Philadelphia Transit Co.	Feb. 11	2	Transport Workers Union (CIO)	10,000
Allis-Chalmers, 7 plants in 6 States	Mar. 14	(11)	United Automobile Workers (CIO), United Farm Equipment and Metal Workers (CIO), United Electrical Workers (CIO), and CIO Industrial Union, 1424.	25,000
Bituminous-coal mines, industry-wide	Apr. 1	59	United Mine Workers (AFL after Jan. 1946)	340,000
Port of Philadelphia	Apr. 5	6	CIO and AFL Unions in support of the United Harbor Workers (District 50, United Mine Workers AFL).	18,000
Briggs Manufacturing Co., Detroit, Mich.	May 3	1	United Automobile Workers (CIO)	11,000
Railroad industry, Nation-wide	May 23	2	Brotherhood of Locomotive Engineers and Brotherhood of Railroad Trainmen (Ind.).	350,000
City of Rochester, N. Y.	May 28	1	AFL and CIO Unions—general sympathy strike	20,000
Anthracite mines, Pennsylvania	May 31	8	United Mine Workers (AFL)	75,000
Association of General Contractors of America, Cincinnati, Ohio	June 3	2	Hod Carriers, Building and Common Laborers (AFL)	10,000
Railway Express Co., New York City and Hudson County, N. J.	June 27	5	Brotherhood of Railway and Steamship Clerks, Freight Handlers, Express and Station Employees (AFL).	12,000
Motion picture studios, Los Angeles (Hollywood), Calif.	July 1	2	Conference of Studio unions (comprising AFL craft affiliates)	14,000
New York City and other Atlantic ports	July 10	4	Seafarers' International Union (AFL) and its affiliated Sailors Union of the Pacific (Supported by other AFL unions). National Maritime Union (CIO).	11,500
Waterfront Employers' Association San Francisco; Long Beach, and Los Angeles, Calif.	July 31	(12)	International Longshoremen's and Warehousemen's Union (CIO)	12,000
Building and construction industry, Buffalo, N. Y.	Aug. 12	11	Allied Building Trades Council (AFL)	18,000
General Motors Corp.—Fisher Body Plant, Truck and Coach Division, Pontiac Motor Division.	Aug. 14	1	United Automobile Workers (CIO)	11,000
Commercial and industrial construction, Cuyahoga, Geauga, and Lake Counties, Ohio.	Aug. 29	2	Building Trades (AFL)	24,000
Trucking companies, New York City area and New Jersey	Sept. 1	(13)	Brotherhood of Teamsters (AFL)	31,000
Maritime industry, unlicensed personnel—Atlantic, Gulf, and Pacific Coast ports.	Sept. 5	17	Sealarers' International Union (AFL) and its affiliate, Sailors Union of the Pacific, National Maritime Union (CIO), Marine Cooks and Stewards (CIO), and Marine Firemen, Oilers, Watertenders and Wipers Association (Ind.), supported by other AFL Unions.	132,000
Hudsnn Motor Car Co., Detroit, Mich.	Sept. 11	1	United Automobile Workers (CIO)	12,000
Maritime industry, licensed personnel—Atlantic, Gulf, and Pacific Coast ports; longshoremen on Pacific Coast.	Oct. 1	(14)	Marine Engineers Beneficial Association (CIO), Masters, Mates and Pilots (AFL), International Longshoremen's and Warehousemen's Union (CIO).	142,000
Transcontinental & Western Air, Inc. (Trans World Airline)	Oct. 21	26	Air Line Pilots Association (AFL)	13,000
Bituminous-coal mines, industry-wide[15]	Nov. 21	17	United Mine Workers (AFL)	[15]335,000
General strike, Oakland, Calif.	Dec. 3	2	Retail Clerks' Intl. Association (AFL) in original dispute. AFL unions participated in general sympathy strike.	50,000

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[1] Intermittent idleness for total of 18 days during September, October, and November.

[2] Average per worker 20 days. Includes intermittent stoppages April through November.

[3] Average per worker 21 days. Includes intermittent stoppages May through November.

[4] Stoppage began Aug. 17; however, majority of workers did not become idle until September.

[5] About 45,000 workers were idle by Sept. 30. The remainder became idle during October.

[6] Settlements reached with a few companies prior to December 1945. Majority of agreements signed by late December, with most of the remaining settlements occurring at some time in the following 3 months.

[7] Agreement reached on Mar. 13, 1946; ratification by local unions, together with plant production problems, delayed reopening of most plants until late in the month. A few plants continued idle into April.

[8] General Motors Corp. (Electrical Division) settled on Feb. 9, General Electric Co. on March 14, and Westinghouse Electric and Manufacturing Co. on May 10.

[9] Settlement on Feb. 15, 1946, with U.S. Steel Corp., followed by agreements with other large basic steel companies within 4 days, resulted in the return to work of approximately 450,000 employees. Virtually all the remaining 300,000 workers went back to their jobs at various dates during the next 2 months as additional settlements were reached.

[10] Chase Brass Co. settled on April 6 and American Brass Co. on May 19.

[11] Duration of stoppages at various plants as follows: LaPorte, Ind., Mar. 14-Oct. 12; Norwood, Ohio, Mar. 19-Sept. 28; Pittsburgh, Pa., Mar. 22-Sept. 16; Springfield, Ill., Apr. 16-Sept. 18; Hyde Park (Boston), Mass., Apr. 30-Dec. 8; LaCrosse, Wis., Apr. 30-Oct. 24; West Allis, Wis., Apr. 30, 1946-Mar. 23, 1947.

[12] Majority of employees resumed work Aug. 1; some idleness continued through Aug. 1 in Los Angeles area.

[13] Some settlements were reached on Sept. 17. Virtually all other employers settled in the following 6 weeks.

[14] MEBA and MMP on East and Gulf Coasts signed agreements on Oct. 22 and Oct. 26, respectively. West Coast stoppage continued until Nov. 23.

[15] This figure does not include some 7,500 anthracite miners who were idle for 2 days during this period following an erroneous report that their president had been jailed.

Table E–9: Work stoppages involving 10,000 or more workers, 1935–47—Continued

Business and location	Beginning date	Approximate duration (calendar days)	Union(s) involved	Approximate number of workers involved
1947:				
Hudson Motor Car Company, Detroit, Mich.	Jan. 27	2	United Automobile Workers (CIO)	14,000
Telephone industry, Nation-wide	Apr. 7	[16]44	National Federation of Telephone Workers (Ind.)	370,000
Statewide demonstration, Iowa	Apr. 21	1	Various unions (AFL & CIO)	100,000
Inland Steel Co., East Chicago, Ind. and Chicago Heights, Ill.	May 1	7	United Steelworkers (CIO)	14,000
Construction industry, Detroit, Mich. area	May 1	[17]47	Building trades unions (AFL)	19,000
Construction industry, Lehigh Valley area, Pennsylvania	May 1	[18]38	Building trades unions (AFL)	10,000
Metal trades industries, Washington State	May 16	4	Metal Trades Council (AFL) and International Association of Machinists (Ind.)	10,000
Remington Rand, Inc., New York and Michigan	May 26	[19]70	International Association of Machinists (Ind.) and United Electrical, Radio, and Machine Workers (CIO) beginning June 18	15,000
Construction industry, Philadelphia, Pa. area	June 5	13	Building trades unions (AFL)	15,000
Bituminous-coal mines, Indiana and southwestern Pennsylvania	June 6	(20)	United Mine Workers (AFL)	18,000
Hudson Motor Car Co., Detroit, Mich.	June 11	2	United Automobile Workers (CIO)	16,000
Bituminous-coal mines, industry-wide	June 23	(21)	United Mine Workers (AFL).	343,000
Shipyards, Atlantic and Gulf Coasts and San Pedro, Calif.	June 26	(22)	International Union of Marine and Shipbuilding Workers (CIO)	50,000
Union Railroad and Carnegie Illinois Steel Corp., Pittsburgh, Pa. area.	Sept. 5	9	Railroad Trainmen (Ind.) and Locomotive Engineers (Ind.) (Ind.)	[23]23,000
Railway Express Agency, Inc., New York City and nearby New Jersey.	Sept. 19	25	Teamsters (AFL)	10,000

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[16] Major portion of strike ended by May 20, some companies settled earlier and several not until the last week in May.

[17] Settlements involving substantial numbers of workers were reached May 29, June 16, and July 14.

[18] Stoppage terminated by June 7 for all trades except electricians and roofers who remained out until June 24.

[19] Electrical workers settled July 28, machinists August 3.

[20] Most workers idle not more than 3 working days.

[21] Between June 23-27 over 200,000 stopped work allegedly in protest against passage of the Labor Management Relations Act by Congress. June 28-July 7 was the scheduled industry-wide vacation period. On June 30, the mines, operated by the Government since May 1946, were returned to private control. After the scheduled vacation, most miners were idle from July 8-11 until contracts with operators were signed and ratified.

[22] About 25,000 stopped work June 26; an additional 25,000 went out July 1. Some companies settled during July, August, and September. Agreement covering most Bethlehem Steel yards was reached by November 7. The last plants to settle were the Patapsco Scrap Corp. (a subsidiary of Bethlehem Steel) at Fairfield, Md. (Nov. 16), and the San Pedro, Calif., plant of Bethlehem Steel (Dec. 24).

[23] About 1,900 employees of the Union Railroad (a subsidiary of U. S. Steel Corp. servicing steel plants) were involved in the dispute and about 21,000 steel workers in closely integrated operations were made idle.

Conciliation Service Cases

The Conciliation Service of the United States Department of Labor assisted in the settlement of labor-management disputes and otherwise aided employers and unions in matters pertaining to labor relations problems. Requests for such service were usually made by one or both parties to a labor dispute, although the Service could enter cases on its own initiative where the public interest required it. Cases closed were classified and tabulated in categories which are defined as follows:

Work stoppage—a strike or lock-out.[1]

Threatened stoppage—a situation in which a definite strike date has been announced or a 30-day strike notice has been filed by a union pursuant to the War Labor Disputes Act.

Controversy — a dispute which has not reached the stage of a work stoppage or threatened stoppage.

Arbitration—arbitration decisions rendered by arbitrators appointed by the Conciliation Service upon request of both parties to a dispute. These arbitrators were appointed to render final and binding awards which the parties had agreed to accept in advance of the award.

Technical activities—the conducting of surveys upon the joint request of both parties to a dispute and the giving of advice to companies and unions on such technical matters as wage incentive plans, time studies, and job evaluations.

Miscellaneous special services—services provided upon request—such as the furnishing of labor relations information, consultation with labor and management representatives on specific problems, and addresses to interested groups concerning the Conciliation Service, labor problems, and related subjects.

The total number of situations dealt with and workers involved are shown in table E–10 by type of case for the fiscal years 1940–41 through 1946–47.

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[1] The total number of work stoppages which the Conciliation Service assisted in settling is not comparable with the total number of work stoppages reported by the Bureau of Labor Statistics in table E–3. The Bureau of Labor Statistics total tended to be larger because it included stoppages in which the assistance of the Conciliation Service was not utilized.

TABLE E-10: Cases closed by the United States Conciliation Service, fiscal years 1940-41 through 1946-47

Type of case	1940—41		1941—42		1942—43		1943—44		1944—45		1945—46		1946—47	
	Number	Workers involved (in thousands)	Number	Workers involved (in thousands)	Number	Workers involved (in thousands)	Number	Workers involved (in thousands)	Number	Workers involved (in thousands)	Number	Workers involved (in thousands)	Number	Workers involved (in thousands)
Aggregate	5,599	3,455	8,511	5,575	17,559	10,975	24,797	12,242	25,907	14,507	18,840	8,573	16,711	6,679
Total disputes disposed of	3,705	2,952	6,467	4,871	14,344	10,453	21,698	11,783	23,121	14,095	16,434	8,289	14,422	6,160
Work stoppages	1,535	1,239	1,781	769	2,086	1,292	2,843	1,264	3,207	1,709	3,206	2,534	3,047	2,013
Agreement reached between parties	1,350	746	1,567	632	1,677	787	2,463	1,016	2,743	1,369	3,056	2,014	......	....
Referred or certified to NWLB or NDMB	27	471	65	103	282	440	290	208	444	337	62	95	......	....
Referred to NLRB or other agencies	81	15	94	26	103	52	73	38	6	2	57	373	......	....
Unable to adjust	77	7	55	8	24	12	17	2	14	1	31	51	......	....
Threatened work stoppages	1,319	1,048	2,238	2,115	2,347	2,094	2,217	1,505	2,183	2,017	5,088	2,518	6,781	2,813
Agreement reached between parties	1,237	789	1,931	1,030	1,795	1,161	1,764	1,040	1,813	1,118	4,935	2,393	......	....
Referred or certified to NWLB or NDMB	17	238	171	1,018	371	852	317	424	356	899	70	82	......	....
Referred to NLRB or other agencies	49	18	114	64	64	75	87	27	7	1	66	39	......	....
Unable to adjust	16	4	22	3	44	6	49	13	7	1	17	3	......	....
Controversies	851	664	2,448	1,987	9,911	7,067	16,638	9,014	17,731	10,369	8,140	3,237	4,594	1,334
Agreement reached between parties	773	651	2,185	1,476	7,451	3,716	12,068	4,090	10,870	4,793	7,070	2,402	......	....
Referred or certified to NWLB or NDMB	......	....	......	....	1,886	3,052	3,965	3,747	6,794	5,557	934	793	......	....
Referred to NLRB or other agencies	59	10	215	480	407	277	421	168	23	5	91	26	......	....
Unable to adjust	19	2	48	31	167	22	184	20	44	14	45	15	......	....
Arbitration	192	62	453	168	1,009	240	1,185	223	1,151	304	959	138	1,008	223
Technical	114	47	76	27	148	104	213	151	166	30	123	29	247	38
Special services	1,588	385	1,515	509	2,058	178	1,701	85	1,469	78	1,324	117	1,034	258

Source: Conciliation Service, United States Department of Labor.

National Labor Relations Board Cases

The trend in the number of cases filed with and handled by the National Labor Relations Board in the fiscal years 1935-36 through 1946-47 is given in table E-11.

Recourse to formal action in the settlement of representation and unfair labor practice cases means that the Board held formal hearings and issued formal decisions in cases in which other means of settlement were ineffective.

TABLE E–11: Disposition of cases by the National Labor Relations Board, fiscal years 1935–36 through 1946–47

Cases	Fiscal year—											
	1935-36	1936-37	1937-38	1938-39	1939-40	1940-41	1941-42	1942-43	1943-44	1944-45	1945-46	1946-47
Number of cases filed:												
Total	1,068	4,068	10,430	6,904	6,177	9,151	10,977	9,544	9,176	9,738	12,260	14,909
Unfair labor practices:												
Number	865	2,895	6,807	4,618	3,934	4,817	4,967	3,403	2,573	2,427	3,815	4,232
Percent of total	81.0	71.2	65.3	66.9	63.7	52.6	45.2	35.7	28.0	24.9	31.1	28.4
Representation cases:												
Number	203	1,173	3,623	2,286	2,243	4,334	6,010	6,141	6,603	7,311	8,445	10,677
Percent of total	19.0	28.8	34.7	33.1	36.3	47.4	54.8	64.3	72.0	75.1	68.9	71.6
Number of cases closed:												
Total	734	2,322	8,799	5,569	7,354	8,396	11,741	9,782	9,197	9,102	10,892	14,456
Unfair labor practices	636	1,751	5,694	4,230	4,664	4,698	5,456	3,854	2,690	2,312	2,911	4,014
Percent closed before formal action	83.5	94.7	96.4	90.6	88.6	90.3	91.9	85.8	84.7	87.6	90.7	92.7
Percent closed after formal action	16.5	5.3	3.6	9.4	11.4	9.7	8.1	14.2	15.3	12.4	9.3	7.3
Representation cases	98	571	3,105	2,339	2,690	3,698	6,385	5,928	6,507	6,790	7,981	10,442
Percent closed before formal action	88.2	86.9	80.9	72.7	73.1	77.7	77.6	72.4	66.9	65.4	74.1	79.8
Percent closed after formal action	11.8	13.1	19.1	27.3	26.9	22.3	22.4	27.6	33.1	34.6	25.9	20.2
Cases pending at end of year:												
Total	334	2,080	3,711	4,046	2,869	3,624	2,860	2,622	2,601	3,237	4,605	5,058
Unfair labor practices:												
Number	229	1,373	2,486	2,874	2,144	2,263	1,774	1,323	1,206	1,321	2,225	2,443
Percent of total	68.6	66.0	67.0	71.0	74.7	62.4	62.0	50.5	46.4	40.8	48.3	48.3
Representation cases:												
Number	105	707	1,225	1,172	725	1,361	1,086	1,299	1,395	1,916	2,380	2,615
Total	31.4	34.0	33.0	29.0	25.3	37.6	38.0	49.5	53.6	59.2	51.7	51.7

Source: National Labor Relations Board, Tenth, Eleventh, and Twelfth Annual Reports.

Section F: Productivity and Unit Labor Cost

Productivity, as the term is used here, refers to output in physical units per man-hour of work. The indexes of output per man-hour were obtained by dividing indexes of production by indexes of man-hours. Unit labor cost is the wage payment per physical unit of output. The indexes of unit labor cost were derived by division of pay-roll indexes by production indexes.

Data on productivity and unit labor cost which are published by the Bureau of Labor Statistics are obtained largely from Government sources.

Productivity is a measure of the relationship between the volume of goods produced and one factor of input—labor time. The data do not measure the specific contribution of labor or of capital or of any other single factor of production. The output per man-hour indexes also do not reflect increased efficiency or lowered costs resulting from such long-time trends as more economical use of fuel and materials or more efficient integration of industries. Changes in the ratio between output and man-hours of work show the joint effect of a large number of separate, though interrelated, influences. The long-term upward trend of output per man-hour is due mainly to technical improvements in industrial organization and processes. At any time, however, output per man-hour also depends on such factors as the rate of operations, the relative contributions to production by plants at different levels of efficiency, the types of resources and materials available, the flow of materials, the skill and effort of the work force, the efficiency of management, and the state of labor relations.

Figures for the years after 1939 have been influenced by the effect of wartime and reconversion conditions on these factors and also on the products of many industries. The reports concerning a considerable number of the industries for which indexes were compiled through 1939 had to be discontinued at least temporarily, both because of the absence of Census data after 1939 and because of the change in the nature of the products manufactured during the war years.

The manufacturing industries for which series are continuous, therefore, are only a part of the total and should not be taken together to represent manufacturing as a whole nor should the figures be averaged to represent all manufacturing. The figures are therefore applicable only to the individual industries which they represent and any generalizations concerning productivity trends should be interpreted in the light of the changes which have taken place since 1939. Furthermore, adjustments may be necessary in individual series as additional data, especially from the 1947 Census of Manufactures, become available.

The unit labor cost index relates wages, a money value measure, to production, a physical volume measurement. To convert both these elements—wages and production—into money values would involve comparison of pay-roll indexes with value of production as reported in the Census of Manufactures. The indexes of unit labor cost give no indication of changes in the relative importance of labor cost to other production costs. However, data are not available to make these comparisons on a current basis. Moreover, the indexes of unit labor cost should be interpreted in relation to other costs and to profits, since in a time of rising prices these relationships are especially significant.

Output per man-hour (output per worker in agriculture) and unit labor cost for broad segments of the economy—manufacturing, mining, agriculture, railroads, electric light and power, telephone, and telegraph—are shown in index form in table F–1 for selected periods between 1909 and 1947. Details of construction of these indexes are explained in footnotes. As the production pattern changed markedly when the United States began its World War II production program, it is not possible to measure the over-all changes in manufacturing efficiency from peace to war. Consequently the indexes for the all-manufacturing group are not extended beyond 1939. Indexes for individual manufacturing industries are given in table F–2; those for mining in table F–3; and in table F–4 the output per worker in agriculture is given by farming areas.

TABLE F–1: Indexes of output per man-hour (output per worker in agriculture) and unit labor cost for selected industries, selected years 1909–47

[1939=100]

Period	All manufacturing[1]		Mining[2]		Agriculture[3]	Steam railroad transportation[4]		Electric light and power[5]		Telephone[6]		Telegraph[7]	
	Output per man-hour	Unit labor cost	Output per man-hour	Unit labor cost	Output per worker	Revenue traffic per man-hour	Unit labor cost (revenue traffic)	Output per man-hour	Unit labor cost	Output per man-hour	Unit labor cost	Output per employee	Unit labor cost
09	39.4	83.6	...	...	66.4	...	...	...	...	...	...	...	...
10	...	...	...	...	70.1	...	...	...	...	...	...	...	...
11	...	...	...	...	73.2	...	...	...	...	...	...	...	...
12	...	...	...	...	77.4	...	...	...	...	...	...	...	...
13	...	...	...	...	72.5	...	...	...	...	...	...	...	...
14	45.5	83.7	...	...	79.4	...	...	...	...	...	...	...	...
15	...	...	48.6	...	77.0	...	...	...	...	...	...	...	...
16	...	...	48.1	...	73.4	51.6	...	...	...	...	...	...	...
17	...	...	48.5	...	78.2	54.2	...	43.1	100.5	...	...	...	...
18	...	...	49.4	...	81.3	53.5	...	...	...	...	...	...	...
19	45.3	178.8	49.6	...	81.2	56.7	...	...	...	...	...	...	...
20	48.0	196.3	51.8	...	86.5	57.6	...	...	...	...	...	...	...
21	55.2	158.0	54.2	...	73.7	58.5	...	...	...	...	...	...	...
22	60.5	133.9	57.5	...	79.7	60.9	...	46.0	148.0	...	...	...	...
23	59.5	149.1	59.0	...	81.9	62.9	...	51.0	...	...	...	...	...
24	63.4	147.0	60.7	...	83.8	64.6	...	49.1	...	...	...	...	...
25	67.6	137.8	62.6	...	88.6	68.2	...	50.4	...	...	...	...	...
26	69.5	134.0	63.4	...	91.3	70.4	...	53.1	...	...	...	...	...
27	71.3	131.1	65.3	...	88.3	70.2	...	52.7	143.2	...	...	...	...
28	75.1	127.0	68.0	...	91.8	73.7	...	...	...	...	...	...	...
29	78.1	123.1	69.9	...	91.6	75.1	...	54.1	138.5	...	...	...	...
30	80.0	117.3	72.9	...	89.8	75.1	...	50.1	150.4	...	...	...	...
31	83.5	105.0	77.2	...	99.0	75.6	...	51.9	144.9	...	...	...	...
32	77.8	96.4	77.6	...	93.4	73.7	...	58.3	133.2	...	...	...	...
33	81.9	89.3	78.8	...	89.2	83.0	...	68.1	113.9	...	...	...	...
34	85.9	103.5	81.4	...	76.6	83.7	...	77.4	111.9	...	...	...	...
35	90.8	100.0	84.9	...	87.5	87.6	103.7	82.5	108.2	88.2	95.4	86.4	99.8
36	91.0	99.1	86.6	...	81.6	93.5	98.0	87.8	102.3	91.2	94.5	87.7	99.5
37	90.0	110.8	88.0	...	105.3	95.2	98.9	89.6	105.9	88.8	101.8	93.0	101.7
38	91.6	108.0	90.1	...	97.8	94.7	105.3	89.0	110.1	92.3	103.5	96.5	99.8
39	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
40	...	...	102.1	97.6	103.5	105.2	95.4	108.6	93.7	103.0	97.9	92.5	105.8
41	...	...	103.9	107.6	107.5	115.5	90.8	123.2	85.9	99.5	99.5	92.9	109.0
42	...	...	104.0	120.7	118.9	139.6	82.8	145.8	78.1	98.2	103.6	101.4	113.4
43	...	...	101.7	137.8	116.7	150.9	83.1	182.7	65.9	97.9	109.9	107.9	128.8
44	...	...	105.0	147.1	123.6	148.1	88.6	191.1	66.1	99.6	114.2	111.3	130.7
45	...	...	106.7	149.8	120.7	139.5	95.2	182.5	71.1	98.8	123.0	116.4	139.6
46	...	...	110.1	160.1	122.0	129.1	122.3	160.7	88.3	94.8	146.4	109.6	164.5
47	...	...	114.3	180.4	116.9	135.0	122.8	166.6	92.3	...	...	...	...

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[1] See footnote 1, table F–2.

[2] See footnote 1, table F–3.

[3] See footnote 1, table F–4.

[4] The indexes refer to class I steam line-haul railroads. For the 1935–47 segment, the oduction index represents aggregate passenger-miles and freight ton-miles, each tegory being weighted by respective average unit revenues in 1939. The man-hours lex represents the total of straight time actually worked, all overtime paid for, and nstructive-allowance hours of train and engine employees. The index of pay rolls ers to total compensation of hourly basis employees including that represented by called "time paid for but not worked." All data were obtained from published reports the Interstate Commerce Commission. The 1916–34 segments are based on slightly ferent indexes published by the Bureau of Labor Statistics in 1937.

[5] The series refer to privately owned electric utilities. For Census years through 1937, y are based on data from the quinquennial Census of Electrical Industries. The luction index represents kilowatt-hour sales to ultimate consumers in Census years; etricity generated by privately owned utilities as reported by the Federal Power mmission, was used in intervening years. All wage and salary employees, except main cutives and employees of appliance sales departments, are included in the employnt index. Estimates for certain years between 1917 and 1927 were based on employnt in private electric companies published by the Edison Electric Institute. For the riod since 1929, employment is represented by the Bureau of Labor Statistics index the electric light and power industry. The index of man-hours was derived from the ployment index and average weekly hours of wage earners, from a study published by the National Research Project of the Work Projects Administration for the period 1917–31 and from the Bureau of Labor Statistics for later years. The Bureau of Labor Statistics index of pay rolls was used for the period beginning with 1929.

[6] The indexes are based on Federal Communications Commission data and refer to class A telephone carriers. The production index is based on the number of originating local and toll calls, weighted by average revenue per local call and per toll call in 1939. The index of man-hours was derived from the employment measure and a series for average weekly hours. The weekly hour series was obtained from Bureau of Labor Statistics data for the telephone and telegraph industries combined for 1935–39 and for the telephone industry alone from 1939. The pay-roll index was computed from Federal Communications Commission statistics for total annual compensation to all employees.

[7] The indexes are based on Federal Communications Commission data for the principal wire-telegraph and ocean-cable carriers. The production index is based on Federal Communications Commission series for (1) domestic messages, land-line companies; (2) foreign messages, land-line companies; (3) domestic messages, ocean-cable companies; and (4) foreign messages, ocean-cable. Each series was weighted by the corresponding unit revenue in 1939. As satisfactory data on average weekly hours are not available before 1943, an index of output per man-hour is not presented. The employment index is based on averages of the number of employees of all classes in service at the end of June and at the end of December (June and October for 1944) adjusted to represent annual averages. The pay-roll index was computed from Federal Communications Commission data for total annual compensation to all employees.

TABLE F–2: Indexes of output per man-hour and unit labor cost in selected manufacturing industries, 1919–47

[1939=100]

Period	All manufacturing[1]		Beet-sugar refining		Bread and other bakery products		Cane-sugar refining		Canning and preserving group		Cement	
	Output per man-hour	Unit labor cost	Output per man-hour	Unit labor cost	Output per man-hour	Unit labor cost	Output per man-hour	Unit labor cost	Output per man-hour	Unit labor cost	Output per man-hour	Unit labor cost
1919	45.3	178.8	...	...	...	...	50.7	137.6	53.7	142.1	43.2	158.8
1920	48.0	196.3	...	...	...	...	55.0	151.4	...	...	44.5	190.8
1921	55.2	158.0	...	...	...	...	52.2	131.7	52.7	140.1	51.2	137.3
1922	60.5	133.9	...	...	...	...	66.5	101.7	...	...	56.5	149.6
1923	59.5	149.1	...	...	86.8	99.5	66.4	115.4	65.7	122.9	55.6	141.1
1924	63.4	147.0	...	...	94.2	94.0	75.2	104.1	72.2	112.2	56.9	141.5
1925	67.6	137.8	...	...	93.7	95.3	83.9	89.3	68.8	117.6	61.7	131.2
1926	69.5	134.0	...	...	98.6	91.4	86.9	83.6	71.2	...	62.0	126.1
1927	71.3	131.1	...	...	96.7	92.3	80.9	88.1	67.4	117.5	64.7	120.8
1928	75.1	127.0	...	...	95.0	93.1	82.9	87.2	72.4	...	67.8	113.3
1929	78.1	123.1	...	...	89.4	99.3	79.8	89.0	68.4	115.1	71.7	111.9
1930	80.0	117.3	...	...	90.6	101.3	81.6	88.8	76.5	105.7	74.8	106.0
1931	83.5	105.0	...	...	94.9	94.9	79.9	89.5	86.1	96.4	85.7	94.3
1932	77.8	96.4	...	...	95.5	86.7	85.3	82.4	85.0	93.7	83.4	80.0
1933	81.9	89.3	...	...	90.6	88.8	95.7	79.2	97.9	79.0	84.4	85.4
1934	85.9	103.5	...	...	92.9	97.7	102.1	84.5	93.7	97.6	86.0	102.4
1935	90.8	100.0	82.6	106.8	95.4	97.4	105.9	84.2	100.4	92.0	80.9	107.5
1936	91.0	99.1	87.1	108.0	94.9	96.0	107.6	84.6	82.8	104.9	92.1	91.5
1937	90.0	110.8	86.9	123.4	92.3	103.4	109.7	90.2	88.7	108.6	89.1	113.4
1938	91.6	108.0	100.6	103.2	97.3	100.8	102.3	94.2	95.3	102.5	92.2	110.0
1939	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1940[2]	...	...	103.9	101.4	...	...	103.9	97.6	108.7	95.7	100.4	101.2
1941[2]	...	...	98.8	119.8	105.1	102.9	111.0	94.6	105.6	112.0	108.3	100.3
1942[2]	...	...	89.8	149.3	106.9	110.6	81.0	145.6	99.3	142.6	108.4	109.4
1943[2]	...	...	72.4	206.7	112.2	114.9	85.3	149.1	97.0	168.9	94.7	133.2
1944[2]	...	...	74.8	202.4	111.0	123.1	88.8	149.1	104.1	167.7	83.8	157.1
1945[2]	...	...	78.7	206.5	110.2	130.9	85.2	158.6	104.7	175.7	90.1	150.8
1946[2]	...	...	89.4	204.0	111.7	145.1	82.3	184.1	114.2	183.5	108.7	137.7
1947[2]	...	...	98.2	205.7	106.9	174.1	86.4	202.4	110.5	212.5	110.8	152.4

Period	Clay construction products		Coke group		Beehive coke		Byproduct coke		Condensed and evaporated milk		Confectionery	
	Output per man-hour	Unit labor cost	Output per man-hour	Unit labor cost	Output per man-hour	Unit labor cost	Output per man-hour	Unit labor cost	Output per man-hour	Unit labor cost	Output per man-hour	Unit labor cost
1919	70.2	119.8	49.1	147.0	71.2	178.2	48.5	140.0	...	...	...	...
1920	71.6	142.0	50.8	...	82.7	...	50.0	...	...	...	...	...
1921	70.6	123.0	58.9	133.9	79.4	174.5	58.4	131.0	...	...	...	...
1922	73.5	110.0	69.4	...	72.8	...	69.2	...	...	...	...	...
1923	80.4	121.8	77.8	125.0	110.5	173.1	77.0	114.6	...	...	...	...
1924	76.1	131.4	81.1	...	107.3	...	80.3	...	...	...	...	...
1925	82.2	118.9	82.6	98.3	91.8	134.0	82.4	99.1	...	...	47.7	166.3
1926	83.0	118.6	89.7	...	106.5	...	89.2	...	...	...	52.2	153.8
1927	85.8	115.7	86.7	90.9	97.2	116.4	86.3	91.9	...	...	54.1	152.3
1928	90.5	110.6	98.5	...	81.5	...	99.4	...	...	...	53.1	152.9
1929	88.0	109.8	92.8	76.1	105.9	95.2	92.4	76.4	...	...	53.8	150.7
1930	88.9	110.3	86.1	...	80.4	...	86.1	...	...	...	61.2	139.9
1931	91.8	95.3	75.6	88.4	74.6	123.0	75.6	87.7	...	...	62.6	136.8
1932	79.8	89.5	66.3	...	57.4	...	66.8	...	...	...	67.9	116.1
1933	87.8	76.9	74.3	75.5	60.2	...	75.1	...	...	...	73.1	110.7
1934	78.6	102.3	73.9	...	74.7	...	73.8	...	...	...	83.2	112.8
1935	84.3	98.5	85.0	83.4	71.2	...	85.6	...	...	...	88.6	106.9
1936	84.7	98.6	92.3	...	93.7	...	92.3	...	...	...	91.1	96.5
1937	88.2	108.5	94.0	87.0	102.9	95.5	93.6	87.6	...	...	88.2	107.6
1938	86.8	111.0	87.9	...	86.2	...	87.9	...	...	...	94.1	103.7
1939	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1940[2]	104.5	89.4	104.4	...	99.2	...	104.6	...	103.3	96.6	107.4	94.6
1941[2]	102.3	98.1	105.3	...	102.0	...	105.4	...	98.4	109.2	113.0	96.8
1942[2]	94.6	115.0	106.2	...	103.9	...	106.2	...	82.3	146.1	112.9	108.3
1943[2]	77.9	154.0	98.4	...	104.8	...	98.2	...	72.6	184.2	109.1	124.7
1944[2]	80.4	156.0	103.1	...	109.7	...	103.0	...	75.5	188.5	111.2	133.8
1945[2]	84.2	158.4	100.5	...	108.7	...	100.2	...	85.5	173.0	111.6	142.9
1946[2]	100.0	157.0	97.0	...	116.4	...	96.5	...	86.3	197.3	117.4	152.5
1947[2]	99.8	173.8	105.2	...	...	...	...	...	82.1	241.5	109.3	186.4

See footnotes at end of table.

TABLE F–2: Indexes of output per man-hour and unit labor cost in selected manufacturing industries, 1919–47—Continued

[1939 = 100]

Period	Cotton goods		Fertilizers		Flour and other grain-mill products		Footwear except rubber		Glass products group			
									incl. tableware, pressed and blown glass, etc.		excl. tableware, pressed and blown glass, etc.	
	Output per man-hour	Unit labor cost	Output per man-hour	Unit labor cost	Output per man-hour	Unit labor cost	Output per man-hour	Unit labor cost	Output per man-hour	Unit labor cost	Output per man-hour	Unit labor cost
1919....	58.2	156.4	51.2	187.2	55.9	146.6	64.3	150.3	33.8	195.5	....	....
1920....	61.3	201.4	42.7	....	51.2	187.3	66.6	174.2	38.4	210.3	....	....
1921....	56.7	157.3	58.0	165.0	62.8	143.0	63.2	171.4	38.5	189.7	....	....
1922....	65.0	130.4	49.1	....	64.4	128.5	67.1	167.0	49.5	132.0	....	....
1923....	65.0	149.3	65.2	133.5	66.2	131.7	62.9	171.4	48.0	150.8	....	....
1924....	65.2	146.5	73.4	122.5	71.5	127.6	63.9	169.3	49.4	150.9	....	....
1925....	65.9	136.3	66.7	135.1	72.0	127.8	62.8	168.1	51.8	142.9	....	....
1926....	62.9	134.0	65.3	143.9	75.9	123.1	68.4	159.5	57.3	127.9	....	....
1927....	60.9	136.2	70.6	134.4	77.2	120.9	73.8	146.7	60.1	120.5	....	....
1928....	65.5	127.0	77.2	117.7	81.4	116.9	77.6	138.8	57.7	125.7	....	....
1929....	68.5	121.6	74.1	115.6	87.0	112.0	77.7	139.5	55.9	129.9	....	....
1930....	66.2	126.1	78.6	112.4	91.7	104.2	75.7	137.6	58.3	129.1	....	....
1931....	64.3	112.2	86.8	106.3	96.8	93.6	73.5	121.9	67.6	114.9	....	....
1932....	70.2	87.4	87.9	92.0	94.0	85.8	79.4	102.4	70.8	100.2	....	....
1933....	74.7	95.3	83.0	82.7	93.6	88.4	88.0	94.7	79 9	88.3	....	....
1934....	79.0	122.8	85.4	107.7	93.1	102.4	89.6	111.2	75.4	105.4	....	....
1935....	85.0	113.5	90.5	101.7	90.8	105.6	97.0	104.9	86.3	96.9	....	....
1936....	93.5	101.1	89.5	93.2	87.5	104.2	103.7	96.2	85.6	102.0	....	....
1937....	93.5	113.4	89.1	101.6	83.8	113.9	95.7	108.9	91.8	105.0	....	....
1938....	93.7	108.6	98.6	96.7	92.6	104.6	99.0	103.2	87.2	114.3	....	....
1939....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100 0	100.0
1940[2]...	....	....	104.7	100.8	99.8	101.2	104.1	99.6	....	....	103.4	100.5
1941[2]...	....	....	100.8	115.8	99.9	106.8	108.5	107.0	....	....	104.6	106.6
1042[2]...	....	....	91.0	148.9	95.7	125.5	107.0	125.4	....	....	92.5	128.7
1943[2]...	....	....	84.0	183.2	89.3	149.8	108.3	134.2	....	....	87.5	144.5
1944[2]...	....	....	89.0	193.8	83.3	170.0	106.1	146.6	....	....	91.2	143.7
1945[2]...	....	....	96.0	189.5	83.4	178.8	111.3	149.9	....	....	97.6	138.0
1946[2]...	....	....	109.7	181.5	79.3	210.8	116.5	162.6	....	....	98.1	157.9
1947[2]...	....	....	112.5	199.1	85.6	224.9	106.6	193.7	....	....	102.3	173.9

Period	Ice cream		Leather		Malt liquors		Newspaper and periodical printing and publishing		Nonferrous metals: primary smelting and refining of copper, lead and zinc		Paints and varnishes		Paper and pulp group	
	Output per man-hour	Unit labor cost	Output per man-hour	Unit labor cost	Output per man-hour	Unit labor cost	Output per man-hour	Unit labor cost	Output per man-hour	Unit labor cost	Output per man-hour	Unit labor cost	Output per man-hour	Unit labor cost
1919....	39.7	217.6	47.0	169.5	....	....	43.7	131.4	45.6	180.9	53.0	125.5	44.9	156.9
1920....	42.8	....	44.6	210.8	....	....	51.9	149.7	42.7	....	46.7	181.0	47.0	193.1
1921....	41.5	254.8	57.9	137.4	....	....	51.8	152.2	54.8	136.8	57.2	136.8	47.2	170.1
1922....	42.0	....	58.8	124.8	....	....	59.4	134.5	51.0	....	67.2	107.7	55.4	132.8
1923....	42.1	249.8	62.2	130.9	....	....	63.2	129.5	58.8	145.0	65.2	115.4	58.8	141.8
1924....	40.3	256.9	62.5	135.9	....	....	64.9	131.4	65.4	....	62.8	120.3	60.9	144.0
1925....	46.0	237.7	61.2	135.8	....	....	69.0	129.0	71.4	117.1	63.6	118.7	64.3	135.5
1926....	46.9	243.4	62.8	137.8	....	....	77.5	118.9	76.3	....	59.0	132.9	65.8	132.0
1927....	50.1	227.1	66.9	131.4	....	....	75.7	120.8	80.5	104.6	67.0	121.0	69.7	125.8
1928....	50.3	229.4	68.1	128.6	....	....	78.6	119.5	83.9	....	72.6	109.7	73.5	120.7
1929....	54.6	209.3	65.9	126.9	....	....	77.4	122.2	89.5	101.4	71.7	111.5	74.0	120.1
1930....	57.2	199.8	66.2	129.1	....	....	74.4	125.7	85.3	....	73.1	113.4	74.5	119.2
1931....	59.4	190.9	64.0	127.8	....	....	75.4	124.0	96.1	87.0	76.5	110.0	85.3	102.3
1932....	53.3	188.1	71.2	105.5	....	....	74.3	115.8	80.4	88.4	70.5	110.2	84.9	89.7
1933....	58.8	168.2	74.6	102.4	....	....	75.3	108.6	88.5	77.5	70.8	103.8	86.9	82.7
1934....	66.2	159.7	81.5	109.7	....	....	85.4	106.7	85.1	96.5	76.6	107.1	82.4	101.8
1935....	69.9	145.4	84.7	109.0	....	....	92.1	103.6	76.2	99.7	85.9	97.3	87.5	98.2
1936....	76.9	126.2	84.3	103.9	....	....	93.6	102.8	80.5	104.2	90.0	94.3	91.5	95.0
1937....	81.0	122.8	86.2	116.4	....	....	93.1	103.0	87.6	114.0	91.2	103.0	92.6	105.7
1938....	89.4	113.5	93.4	107.4	....	....	92.7	105.6	84.7	116.1	90.7	108.2	94.5	106.2
1939[2]...	100.0	100.0	100.0	100.0	100.0	100 0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1940[2]...	99.0	104.0	101 2	101.3	97.8	104 3	....	....	....	....	....	....	....	....
1941[2]...	101.2	106.4	110.2	101 6	96 1	106.6	....	....	....	....	....	....	....	....
1942[2]...	106.6	109.9	120.1	106 9	95.7	115.8	....	....	....	....	....	....	....	....
1943[2]...	107.9	120.7	114.2	120 1	87.5	131.8	....	....	....	....	....	....	....	....
1944[2]...	113.9	122.1	118.0	124.1	87.9	137.5	....	....	....	....	....	....	....	....
1945[2]...	128.1	113.7	116 3	131 0	88 3	143 0	....	....	....	....	....	....	....	....
1946[2]...	152.4	105.1	116.6	145 4	88 0	158.4	....	....	....	....	....	....	....	....
1947[2]...	124.0	145.3	120.1	162.4	85.3	185.5	....	....	....	....	....	....	....	....

See footnotes at end of table.

TABLE F-2: Indexes of output per man-hour and unit labor cost in selected manufacturing industries, 1919–47—Continued

[1939 = 100]

Period	Rayon and allied products		Slaughtering and meat packing		Tobacco products group		Cigars		Cigarettes		Chewing and smoking tobacco and snuff		Woolen and worsted goods	
	Output per man-hour	Unit labor cost	Output per man-hour	Unit labor cost	Output per man-hour	Unit labor cost	Output per man-hour	Unit labor cost	Output per man-hour	Unit labor cost	Output per man-hour	Unit labor cost	Output per man-hour	Unit labor cost
1919....	....	....	58.8	141.7	39.1	188.6	45.0	184.0	24.4	326.5	68.0	81.4	62.7	124.6
1920....	....	....	62.1	149.6	39.8	215.6	50.2	....	22.6	....	65.9	....	68.7	151.1
1921....	....	....	71.9	120.4	41.7	181.8	43.9	196.2	30.5	240.5	63.9	95.0	64.1	132.3
1922....	....	....	76.3	102.7	44.3	165.9	44.7	....	34.6	....	68.3	....	64.3	126.3
1923....	23.5	284.4	74.0	106.8	47.4	163.1	45.4	193.0	43.2	175.3	64.9	95.7	66.8	130.5
1924....	23.3	311.2	79.4	101.9	50.1	158.1	47.5	....	47.9	....	66.1	93.9	68.1	140.2
1925....	25.3	281.6	78.0	106.8	52.2	152.5	47.6	....	54.0	....	71.0	90.9	73.4	129.4
1926....	32.7	....	81.2	104.2	56.4	142.0	50.3	....	63.7	....	73.1	87.3	73.7	124.9
1927....	28.2	240.9	79.8	105.4	55.3	139.5	49.1	174.3	60.9	130.2	75.8	86.4	72.4	124.6
1928....	30.7	....	79.8	105.0	56.2	134.0	50.6	....	60.7	....	75.1	86.7	72.8	122.8
1929....	30.4	233.5	79.1	105.2	63.7	121.7	55.2	153.6	78.8	105.3	82.0	81.9	70.7	123.2
1930....	38.2	212.9	81.3	103.1	63.2	116.2	54.4	148.4	83.0	89.8	77.4	83.7	71.2	126.6
1931....	45.6	153.5	88.9	89.8	71.0	104.4	63.7	128.6	85.3	80.6	82.3	82.3	77.9	109.2
1932....	46.8	129.3	89.3	76.0	67.6	104.3	57.9	133.7	87.7	72.9	85.5	77.6	82.3	89.4
1933....	60.7	106.3	91.6	75.1	73.7	102.7	62.6	128.5	96.4	77.4	96.9	76.6	86.3	88.4
1934....	62.2	126.4	81.7	100.9	75.0	105.7	69.7	125.0	79.8	86.1	88.8	84.9	95.1	102.9
1935....	67.8	119.0	82.2	106.9	86.7	97.9	83.1	108.4	88.6	89.9	97.8	83.7	99.5	95.5
1936....	72.7	112.4	86.2	99.5	92.2	95.1	86.0	103.9	102.7	89.1	101.4	84.2	97.8	98.9
1937....	79.4	118.3	83.8	117.5	90.5	102.9	87.1	107.5	95.9	102.6	94.3	95.4	96.2	113.7
1938....	87.2	112.6	94.0	107.0	94.7	102.8	92.8	106.0	97.1	101.9	98.2	96.3	90.4	115.0
1939....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1940[2]...	112.6	93.4	....	....	101.0	103.2	100.4	103.0	[3]101.8	[3]103.2	[3]101.8	[3]103.2	....	....
1941[2]...	132.0	85.9	....	....	104.8	105.7	102.0	107.9	[3]108.6	[3]102.8	[3]108.6	[3]102.8	....	....
1942[2]...	147.8	86.2	....	....	104.9	117.4	104.0	117.3	[3]106.1	[3]116.0	[3]106.1	[3]116.0	....	....
1943[2]...	145.0	93.9	....	....	103.9	130.4	106.3	135.1	[3]100.7	[3]123.4	[3]100.7	[3]123.4	....	....
1944[2]...	153.5	91.8	....	....	109.1	136.2	117.7	138.5	[3]99.5	[3]132.3	[3]99.5	[3]132.3	....	....
1945[2]...	163.7	89.6	....	....	117.9	136.4	131.6	134.6	[3]103.4	[3]136.7	[3]103.4	[3]136.7	....	....
1946[2]...	176.4	92.6	....	....	116.5	157.4	127.0	157.0	[3]104.7	[3]156.7	[3]104.7	[3]156.7	....	....
1947[2]...	196.8	96.1	....	....	117.2	171.8	124.1	170.7	[3]109.2	[3]169.9	[3]109.2	[3]169.9	....	....

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[1] The production indexes for 1909, 1914, and the odd-numbered years in the 1919-39 period are from Employment in Manufacturing, 1899-1939, by Solomon Fabricant (National Bureau of Economic Research). The indexes for the years 1920-38 were completed by using the Federal Reserve index for manufactures. The indexes of employment and pay rolls are based on Bureau of Labor Statistics and Bureau of the Census statistics. The index of man-hours was derived from an employment index and a series for average weekly hours including Bureau of Labor Statistics figures for 1909, 1914, 1919, and 1923-39 and estimates for 1920-22, based on Bureau of Labor Statistics data for average weekly earnings and data for average hourly earnings as shown in Employment, Hours, and Earnings, in Prosperity and Depression, United States, 1920-22, by W. I. King.

[2] For the period beginning with 1940, the Bureau of Labor Statistics is reviewing its indexes of output per man-hour and unit labor cost for selected manufacturing industries. The indexes presented here represent tentative revisions made in May 1947 and replace those published in the mimeographed report, Productivity and Unit Labor Cost in Selected Manufacturing Industries, 1939-45, May 1946. The indexes are compiled as broad measures of general trend. Because of the wide interest in these measures, detailed statements showing the basic data and describing the procedures used in the computation of the revised indexes have been prepared and sent to interested persons for comment and suggestions prior to publication in final form. The revised series (including any further revisions deemed necessary) extended through 1947, will be published at a later date together with current data for those industries for which no indexes are shown after 1939.

[3] New series; covers cigarettes, chewing and smoking tobacco, and snuff combined.

TABLE F-3: Indexes of output per man-hour and unit labor cost in selected mining industries, 1935–47

[1939=100]

eriod	Mining[1]		Bituminous-coal mining		Anthracite mining		Crude petroleum, natural gas, and natural gasoline	Iron mining		Copper mining			Lead and zinc mining		
										Recoverable metal		Ore	Recoverable metal		Ore
	Output per man-hour	Unit labor cost[2]	Output per man-hour	Unit labor cost	Output per man-hour	Unit labor cost	Output per man-hour[3]	Output per man-hour	Unit labor cost	Output per man-hour	Unit labor cost	Output per man-hour	Output per man-hour	Unit labor cost	Out-put per man-hour
935 .	84.9	....	82.4	98.9	79.3	110.4	89.0	87.7	....	97.5	....	65.3	99.5	....	88.7
936 .	86.6	....	86.3	100.3	86.2	103.5	83.3	98.8	....	110.2	....	84.1	93.7	....	94.9
937..	88.0	....	88.1	108.0	87.4	108.2	84.9	105.9	....	101.0	....	90.2	90.1	....	96.4
938..	90.1	....	92.9	108.2	97.9	104.0	84.3	70.2	....	80.2	....	83.1	97.6	....	93.3
939 .	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
940..	102.1	97.6	104.0	96.8	98.5	100.9	....	117.4	86.4	103.2	102.5	107.2	96.4	110.0	99.5
941..	103.9	107.6	104.4	108.9	100.5	100.7	....	117.3	97.5	99.3	115.2	107.0	98.3	120.1	107.7
942..	104.0	120.7	102.9	119.7	92.1	118.5	....	107.8	112.0	101.6	129.4	113.9	90.4	152.4	102.3
943..	101.7	137.8	98.7	136.9	87.5	131.7	....	96.9	132.6	103.6	142.3	122.9	80.1	187.7	101.1
944..	105.0	147.1	102.5	149.0	92.0	137.8	....	99.7	131.3	113.1	134.2	140.4	87.5	182.0	120.4
945..	106.7	149.8	105.7	150.0	89.2	150.4	....	110.5	125.1	114.1	135.5	151.0	92.0	178.5	132.0
946 .	110.1	160.1	114.2	158.1	93.5	171.7	....	104.9	149.6	99.4	172.2	134.3	85.1	210.5	126.4
947..	114.3	180.4	120.8	172.8	89.1	202.4	....	107.5	162.2	108.7	179.4	....	90.9	225.5	....

[1] The indexes of output per man-hour for 1935-47 cover six of the principal mining ndustries as shown. Crude petroleum, natural gas, and natural gasoline, for which no nit labor costs are available, are excluded from the index of unit labor cost. The index f production is an average of the separate production indexes weighted with current-ear man-hours; the indexes of man-hours and pay rolls are based on Bureau of Labor tatistics data. The series for 1915-34 is based on an index covering almost all mining ndustries, prepared by the WPA National Research Project, Production, Employment, nd Productivity in the Mineral Extractive Industries, 1880-1938. The indexes of output per man-hour and unit labor cost include tentative revisions made in August 1947 The revisions result from tentative adjustments in the Bureau's employment series, t data published by the Bureau of Employment Security of the Federal Security Agency

[2] Five mining industries; excludes crude petroleum, natural gas, and natural gasoline for which no unit labor costs are available.

[3] Pending further review, the tentative revisions for crude petroleum, natural gas, and natural gasoline for the years 1940-47 were not considered sufficiently reliable for publication. Data for this industry were considered satisfactory for inclusion in the combined indexes for the six principal mining industries.

TABLE F-4: Indexes of output per worker in agriculture, total and 11 farming areas, 1935–47[1]

[1939=100]

Period	United States[2]	Corn area	Eastern dairy area	Western dairy area	Eastern cotton area	Delta cotton area	Western cotton area	Small grain area	Middle eastern area	Range area	Northwestern area	California
1935	87.5	85.9	100.0	86.0	98.8	76.4	96.8	97.6	83.4	85.4	100.2	90.5
1936	81.6	75.8	96.1	75.7	99.7	95.2	86.2	70.6	78.4	88.0	98.5	92.4
1937	105.3	96.6	104.1	90.7	126.0	124.2	126.3	90.1	99.2	99.2	105.3	104.0
1938	97.8	94.3	101.0	93.7	108.1	101.8	106.3	105.1	89.5	103.6	105.3	97.8
1939	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1940	103.5	97.1	102.2	105.6	110.2	92.6	119.8	113.5	99.3	111.4	103.8	104.4
1941	107.5	105.8	106.4	107.8	98.4	98.0	114.1	143.1	101.3	119.4	110.9	102.0
1942	118.9	113.7	112.1	118.3	108.8	115.5	122.4	157.7	112.6	122.3	110.9	100.3
1943	116.7	114.7	107.1	116.1	115.8	106.2	116.3	153.5	106.8	122.6	112.7	102.7
1944	123.6	113.9	115.4	119.2	122.6	114.3	127.3	164.3	120.6	124.8	116.0	108.3
1945	120.7	117.4	113.7	126.6	124.0	104.6	107.2	158.1	121.9	123.6	115.5	108.7
1946	122.0	122.0	116.8	125.2	116.0	91.7	103.6	148.3	129.8	120.9	116.6	116.4
1947	116.9	104.1	113.5	116.8	120.4	84.4	120.6	134.5	124.9	127.6	111.1	115.3

[1] Indexes are shown for the United States as a whole and for 11 farming areas. Six States are not included in these areas—Maine, Rhode Island, New Jersey, Delaware, Florida, and Missouri. The States included in each area are as follows: **Corn area**—Illinois, Indiana, Iowa, Ohio; **Eastern dairy area**—Connecticut, Massachusetts, New Hampshire, New York, Pennsylvania, Vermont; **Western dairy area**—Michigan, Minnesota, Wisconsin; **Eastern cotton area**—Alabama, Georgia, South Carolina; **Delta cotton area**—Arkansas, Louisiana, Mississippi; **Western cotton area**—Oklahoma, Texas; **Small grain area**—Kansas, Montana, Nebraska, North Dakota, South Dakota; **Middle Eastern area**—Kentucky, Maryland, North Carolina, Tennessee, Virginia, West Virginia; **Range area**—Arizona, Colorado, Nevada, New Mexico, Utah, Wyoming; **Northwestern area**—Idaho, Oregon, Washington, California.

[2] The series for 1909-34 was derived from indexes prepared by the WPA National Research Project and shown in the reports, Trends in Size and Production of the Aggregate Farm Enterprise, 1909–36, and Trends in Employment in Agriculture, 1909-36. The series for 1935-47 is based on Bureau of Agricultural Economics data. The employment series includes all persons, regardless of age, engaged in farm work for 2 or more days a week, proprietors, family workers, and hired workers. The production index was derived from statistics for gross farm output of 73 products combined with weights representing the estimated labor requirements per unit of gross output.

Section G: Work Injuries

Work-injury data regularly compiled by the Bureau of Labor Statistics include (1) annual estimates of the total volume of work injuries n each major manufacturing and nonmanufac-uring classification, (2) current injury frequency rates for the primary manufacturing ndustry classifications, (3) annual injury frequency and severity rates for manufacturing and nonmanufacturing industry classifications, and (4) accident cause statistics for selected ndustry classifications.

Injury frequency rate means the average number of disabling injuries for each million employee-hours worked.

All available data relating to work injuries are utilized in the preparation of the national estimates that are made annually. Inasmuch as there is no uniform requirement concerning he reporting of work injuries, the information available is incomplete and for some groups is extremely limited. In general, accident reports are received by Federal agencies such as the Bureau of Labor Statistics, the Bureau of Mines, the Interstate Commerce Commission, and by the various State workmen's compensation bureaus. To compile the country-wide estimates, the tabulated injury totals prepared by these agencies are related to the appropriate segments of the national employment, and the national injury estimates are computed by direct expansion to represent the probable volume of injuries in the total working population.

At the end of each quarter, about 14,000 manufacturing establishments are requested to supply information for each month of the quarter regarding the number of workers employed, the number of employee-hours worked, the number of disabling work injuries experienced by their employees, and a break-down indicating the resulting type of disability as known at the time of preparing the report. Generally, about 11,000 voluntary reports are received from employers in time for the quarterly tabulations.

All of these data are incorporated into the more comprehensive annual surveys.

At the end of each year, voluntary annual summary reports are solicited from an additional mailing list of about 50,000 employers. Some 25,000 manufacturing establishments and about 15,000 nonmanufacturing establishments usually report in this survey. Such reports are classified according to the principal product or operation of the respective establishments, and the reported data are totaled by industry classification. From these totals the injury frequency and severity rates are computed following, with one exception, the procedures specified in the American Standard Method of Compiling Industrial Injury Rates. The single exception is that the full-time charges for each permanent-partial disability are used rather than the percentage charges as permitted under the Standard Method. The computed rates for the various industry classifications are then weighted according to the total estimated employment in the classification and are combined in the computation of weighted rates for the major industry groups.

Special surveys are made within selected industries to obtain greater coverage and greater detail than is possible in the regular surveys, and to determine the prevailing causes of the accidents which produce work injuries. An attempt is made to obtain a report from every employer in the industry. From these reports, frequency and severity rates are computed for each type of operation commonly found in the industry, for plants in various size groups, and for plants in various geographic areas.

In addition, representatives of the Bureau of Labor Statistics visit a number of establishments in the selected industry and ask permission to review their original accident records. If permission is given, the Bureau representative examines the records and for each recorded accident prepares a transcript indicating (1) how, when, and where the accident occurred; (2) what unsafe conditions and/or unsafe acts contributed to the accident; and (3) what type of injury resulted. These data are then analyzed and tabulated according to the provisions of the American Recommended Practice for Compiling Industrial Accident Causes as approved by the American Standards Association.

The estimates of time lost owing to disabling work injuries shown in table G–1 for 1940–47 include actual man-days lost in the year the injury occurred and also future economic losses.

The estimated number of work injuries classified by the extent of disability are shown in table G–2, by major manufacturing and nonmanufacturing industry groups, for the years 1936–47. In table G–3 the injury frequency rates and indexes of injury frequency rates, according to the extent of disability in manufacturing industries, are given for 1926–47.

Bureau of Labor Statistics records of work-injury frequency rates are shown in table G–4 for 87 individual industries for the period 1941–47. The number of industry groups for which data are tabulated separately is currently considerably greater. However, changes in industrial classifications prevent the same historical presentation for other individual series.

Man-days lost in the year of injury are the actual number of days in that year during which the employee was unable to work because of this injury.

Economic loss includes both actual days lost in the year of injury and allowances for subsequent losses of working time and working ability owing to the injury.

TABLE G–1: Estimated number of work injuries and resulting time lost, 1940–47

Period	Number of disabling injuries	Man-days lost	
		In year of injury	In subsequent years (economic loss)
1940......	1,889,700	41,912,000	191,928,000
1941......	2,180,200	42,083,000	209,000,000
1942......	2,267,700	53,000,000	210,000,000
1943......	2,414,000	56,800,000	217,200,000
1944......	2,230,400	43,614,400	179,329,600
1945......	2,019,800	45,600,000	185,664,000
1946......	2,056,000	42,750,000	187,250,000
1947......	2,059,000	44,700,000	189,000,000

TABLE G–2: Estimated number of work injuries (major manufacturing and nonmanufacturing industry groups), by extent of disability, 1936–47

Industry group and type of disability	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947
All industry groups: Total	1,407,200	1,838,000	1,375,600	1,603,500	1,889,700	2,180,200	2,267,700	2,414,000	2,230,400	2,020,300	2,056,000	2,059,000
Fatalities	16,000	19,600	16,400	16,400	18,100	19,200	18,100	18,400	15,900	16,500	16,500	17,000
Permanent—total	(1)	(1)	(1)	(2)	(2)	(2)	1,800	1,700	1,700	1,800	1,800	1,800
Permanent—partial	66,200	126,700	98,900	109,400	89,600	100,600	100,800	108,800	94,200	88,100	92,400	90,000
Temporary—total	1,325,000	1,691,700	1,260,300	1,477,700	1,782,000	2,060,400	2,147,000	2,285'900	2,118,400	1,913,900	1,945,300	1,950,200
Agriculture:[3] Total	264,600	270,500	267,400	257,300	270,400	270,400	283,700	311,900	311,900	305,600	323,600	298,000
Fatalities	5,500	4,500	4,400	4,300	4,500	4,500	4,500	4,800	4,800	4,500	4,500	4,300
Permanent—total	(1)	(1)	(1)	(2)	(2)	(2)	400	400	400	400	400	400
Permanent—partial	6,100	13,500	13,000	13,000	13,900	13,900	14,200	15,600	15,600	15,300	16,200	14,900
Temporary—total	253,000	252,500	250,000	240,000	252,000	252,000	264,000	291,100	291,100	285,400	302,500	278,400
Mining and quarrying:[4] Total	103,100	107,800	82,000	91,000	86,500	97,100	102,700	96,400	92,100	82,100	83,800	92,900
Fatalities	1,700	1,900	1,700	1,600	1,800	1,900	2,000	2,000	1,700	1,500	1,300	1,500
Permanent—total	(1)	(1)	(1)	(2)	(2)	(2)	200	200	200	200	200	200
Permanent—partial	3,400	3,300	2,500	2,700	2,900	3,700	4,500	4,200	4,000	3,600	3,700	4,100
Temporary—total	98,000	102,600	77,800	86,700	81,800	91,500	96,000	90,000	86,200	76,800	78,600	87,100
Construction:[5] Total	283,900	291,700	292,200	404,700	453,800	495,500	349,500	260,100	99,600	112,200	131,800	151,700
Fatalities	2,700	3,700	2,600	3,600	4,100	4,100	3,300	2,500	1,100	1,700	2,200	2,400
Permanent—total	(1)	(1)	(1)	(2)	(1)	(2)	300	200	100	100	300	300
Permanent—partial	154,00	20,600	14,600	18,100	20,900	21,800	17,100	12,800	3,600	3,400	3,400	[illegible]
Temporary—total	265,800	367,400	275,000	383,000	428,800	469,600	328,800	244,600	94,800	107,000	125,900	144,700
Manufacturing:[6] Total	311,600	364,400	220,800	286,200	316,000	452,700	635,200	802,500	786,900	591,600	541,500	539,000
Fatalities	2,100	2,500	1,900	1,600	1,900	2,400	2,500	3,100	2,900	2,700	2,500	2,700
Permanent—total	(1)	(1)	(1)	(2)	(2)	(2)	300	300	300	300	200	300
Permanent—partial	21,200	27,900	14,000	17,600	18,600	25,300	27,000	34,100	35,400	30,700	28,200	27,200
Temporary—total	288,300	334,000	204,900	267,000	295,500	425,000	605,400	765,000	748,300	557,900	510,600	508,900
Public utilities: Total	13,700	16,500	16,300	21,000	21,000	21,000	21,000	19,700	19,300	20,300	25,500	27,700
Fatalities	300	300	500	500	500	500	500	400	400	400	400	600
Permanent—total	(1)	(1)	(1)	(2)	(2)	(2)	(7)	(7)	(7)	(7)	(7)	(7)
Permanent—partial	400	700	700	500	500	500	500	500	500	600	600	600
Temporary—total	13,000	15,500	15,100	20,000	20,000	20,000	20,000	18,80	18,400	19,300	24,500	26,700
Trade:[5] Total	133,000	241,200	201,500	200,800	244,600	297,100	284,200	268,400	273,800	296,400	333,100	360,600
Fatalities	600	2,800	1,800	1,800	1,900	1,600	1,200	1,100	700	1,200	1,400	1,500
Permanent—total	(1)	(1)	(1)	(2)	(2)	(2)	100	100	100	100	100	100
Permanent—partial	1,700	32,000	39,700	39,000	8,700	7,500	7,000	6,600	6,000	7,100	8,000	8,600
Temporary—total	130,700	206,400	160,000	160,000	234,000	288,000	275,900	260,600	267,000	288,000	323,600	350,400
Railroads:[8] Total	37,800	40,100	30,300	34,500	33,700	48,200	60,800	85,400	92,400	94,100	76,000	71,900
Fatalities	800	800	600	800	700	1,100	1,100	1,300	1,200	1,100	800	800
Permanent—total	(1)	(1)	(1)	(2)	(2)	(2)	200	200	300	400	300	300
Permanent—partial	1,200	1,400	1,500	1,700	1,700	3,300	4,200	5,900	6,400	6,500	5,300	5,000
Temporary—total	35,800	37,900	28,200	32,000	31,300	43,800	55,300	78,000	84,500	86,100	69,600	65,300
Miscellaneous transportation:[5] Total	27,500	42,400	52,900	54,400	129,300	130,300	136,900	146,000	135,100	139,900	132,800	135,200
Fatalities	600	800	700	800	900	1,200	1,200	1,300	900	1,000	900	900
Permanent—total	(1)	(1)	(1)	(2)	(2)	(2)	100	100	100	100	100	100
Permanent—partial	1,100	2,200	1,000	1,600	3,400	3,600	3,800	4,100	4,100	4,200	7,600	7,400
Temporary—total	25,800	39,400	51,200	52,000	125,000	125,500	131,800	140,500	130,000	134,600	124,200	126,800
Service, government, and miscellaneous industries:[5] Total	232,000	363,400	212,200	253,600	334,400	367,900	393,700	423,600	419,300	378,100	407,900	382,000
Fatalities	1,700	2,300	2,200	1,400	1,800	1,900	1,800	1,900	2,200	2,400	2,500	2,500
Permanent—total	(1)	(1)	(1)	(2)	(2)	(2)	200	200	200	200	200	200
Permanent—partial	15,700	25,100	11,900	15,200	19,000	21,000	22,500	24,200	18,800	16,700	19,400	17,900
Temporary—total	214,600	336,000	198,100	237,000	313,600	345,000	369,200	397,300	398,100	358,800	385,800	361,400

[1] Permanent-total included in permanent-partial.
[2] Permanent-total included in fatalities.
[3] Based on fragmentary data.
[4] Based largely on Bureau of Mines data.
[5] Based on small sample studies.
[6] Based on comprehensive surveys.
[7] Less than 50.
[8] Based on Interstate Commerce Commission data.

TABLE G–3: Work-injury frequency rates and indexes of work-injury frequency rates (manufacturing), by extent of disability, 1926–47[1]

Period	Injury frequency rates[2]	Index of frequency rates (1926 = 100)[3]			
		All injuries	Death and permanent-total	Permanent-partial	Temporary-total
1926......	24.2	100.0	100.0	100.0	100.0
1927......	22.6	93.6	107.1	96.3	93.3
1928......	22.5	93.2	107.1	104.6	92.5
1929......	24.0	99.2	92.9	109.2	98.7
1930......	23.1	95.5	107.1	111.0	94.6
1931......	18.9	78.0	92.9	102.8	76.5
1932......	19.6	80.9	107.1	113.8	78.9
1933......	19.3	91.8	85.7	110.1	90.8
1934......	20.2	93.6	107.1	128.4	91.6
1935......	17.9	88.1	92.9	121.1	86.2
1936......	16.6	85.7	85.7	114.7	84.1
1937......	17.8	85.8	85.7	122.0	83.7
1938......	15.1	71.7	71.4	78.9	68.1
1939......	14.9	73.4	71.4	80.7	73.9
1940......	15.3	75.3	71.4	84.8	75.6
1941......	18.1	85.8	80.3	93.7	86.3
1942......	19.9	93.5	70.7	83.4	94.1
1943......	20.0	94.4	70.7	83.4	95.0
1944......	18.4	88.3	62.8	75.3	89.7
1945......	18.6	81.9	62.8	72.3	83.0
1946......	19.9	84.3	60.1	77.9	85.3
1947......	18.8	78.4	51.7	70.1	79.3

[1] Prior to 1936 the coverage in the Bureau of Labor Statistics surveys was limited to wage earners in 30 industry classifications. Starting in 1936 the coverage was extended to include all employees in all types of manufacturing.

[2] The frequency rates shown (average number of disabling injuries for each million employee-hours worked) represent the combined experience of all reporting establishments in each year. Prior to 1936 the frequency rates were unweighted. From 1936 on, the all-manufacturing rates have been weighted averages. In their computation the current procedure is to weight the frequency rate for each industry classification by he estimated total employment in that industry.

[3] Prior to 1937 the index numbers represent the change in the frequency rate of the entire reporting sample for each year as related to the base year, 1926. Because of the substantial expansion of the sample in 1936 and in subsequent years this procedure was changed. Beginning with 1937, the indexes have been computed by chain link methods using the percentage of change in the frequency rates for identical establishments in each pair of successive years. The index changes, therefore, do not necessarily correspond with the changes in the all-manufacturing frequency rates shown in the table.

TABLE G–4: Work-injury frequency rates for selected manufacturing and nonmanufacturing industries, 1941–47

Industry	Injury frequency rate[1]						
	1941	1942	1943	1944	1945	1946	1947
Manufacturing							
Total manufacturing	[2]18.1	[2]19.9	[2]20.0	[2]18.4	[2]18.6	[2]19.9	18.8
Apparel and other finished textile products:							
Clothing, men's and boys'	6.7	7.7	7.6	9.2	8.4	7.6	7.0
Chemicals and allied products:							
Drugs, toiletrics, and insecticides	9.0	15.4	18.5	18.6	14.9	14.2	12.0
Explosives	5.7	6.4	5.3	5.3	3.6	5.7	5.3
Fertilizers	27.7	32.0	32.6	33.7	33.5	33.0	31.6
Paints, varnishes, and colors	14.8	17.4	19.0	18.3	17.6	18.6	17.3
Soap and glycerin	10.9	10.3	11.4	15.0	11.6	10.7	9.4
Synthetic textile fibers	9.6	8.4	10.5	9.0	8.9	6.8	5.8
Electrical machinery, equipment, and supplies:							
Radios and phonographs	6.2	5.9	7.9	9.2	6.8	7.4	6.2
Food products:							
Baking	15.0	16.2	20.5	20.2	18.6	18.1	18.1
Canning and preserving	30.0	33.0	25.3	28.9	27.2	30.7	27.3
Confectionery	16.1	15.2	19.4	19.0	18.1	17.4	16.1
Flour, feed, and grain-mill products	21.8	24.9	30.2	31.1	27.6	26.6	27.1
Slaughtering and meat packing	30.9	44.8	47.6	35.9	32.4	35.7	29.9
Sugar refining	28.2	31.4	29.9	31.6	30.3	33.6	32.8
Furniture and finished lumber products:							
Furniture, metal	21.4	23.0	30.7	30.2	21.2	21.1	19.6
Morticians' supplies	13.6	17.2	21.3	17.8	18.7	24.7	25.0
Office, store, and restaurant fixtures	21.7	18.2	27.1	21.0	26.3	27.9	23.9
Iron and steel and their products:							
Cutlery and edge tools	20.7	24.5	25.9	28.1	26.0	23.0	23.6
Fabricated structural steel	35.7	40.7	34.7	35.7	27.6	29.3	27.3
Forgings, iron and steel	44.5	38.0	40.8	37.7	32.5	31.2	28.4
Hardware	19.4	24.3	20.2	20.0	16.6	13.8	16.0
Heating equipment, not elsewhere classified	29.6	33.7	36.3	42.8	33.8	36.0	34.3
Iron and steel	10.2	10.4	10.0	9.9	8.7	9.5	8.2
Ornamental metalwork	18.4	30.2	31.9	32.4	26.2	23.1	27.8
Plumbers' supplies	17.7	20.1	21.9	20.8	16.4	20.2	23.3
Stamped and pressed metal products, not elsewhere classified	29.1	20.6	28.8	27.4	22.2	22.7	23.4
Tin cans and other tinware	21.0	20.3	17.3	19.7	17.3	17.1	18.6
Tools except edge tools	24.9	24.3	25.5	25.5	22.8	24.8	23.7
Wire and wire products	19.0	21.6	21.4	23.2	23.1	23.7	21.5
Leather and leather products:							
Boots and shoes, not rubber	7.6	9.0	11.8	12.3	10.8	10.8	9.6
Leather	26.6	30.2	29.4	29.2	28.4	34.9	29.4
Lumber and timber basic products:							
Logging	96.3	89.6	82.2	85.4	92.0	80.4	102.8
Machinery, except electric:							
Agricultural machinery and tractors	25.7	18.3	19.9	24.0	23.5	25.5	23.4
Construction and mining machinery	29.4	28.4	29.5	28.4	25.9	27.5	28.5
Food-products machinery	24.3	18.3	27.2	27.3	20.8	25.0	24.6
Metalworking machinery	20.0	21.8	19.2	16.9	15.8	15.8	15.5
Special industry machinery, not elsewhere classified	23.2	25.2	24.6	22.6	20.9	22.7	21.4
Textile machinery	15.8	18.3	14.6	17.3	14.1	18.0	18.4
Printing and publishing:							
Book and job printing	8.2	10.5	10.5	9.9	8.5	8.9	9.4
Bookbinding	6.5	8.6	13.6	12.7	4.2	10.3	10.0
News and periodical	7.6	8.5	8.3	8.0	7.8	8.9	9.3
Rubber products:							
Rubber boots and shoes	12.6	8.6	10.7	12.4	12.5	11.4	9.8
Rubber tires and tubes	13.0	11.9	14.5	15.5	13.5	12.9	10.5
Manufacturing—Continued							
Stone, clay, and glass products:							
Structural clay products	38.2	47.1	42.9	43.9	41.8	44.9	43.9
Concrete, gypsum, and plaster products	46.7	48.4	40.8	28.7	27.0	32.7	36.1
Cut stone and cut-stone products	33.4	33.4	33.0	32.9	27.6	42.7	36.8
Glass	17.4	20.5	20.2	18.0	15.7	17.5	15.8
Pottery and related products	17.8	15.5	19.5	17.9	18.5	22.5	21.1
Textile and textile-mill products:							
Carpets, rugs, and other floor coverings	12.9	14.1	17.1	11.0	12.8	17.8	17.9
Cotton yarn and textiles	15.2	16.3	16.7	16.5	15.1	14.0	12.2
Dyeing and finishing textiles	17.7	24.8	23.6	24.5	19.5	21.7	19.2
Knit goods	6.5	7.7	8.3	8.1	7.7	8.2	6.9
Rayon and other synthetic silk textiles	11.4	11.5	13.9	13.3	14.2	12.0	10.4
Woolen and worsted textiles	15.5	17.9	19.8	20.2	20.1	22.3	18.6
Transportation equipment:							
Motor vehicles	9.3	11.3	13.6	14.4	13.0	10.8	8.4
Motor-vehicle parts	21.2	31.9	22.0	25.8	20.1	17.9	17.6
Railroad equipment	17.8	17.4	25.0	21.3	20.1	19.0	17.9
Shipbuilding	26.4	33.1	31.5	23.6	23.3	20.7	25.2
Miscellaneous manufacturing:							
Tobacco products	6.2	6.5	9.2	12.3	9.9	9.3	7.5
Nonmanufacturing							
Construction:							
Building construction	41.8	36.2	25.4	30.6	30.9	35.4	38.7
Heavy engineering	68.0	37.4	24.5	21.5	28.1	46.7	41.8
Highway construction	55.9	38.6	31.8	36.0	35.8	50.5	46.8
Communications:							
Telephone (wire and radio)	2.7	2.9	3.2	3.4	3.0	2.9	3.0
Transportation:							
Streetcar	15.5	19.8	26.5	26.7	26.6	25.4	22.0
Bus	13.3	15.3	18.8	20.4	22.8	19.6	15.9
Streetcar and bus	11.6	13.6	18.1	22.3	26.3	22.6	22.3
Trucking and hauling	34.8	34.8	41.4	38.3	37.5	35.6	38.2
Warehousing and storage	51.9	38.2	32.2	37.5	34.3	34.8	33.5
Heat, light, and power:							
Electric light and power	11.1	9.5	11.8	12.0	13.0	14.8	16.4
Gas	14.3	14.7	16.0	16.1	17.7	24.5	23.0
Waterworks	19.9	10.9	13.7	21.3	22.2	18.0	21.0
Personal services:							
Dry cleaning	5.7	5.2	5.0	5.8	5.8	5.3	5.5
Laundries	7.3	8.9	9.9	8.3	8.1	8.9	8.0
Laundry and dry cleaning	5.9	10.1	9.1	8.8	6.4	8.3	8.4
Amusements and related services	10.4	6.9	6.9	8.4	13.4	8.3	7.5
Medical and other professional services	13.1	6.0	5.3	4.8	4.6	4.5	3.7
Miscellaneous personal services	2.9	3.7	2.5	3.7	4.3	6.9	7.5
Business services:							
Banks and other financial agencies	2.3	3.5	2.7	3.6	3.0	2.9	2.7
Insurance	3.0	2.2	2.7	1.6	2.8	3.1	2.0
Real estate	13.8	10.6	8.9	6.7	6.9	5.3	4.9
Educational services	16.4	8.0	16.8	10.4	8.0	7.8	8.0
Trade:							
Retail, general merchandise	6.9	6.7	6.0	8.0	6.1	15.6	5.8
Retail automobiles	16.5	15.3	12.5	17.5	13.6	8.0	18.6
Filling stations	15.6	12.9	7.7	7.2	5.8	8.8	10.6
Retail apparel and accessories	4.3	5.4	6.5	2.5	2.2	3.8	4.7

[1] The frequency rate is the average number of disabling injuries for each million employee-hours worked.

[2] Weighted according to estimates of total current employment in each industry.

Section H: Building and Construction

A number of statistical measures of building and construction activity are prepared regularly by the Bureau of Labor Statistics.

The series on new construction activity compiled by the Bureau of Labor Statistics in cooperation with the Office of Domestic Commerce, U. S. Department of Commerce, gives detailed information on estimated expenditures for new construction, by type of project, such as highway and road work; public utility construction; river, harbor, and flood control; as well as on residential and nonresidential building.

For federally financed construction, the expenditures are also segregated according to different kinds of projects.

Special compilations are made for the measurement of volume (by value) of building construction—residential, nonresidential, and additions, alterations, and repair work. Such construction forms the largest segment of all construction volume.

Construction Expenditures

The construction-expenditures estimates provided by the Bureau of Labor Statistics (table H–1) measure the total dollar value of construction work actually performed or "put in place" from 1915 to 1947, by type of construction. They differ from data pertaining to building permits (tables H–4 and H–5) which cover the value of work scheduled to be started; they also differ from the data on Federal contract awards and force-account work started (tables H–2 and H–3).

Included in the expenditures estimates are total payments to labor, the value of material consumed, and contractors' overhead and profit on all types of construction projects in progress. The installed value of equipment considered an integral part of a structure is also included; the value of land, machinery, and moveable equipment is excluded. The value of major additions and alterations is combined with the value of new construction in table H–1. Minor building repairs and maintenance work (such as painting, plumbing and heating, waterproofing, papering, electrical repairs, etc.) are excluded.

A summary of the sources and methods used in compiling the expenditures estimates in table H–1 for the principle types of construction follows:

Since 1921, urban private residential construction estimates have been based on reports of building permits issued, submitted by local building officials. These data are adjusted for residential building activity in nonreporting permit places and nonpermit-issuing places, abandonments, and the understatement of construction costs inherent in building permit valuations. From January 1945, adjustments have been made for the time which elapses between the issuance of the building permit and the start of construction. Rural nonfarm starts estimates are based on ratios derived from the analysis of current building permit reports for rural nonfarm places and field surveys in a limited number of nonpermit issuing places. (For a more detailed discussion of these procedures, see the description for the estimates of total nonfarm housing started, in Section I on Housing and Rents).

The resulting total nonfarm estimate of the value of work started during each month is then spread over the construction period based on current progress surveys. The expenditures thus obtained for specific months are then totaled. The 1915–20 estimates are carried back from the 1921–22 average by using the relative changes indicated in the value of residential building contracts awarded as reported by the F. W. Dodge Corp.

Separate estimates are made for the new private nonresidential buildings (industrial warehouses, offices, and loft buildings; stores, restaurants, and garages; religious structures; educational buildings; hotels; social and recreational buildings; hospitals and institutions; and miscellaneous) from the record of contracts awarded as reported monthly by the F. W. Dodge Corp. Adjustments are made to allow for under-coverage in the Dodge reports (which cover only the 37 Eastern States and exclude small projects), and for canceled contracts and duplication of public utility building construction, and then converted to a work-put-in-place basis.

Annual estimates of farm construction and maintenance were made by the Bureau of Agricultural Economics and published in the United States Department of Agriculture study, Income Parity for Agriculture, Part II, Sec. 5 (March 1941). Separate estimates were prepared for operators' dwellings and for service buildings, which correspond respectively to residential and nonresidential construction. Maintenance is included in these figures, however. To segregate the figures for the new construction group, estimates of farm consumption of lumber, prepared by the Forest Service of the United States Department of Agriculture, were utilized.

The gross capital expenditures of class I railroads for equipment, road, and structures for 1922–47 are obtained from the annual Review of Railway Operations, published by the Association of American Railroads. Estimates of construction expenditures of all railroads are obtained by upward adjustment of the data for class I railroads on the basis of the total investment in road and structures of class I railroads and of all railroads. Annual statistics on capital expenditures of the transit industry for 1922–47 are based on data in the Transit Fact Book published by the American Transit Association. The estimates of the railroads and transit industries are carried back to 1915–21 by using expenditure data based on miles of track added or rebuilt.

Annual additions to electric power plants reported to the Federal Power Commission since 1937 are adjusted to include small nonreporting companies and to allow for work in progress and the purchase of existing property, and electric light and power construction financed by the Rural Electrification Administration since 1936 is obtained from the annual reports of that agency. Edison Electric Institute reports are used for 1921–36. The estimates for 1915–20 are based on a year-by-year distribution of increments in plant and equipment as indicated by the Census of Electrical Industries for 1912, 1919, and 1922. Construction expenditure data, published annually since 1929 by the American Gas Association, are adjusted to eliminate equipment expenditures. The 1915–28 estimates for this industry were carried back by use of the year-to-year changes in the fixed capital accounts of 50 large companies.

Estimated construction expenditures of the telephone industry were obtained from the American Telephone and Telegraph Co. Those for the telegraph industry were derived from capital expenditures reported by the Western Union Telegraph Co. for 1927–47 and by Postal Telegraph and Cable Co. for 1919–43, with an adjustment back to 1915 made on the basis of annual increments in the value of plant and equipment. Expenditures for pipe lines are obtained from reports filed with the Interstate Commerce Commission, with adjustment made for companies not required to report and for purchase of existing lines.

From 1939, public residential construction estimates have been based upon regular progress reports issued by the Federal Public Housing Authority and other public housing agencies listing the value of work put in place for individual projects. Adjustments are made to cover funds contributed to the Federal projects by local agencies. Expenditures by the United States Housing Corporation for 1919–20, and by the Public Works Administration, Resettlement Administration, and Alley Dwelling Authority from 1934 are compiled from the annual reports of these agencies.

Estimates through 1941 were based on the F. W. Dodge Corp. reports of contracts awarded for public nonresidential buildings. From 1942 on, estimates were based on construction progress reports furnished by Federal agencies, supplemented by the Dodge Corp. reports.

For 1940–47, construction expenditures of the War and the Navy Departments have been based upon engineers' progress reports issued by these agencies. Navy Department construction expenditures for 1915–36 are derived from special tabulations of the Bureau of Supplies and Accounts, United States Navy Department. Expenditures of the Navy for 1937–39 and the War Department for 1915–39 are based upon expenditures shown in the Budget of the United States Government.

Since 1921, construction estimates for State administered highways are based on annual reports of the Bureau of Public Roads. State administered highway estimates are adjusted to include expenditures by county, municipal, and other local bodies. The adjustments are based upon ratios developed from the analysis of total highway construction and State highway construction. Estimates from 1915 to 1920 are derived from the 1920 Department of Agriculture Yearbook. Interim monthly estimates of expenditures are derived by converting the number of man-months worked as reported by the Bureau of Public Roads into value of work performed.

Construction estimates for water supply and sewage disposal systems are based upon data published annually by the Bureau of the Census in Financial Statistics of Cities. Using the expenditure patterns of the city size groups reporting, expenditure ratios were derived for the smaller municipalities and rural incorporated areas. Current estimates are based upon contracts awarded as reported by F. W. Dodge Corp. with adjustments for incomplete coverage.

For 1915–42, expenditures for reclamation, improvement of rivers and harbors, and flood-control work are derived from annual reports of the Army Chief of Engineers and the Commissioner of Reclamation. From 1943, estimates are based upon project reports furnished by these agencies. Tennessee Valley Authority expenditures are available in its annual reports. Indian Service, Forest Service, National Park Service, and Soil Conservation Service expenditures are derived from special tabulations prepared by those agencies and from the Budget of the United States Government.

Construction expenditures figures of all Federal agencies not discussed above are derived from the Budget of the United States Government.

Outlays for municipal public service enterprises are obtained directly from the municipality or estimated on the basis of information reported in Financial Statistics of Cities. Current "all other" non-Federal construction estimates are derived primarily from reports of contracts awarded which are compiled by F. W. Dodge Corp., Engineering News-Record, and other publications reporting contract awards.

TABLE H-1: Estimated expenditures for new construction by type of construction: years 1915–47 and months 1939–47[1]

Type of construction	Expenditures (in millions)																
	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931
Total new construction[2]	$2,932	$3,453	$4,138	$4,714	$5,736	$6,117	$5,531	$7,017	$8,567	$9,548	$10,512	$11,119	$11,067	$10,780	$9,873	$8,042	$5,967
Private construction	2,217	2,750	2,865	2,482	3,770	4,779	3,991	5,377	6,997	7,705	8,439	9,040	8,733	8,313	7,476	5,265	3,375
Residential building (nonfarm)	950	1,066	902	691	1,536	1,545	1,661	2,734	3,640	4,195	4,505	4,496	4,175	3,869	2,797	1,446	1,228
Nonresidential building (nonfarm)[3]	513	771	860	771	1,147	2,082	1,543	1,638	1,896	1,897	2,373	2,878	2,825	2,797	2,822	2,099	1,104
Industrial	197	262	364	449	621	1,099	574	467	549	460	513	727	696	802	949	532	221
Commercial	(4)	(4)	(4)	(4)	(4)	625	570	613	716	740	940	1,107	1,145	1,121	1,097	856	437
Warehouses, office and loft buildings	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	581	559	259
Stores, restaurants, and garages	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	516	297	178
Religious	(4)	(4)	(4)	(4)	(4)	55	71	103	117	130	165	177	179	168	139	128	82
Educational	(4)	(4)	(4)	(4)	(4)	22	32	61	83	91	108	108	106	107	113	112	94
Social and recreational	(4)	(4)	(4)	(4)	(4)	104	119	132	128	131	199	255	252	224	164	140	116
Hospital and institutional	(4)	(4)	(4)	(4)	(4)	30	44	53	57	63	79	83	106	100	98	103	67
Hotel	(4)	(4)	(4)	(4)	(4)	118	109	181	199	222	313	365	291	224	199	164	46
Miscellaneous	(4)	(4)	(4)	(4)	(4)	29	24	28	47	60	56	56	50	51	63	64	41
Farm construction	205	255	315	323	414	381	183	218	270	257	259	251	283	275	279	193	97
Residential	108	134	166	170	218	201	96	115	142	135	136	132	149	145	147	107	59
Nonresidential	97	121	149	153	196	180	87	103	128	122	123	119	134	130	132	86	38
Public utilities	549	658	788	697	673	771	604	787	1,191	1,356	1,302	1,415	1,450	1,372	1,578	1,527	946
Railroad	241	281	361	365	266	184	184	176	361	365	393	491	462	433	510	521	292
Local transit	112	109	154	107	63	82	59	85	74	56	52	51	77	90	82	85	69
Pipeline	20	20	20	24	56	41	30	41	53	70	55	36	80	53	97	30	77
Electric light and power	92	117	123	102	156	262	163	229	412	463	421	362	362	338	350	377	225
Gas	41	70	45	26	56	78	66	139	133	206	171	248	257	212	185	181	117
Telephone and telegraph	43	61	85	73	76	124	102	117	158	196	210	227	212	246	354	333	166
Public construction	715	703	1,273	2,232	1,966	1,338	1,540	1,640	1,570	1,843	2,073	2,079	2,334	2,467	2,397	2,777	2,592
Residential building	0	0	0	28	14	0	0	0	0	0	0	0	0	0	0	0	0
Nonresidential building[5]	217	207	192	199	246	283	387	481	481	494	573	603	596	638	622	623	578
Industrial[6]	(4)	(4)	(4)	(4)	(4)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)
Commercial	(4)	(4)	(4)	(4)	(4)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)
Public administration	(4)	(4)	(4)	(4)	(4)	38	51	55	44	39	56	70	84	85	103	121	173
Educational	(4)	(4)	(4)	(4)	(4)	190	274	342	346	353	400	399	367	378	367	344	269
Social and recreational	(4)	(4)	(4)	(4)	(4)	12	14	15	20	22	37	47	48	50	36	26	1
Hospital and institutional	(4)	(4)	(4)	(4)	(4)	33	40	60	55	60	61	68	80	108	95	111	104
Miscellaneous	(4)	(4)	(4)	(4)	(4)	10	8	9	16	20	19	19	17	17	21	21	14
Military and naval facilities	17	21	608	1,555	1,089	161	49	25	16	9	8	11	12	15	19	29	4
Highway	298	308	313	289	418	644	830	834	755	932	1,021	1,005	1,156	1,275	1,254	1,505	1,351
State	56	50	62	72	125	240	299	287	280	382	389	356	404	538	557	713	731
County	109	118	112	108	131	192	337	330	242	256	265	266	289	282	257	297	24
Municipal	133	140	139	108	159	208	191	213	226	285	357	373	453	444	429	478	35
Federal[8]	(4)	(4)	(4)	1	3	4	3	4	7	9	10	10	10	11	11	17	2
Sewage disposal	52	46	45	38	53	67	78	88	90	108	133	145	174	183	127	142	11
Water supply	54	49	46	56	71	86	100	113	113	155	145	140	138	117	126	201	15
Miscellaneous public service enterprises[9]	40	43	41	37	35	41	43	49	48	65	119	112	192	157	150	157	20
Conservation and development	36	28	27	29	39	55	52	48	65	79	73	61	63	72	86	111	13
Bureau of Reclamation	7	6	6	6	5	5	7	9	9	8	7	6	6	7	8	11	2
Army Engineers	27	20	18	20	29	41	36	30	43	55	51	41	40	46	59	75	8
Tennessee Valley Authority	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Other	2	2	3	3	5	9	9	9	13	16	15	14	17	19	19	25	3
All other public[10]	1	1	1	1	1	1	1	2	2	1	1	2	3	10	13	9	

See footnotes at end of table.

TABLE H-1: Estimated expenditures for new construction by type of construction: years 1915–47 and months 1939–47[1]—Continued

Type of construction	Expenditures (in millions)															
	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947
Total new construction[2]	$3,290	$2,376	$2,805	$3,230	$4,836	$5,487	$5,186	$6,307	$7,042	$10,490	$13,412	$7,784	$4,136	$4,808	$10,458	$13,977
Private construction	1,467	1,012	1,235	1,676	2,550	3,390	3,076	3,808	4,390	5,426	3,007	1,744	1,823	2,716	8,253	10,893
Residential building (nonfarm)	462	278	361	665	1,131	1,372	1,511	2,114	2,355	2,765	1,315	650	535	684	3,183	5,260
Nonresidential building (nonfarm)[3]	499	404	455	472	712	1,088	764	785	1,028	1,486	635	232	350	1,014	3,346	3,131
Industrial	74	176	191	158	266	492	232	254	442	801	346	156	208	642	1,689	1,702
Commercial	216	127	169	206	283	378	279	287	342	400	150	32	55	199	1,110	835
Warehouses, office and loft buildings	110	41	62	70	104	128	89	76	85	114	57	13	16	52	309	216
Stores, restaurants, and garages	106	86	107	136	179	250	190	211	257	286	93	19	39	147	801	619
Religious	43	20	20	26	32	42	48	46	56	59	29	5	11	26	72	118
Educational	50	14	13	16	37	40	38	37	47	55	23	6	10	28	115	164
Social and recreational	57	32	32	32	51	69	92	94	63	68	28	6	16	24	121	92
Hospital and institutional	32	9	8	10	16	30	33	29	31	44	27	11	25	34	81	107
Hotel	15	8	8	11	15	22	19	17	23	27	14	2	4	11	52	43
Miscellaneous	12	18	14	13	12	15	23	21	24	32	18	14	21	50	106	70
Farm construction	39	69	93	176	189	225	196	226	236	303	271	292	213	191	350	450
Residential	26	43	54	96	104	118	104	120	127	174	144	185	136	116	212	253
Nonresidential	13	26	39	80	85	107	92	106	109	129	127	107	77	75	138	197
Public utilities	467	261	326	363	518	705	605	683	771	872	786	570	725	827	1,374	2,052
Railroad	139	94	128	116	149	199	119	137	167	187	197	211	247	264	258	318
Local transit	29	21	30	40	45	39	41	54	50	30	12	14	15	18	35	56
Pipeline	37	7	12	20	41	67	21	35	30	60	80	77	71	42	63	100
Electric light and power	109	59	66	87	139	218	267	303	311	305	255	144	163	245	443	611
Gas	66	35	43	48	77	80	65	61	91	111	87	63	146	141	270	457
Telephone and telegraph	87	45	47	52	67	102	92	93	122	179	155	61	83	117	305	510
Public construction	1,823	1,364	1,570	1,554	2,286	2,097	2,110	2,499	2,652	5,064	10,405	6,040	2,313	2,092	2,205	3,084
Residential and building	0	0	1	9	61	93	35	65	200	430	545	700	190	71	369	182
Nonresidential building[5]	392	205	286	278	604	470	568	859	556	1,584	3,653	1,805	638	652	325	505
Industrial[6]	(7)	2	11	2	4	2	12	23	164	1,280	3,437	1,668	507	470	84	25
Commercial	(7)	4	13	7	14	22	18	32	34	21	6	4	4	4	4	(11)
Public administration	173	101	74	79	137	121	139	204	133	89	47	14	11	15	16	32
Educational	123	43	110	130	323	221	266	418	132	135	116	62	41	59	101	275
Social and recreational	15	6	27	19	50	34	37	47	18	15	5	8	7	9	11	17
Hospital and institutional	78	43	41	31	63	62	83	114	50	34	32	43	58	85	85	81
Miscellaneous	3	6	10	10	13	8	13	21	25	10	10	6	10	10	24	75
Military and naval facilities	34	36	47	37	29	37	62	125	385	1,620	5,016	2,550	837	690	188	204
Highway	961	809	826	709	927	902	858	867	882	800	616	420	346	386	772	1,233
State	561	522	564	429	634	607	562	505	561	552	435	311	232	226	506	900
County	168	105	87	103	109	142	144	142	137	117	95	59	62	89	165	202
Municipal	211	138	114	113	131	111	115	185	154	105	69	43	45	63	87	108
Federal[8]	21	44	61	64	53	42	37	35	30	26	17	7	7	8	14	23
Sewage disposal	69	34	54	68	115	95	89	82	67	48	39	32	26	37	97	177
Water supply	87	47	62	69	93	79	90	80	127	120	100	70	53	60	97	154
Miscellaneous public service enterprises[9]	135	61	41	59	111	101	94	91	90	63	36	43	46	55	87	117
Conservation and development	139	168	245	317	339	310	299	310	310	354	350	285	163	130	240	396
Bureau of Reclamation	26	26	35	47	56	60	67	72	74	79	60	42	36	39	60	125
Army Engineers	81	102	142	177	192	176	157	157	158	159	150	160	73	63	147	222
Tennessee Valley Authority	0	5	17	28	32	30	31	32	38	83	131	76	45	18	17	30
Other	32	35	51	65	59	44	44	49	40	33	9	7	9	10	16	19
All other public[10]	6	4	8	8	7	10	15	20	35	45	50	135	14	11	30	116

See footnotes at end of table.

TABLE H-1: Estimated expenditures for new construction by type of construction: years 1915–47 and months 1939–47[1]—Continued

Type of construction	Expenditures (in millions)												
	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	1939												
Total new construction[2]	$6,307	$432	$397	$426	$483	$530	$585	$613	$619	$608	$586	$544	$484
Private construction	3,808	262	237	253	296	320	348	365	371	365	354	333	304
Residential building (nonfarm)	2,114	161	137	143	174	180	189	196	197	193	189	184	171
Nonresidential building (nonfarm)[3]	785	52	50	52	54	61	68	72	74	76	77	77	72
Industrial	254	15	14	15	16	18	21	23	24	26	26	28	28
Commercial	287	17	17	19	19	23	26	28	26	28	29	29	26
Warehouses, office and loft buildings	76	6	6	6	5	5	5	6	6	7	8	8	8
Stores, restaurants, and garages	211	11	11	13	14	18	21	22	20	21	21	21	18
Other nonresidential building	244	20	19	18	19	20	21	21	24	22	22	20	18
Farm construction	226	6	7	10	16	22	30	35	36	30	20	8	6
Residential	120	3	4	5	8	12	16	19	19	16	11	4	3
Nonresidential	106	3	3	5	8	10	14	16	17	14	9	4	3
Public utilities	683	43	43	48	52	57	61	62	64	66	68	64	55
Railroad	137	9	9	10	11	12	13	13	13	13	13	11	10
Telephone and telegraph	93	7	6	7	7	8	8	8	8	8	9	9	8
Other public utilities	453	27	28	31	34	37	40	41	43	45	46	44	37
Public construction	2,499	170	160	173	187	210	237	248	248	243	232	211	180
Residential building	65	3	4	4	3	4	5	5	5	6	8	9	9
Nonresidential building[5]	859	68	66	71	77	81	84	84	81	74	66	57	50
Industrial[6]	23	1	1	1	2	2	2	2	2	3	3	2	2
Educational	418	35	35	36	39	40	41	40	38	35	31	26	22
Hospital and institutional	114	8	8	9	10	11	12	12	11	10	8	8	7
All other nonresidential	304	24	22	25	26	28	29	30	30	26	24	21	19
Military and naval facilities	125	8	8	9	9	9	10	11	11	11	11	13	15
Highways	867	50	41	45	53	70	88	92	96	96	95	81	60
Sewer and water	162	12	12	14	14	14	15	17	15	14	12	12	11
Miscellaneous public service enterprises[9]	91	6	7	7	8	8	9	9	9	8	8	7	5
Conservation and development	310	21	21	22	22	23	24	28	29	32	30	30	28
All other public[10]	20	2	1	1	1	1	2	2	2	2	2	2	2
	1940												
Total new construction[2]	$7,042	$425	$386	$424	$482	$557	$628	$671	$688	$691	$692	$713	$685
Private construction	4,390	280	252	268	308	360	411	433	439	434	423	402	380
Residential building (nonfarm)	2,355	159	133	137	163	195	224	232	233	232	226	219	202
Nonresidential building (nonfarm)[3]	1,028	64	62	65	68	77	87	92	94	98	104	106	111
Industrial	442	27	26	26	28	30	32	34	38	42	47	51	61
Commercial	342	22	22	24	25	28	34	34	32	31	31	31	28
Warehouses, office and loft buildings	85	7	7	7	7	6	7	7	8	7	7	8	7
Stores, restaurants, and garages	257	15	15	17	18	22	27	27	24	24	24	23	21
Other nonresidential building	244	15	14	15	15	19	21	24	24	25	26	24	22
Farm construction	236	6	7	11	17	23	31	37	38	31	20	9	6
Residential	127	3	4	6	9	12	17	20	20	17	11	5	3
Nonresidential	109	3	3	5	8	11	14	17	18	14	9	4	3
Public utilities	771	51	50	55	60	65	69	72	74	73	73	68	61
Railroad	167	10	10	11	13	15	15	16	17	17	17	14	12
Telephone and telegraph	122	8	8	9	9	10	10	10	10	11	12	13	12
Other public utilities	482	33	32	35	38	40	44	46	47	45	44	41	37
Public construction	2,652	145	134	156	174	197	217	238	249	257	269	311	305
Residential building	200	12	13	16	16	16	16	16	16	17	19	21	22
Nonresidential building[5]	556	46	36	38	37	37	41	45	48	51	57	59	61
Industrial[6]	164	3	3	3	5	6	6	9	13	20	26	32	38
Educational	132	17	13	12	10	10	11	11	11	10	10	9	8
Hospital and institutional	50	5	4	4	4	4	5	5	4	4	4	4	3
All other nonresidential	210	21	16	19	18	17	19	20	20	17	17	14	12
Military and naval facilities	385	14	12	14	14	14	14	15	17	18	30	98	125
Highways	882	31	32	40	56	77	89	102	109	110	105	80	51
Sewer and water	194	12	14	16	17	18	19	20	18	18	15	14	13
Miscellaneous public service enterprises[9]	90	5	6	7	8	9	10	10	9	9	7	6	4
Conservation and development	310	22	19	22	23	23	25	27	29	31	33	30	26
All other public[10]	35	3	2	3	3	3	3	3	3	3	3	3	3

See footnotes at end of table.

TABLE H-1: Estimated expenditures for new construction by type of construction: years 1915–47 and months 1939–47[1]—Continued

Type of construction	Expenditures (in millions)												
	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	1941												
tal new construction[2]	$10,490	$697	$673	$735	$775	$834	$908	$967	$1,024	$1,026	$1,038	$963	$850
ivate construction	5,426	360	336	356	409	471	524	558	552	524	496	449	391
Residential building (nonfarm)	2,765	185	155	160	196	238	272	297	295	277	258	234	198
Nonresidential building (nonfarm)[3]	1,486	114	118	122	125	129	134	130	124	126	128	122	114
Industrial	801	69	74	75	74	72	68	63	58	58	62	65	63
Commercial	400	25	25	28	30	35	40	41	38	39	37	33	29
Warehouses, office and loft buildings	114	7	7	8	8	9	10	11	11	12	11	10	10
Stores, restaurants, and garages	286	18	18	20	22	26	30	30	27	27	26	23	19
Other nonresidential building	285	20	19	19	21	22	26	26	28	29	29	24	22
Farm construction	303	7	10	13	21	30	40	49	50	38	25	12	8
Residential	174	4	6	7	11	17	24	29	29	21	15	7	4
Nonresidential	129	3	4	6	10	13	16	20	21	17	10	5	4
Public utilities	872	54	53	61	67	74	78	82	83	83	85	81	71
Railroad	187	12	12	13	15	16	17	17	17	17	19	16	16
Telephone and telegraph	179	12	11	13	14	15	16	16	16	16	17	18	15
Other public utilities	506	30	30	35	38	43	45	49	50	50	49	47	40
ublic construction	5,064	337	337	379	366	363	384	409	472	502	542	514	459
Residential building	430	28	29	30	33	38	38	38	42	41	40	37	36
Nonresidential building[3]	1,584	65	71	92	111	126	145	156	161	167	173	163	154
Industrial[6]	1,280	43	53	68	87	101	118	128	132	138	143	136	133
Educational	135	8	8	9	9	10	11	12	13	14	15	14	12
Hospital and institutional	34	3	2	3	3	3	3	3	3	3	3	3	2
All other nonresidential	135	11	8	12	12	12	13	13	13	12	12	10	7
Military and naval facilities	1,620	168	167	174	121	72	59	64	113	141	185	187	169
Highways	800	31	30	34	50	73	85	92	99	96	86	73	51
Sewer and water	168	12	11	14	15	16	17	17	15	14	13	12	12
Miscellaneous public service enterprises[9]	63	4	4	4	5	6	6	7	6	6	6	5	4
Conservation and development	354	25	22	28	28	28	30	31	32	33	35	33	29
All other public[10]	45	4	3	3	3	4	4	4	4	4	4	4	4
	1942												
otal new construction[2]	$13,412	$781	$765	$970	$1,029	$1,105	$1,215	$1,498	$1,416	$1,363	$1,265	$1,115	$890
rivate construction	3,007	328	288	289	305	295	271	254	231	220	199	178	149
Residential building (nonfarm)	1 315	159	133	137	156	150	121	92	79	78	77	71	62
Nonresidential building (nonfarm)[3]	635	101	86	74	61	50	45	41	40	40	36	33	28
Industrial	346	57	49	38	28	21	20	20	22	24	24	23	20
Commercial	150	25	20	20	18	16	13	11	8	7	5	4	3
Warehouses, office and loft buildings	57	9	7	7	7	6	5	5	3	3	2	2	1
Stores, restaurants, and garages	93	16	13	13	11	10	8	6	5	4	3	2	2
Other nonresidential building	139	19	17	16	15	13	12	10	10	9	7	6	5
Farm construction	271	6	9	12	19	27	35	49	39	34	21	13	7
Residential	144	3	5	6	10	14	19	26	21	18	11	7	4
Nonresidential	127	3	4	6	9	13	16	23	18	16	10	6	3
Public utilities	786	62	60	66	69	68	70	72	73	68	65	61	52
Railroad	197	14	13	15	16	17	18	18	19	18	17	16	16
Telephone and telegraph	155	15	15	16	16	14	14	15	14	11	10	9	6
Other public utilities	434	33	32	35	37	37	38	39	40	39	38	36	30
ublic construction	10,405	453	477	681	724	810	944	1,244	1,185	1,143	1,066	937	741
Residential building	545	27	25	28	28	33	36	45	62	65	70	62	64
Nonresidential building[5]	3,653	175	197	227	264	298	337	378	381	404	370	353	269
Industrial[6]	3,437	153	178	204	242	277	316	356	362	388	357	342	262
Educational	116	13	12	13	13	12	12	11	9	8	6	4	3
Hospital and institutional	32	2	2	3	3	3	3	4	4	3	2	2	1
All other nonresidential	68	7	5	7	6	6	6	7	6	5	5	5	3
Military and naval facilities	5,016	170	182	342	336	370	453	699	619	561	514	430	340
Highways	616	34	31	35	48	61	65	68	68	63	63	48	32
Sewer and water	139	12	11	13	13	13	13	14	13	11	11	9	6
Miscellaneous public service enterprises[9]	36	5	4	4	3	3	3	3	3	2	2	2	2
Conservation and development	350	27	25	29	30	30	35	35	34	31	29	25	20
All other public[10]	50	3	2	3	2	2	2	2	5	6	7	8	8

See footnotes at end of table.

Table H-1: Estimated expenditures for new construction by type of construction: years 1915–47 and months 1939–47[1]—Continued

Type of construction	Expenditures (in millions)												
	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	1943												
Total new construction[2]	$7,784	$798	$732	$741	$730	$739	$717	$718	$678	$595	$524	$433	$379
Private construction	1,744	126	111	110	126	145	160	172	181	172	155	144	142
Residential building (nonfarm)	650	50	40	38	44	53	60	61	63	63	61	60	57
Nonresidential building (nonfarm)[3]	232	26	20	15	15	14	17	16	18	22	23	22	24
Industrial	156	17	14	11	10	10	10	11	13	14	16	15	15
Commercial	32	2	2	2	2	2	3	3	3	3	3	4	3
Warehouses, office and loft buildings	13	1	1	1	1	1	1	1	1	1	1	2	1
Stores, restaurants, and garages	19	1	1	1	1	1	2	2	2	2	2	2	2
Other nonresidential building	44	7	4	2	3	2	4	2	2	5	4	3	6
Farm construction	292	7	9	13	22	31	35	47	48	36	22	14	8
Residential	185	4	6	8	14	20	22	31	30	22	14	9	5
Nonresidential	107	3	3	5	8	11	13	16	18	14	8	5	3
Public utilities	570	43	42	44	45	47	48	48	52	51	49	48	53
Railroad	211	15	15	16	16	17	17	17	18	18	19	18	25
Telephone and telegraph	61	6	5	6	5	5	5	4	5	5	5	5	5
Other public utilities	298	22	22	22	24	25	26	27	29	28	25	25	23
Public construction	6,040	672	621	631	604	594	557	546	497	423	369	289	237
Residential building	700	52	50	66	68	83	74	74	59	53	45	41	35
Nonresidential building[5]	1,805	238	229	214	188	167	157	152	124	107	88	74	67
Industrial[6]	1,668	230	223	204	177	154	141	134	107	93	77	66	62
Educational	62	4	3	5	6	7	8	9	7	5	4	2	2
Hospital and institutional	43	2	2	3	3	3	4	5	5	5	4	4	3
All other nonresidential	32	2	1	2	2	3	4	4	5	4	3	2	(11)
Military and naval facilities	2,550	321	287	285	271	254	224	211	206	160	147	105	79
Highways	420	21	21	22	31	36	43	48	50	51	41	31	25
Sewer and water	102	8	7	7	8	8	9	11	10	9	9	8	8
Miscellaneous public service enterprises[9]	43	4	3	3	4	4	4	5	4	3	3	3	3
Conservation and development	285	21	18	24	24	27	29	30	30	26	22	19	15
All other public[10]	135	7	6	10	10	15	17	15	14	14	14	8	5
	944												
Total new construction[2]	$4,136	$345	$320	$312	$334	$355	$361	$384	$392	$372	$348	$320	$293
Private construction	1,823	126	124	132	147	160	168	179	183	172	153	142	137
Residential building (nonfarm)	535	53	49	47	48	48	49	48	46	42	38	35	32
Nonresidential building (nonfarm)[3]	350	22	22	23	24	27	31	33	32	32	32	34	38
Industrial	208	15	14	14	15	17	18	18	18	18	18	20	23
Commercial	55	2	3	3	3	4	5	6	6	5	6	6	6
Warehouses, office and loft buildings	16	1	1	1	1	1	2	2	2	1	2	1	1
Stores, restaurants, and garages	39	1	2	2	2	3	3	4	4	4	4	5	5
Other nonresidential building	87	5	5	6	6	6	8	9	8	9	8	8	9
Farm construction	213	6	6	9	18	22	24	32	35	29	16	10	6
Residential	136	4	4	6	12	14	15	19	23	19	10	6	4
Nonresidential	77	2	2	3	6	8	9	13	12	10	6	4	2
Public utilities	725	45	47	53	57	63	64	66	70	69	67	63	61
Railroad	247	17	17	20	20	22	22	22	23	22	21	20	21
Telephone and telegraph	83	5	5	5	6	7	7	7	8	8	9	8	8
Other public utilities	395	23	25	28	31	34	35	37	39	39	37	35	32
Public construction	2,313	219	196	180	187	195	193	205	209	200	195	178	156
Residential building	190	30	24	21	20	19	17	15	31	10	8	7	6
Nonresidential building[5]	638	61	54	56	50	48	44	43	49	53	61	59	60
Industrial[6]	507	54	47	46	41	38	34	31	37	38	47	46	48
Educational	41	2	3	3	3	2	2	4	4	5	5	4	4
Hospital and institutional	58	3	3	3	4	5	5	5	6	7	6	6	5
All other nonresidential	32	2	1	4	2	3	3	3	2	3	3	3	3
Military and naval facilities	837	81	71	60	67	74	70	79	81	72	65	64	53
Highways	346	22	21	19	26	29	35	39	39	37	35	26	18
Sewer and water	79	5	5	6	6	6	7	8	7	9	8	6	6
Miscellaneous public service enterprises[9]	46	3	3	3	3	5	5	5	5	4	4	3	3
Conservation and development	163	16	16	13	13	13	14	15	14	14	13	12	10
All other public[10]	14	1	2	2	2	1	1	1	1	1	1	1	(11)

See footnotes at end of table.

TABLE H-1: Estimated expenditures for new construction by type of construction: years 1915–47 and months 1939–47[1]—Continued

Type of construction	Expenditures (in millions)												
	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
							1945						
al new construction[2]	$4,808	$ 282	$288	$323	$351	$399	$426	$444	$458	$437	$460	$470	$470
vate construction	2,716	120	120	139	156	188	215	241	259	278	298	333	369
Residential building (nonfarm)	684	26	22	22	27	37	47	58	65	73	85	102	120
Nonresidential building (nonfarm)[3]	1,014	41	45	52	57	66	75	80	87	98	113	138	162
Industrial	642	28	31	35	39	44	50	53	58	63	70	80	91
Commercial	199	6	6	7	8	10	12	14	15	17	24	34	46
Warehouses, office and loft buildings	52	2	2	2	3	3	4	5	5	5	6	7	8
Stores, restaurants, and garages	147	4	4	5	5	7	8	9	10	12	18	27	38
Other nonresidential building	173	7	8	10	10	12	13	13	14	18	19	24	25
Farm construction	191	5	5	10	14	20	23	30	31	24	14	10	5
Residential	116	3	3	6	9	12	14	17	19	15	9	6	3
Nonresidential	75	2	2	4	5	8	9	13	12	9	5	4	2
Public utilities	827	48	48	55	58	65	70	73	76	83	86	83	82
Railroad	264	16	16	19	19	20	21	23	23	27	26	25	29
Telephone and telegraph	117	8	7	8	8	9	9	8	9	10	12	14	15
Other public utilities	446	24	25	28	31	36	40	42	44	46	48	44	38
blic construction	2,092	162	168	184	195	211	211	203	199	159	162	137	101
Residential building	71	7	7	7	8	9	9	7	7	3	3	2	2
Nonresidential building[5]	652	60	64	73	79	78	71	62	54	32	32	26	21
Industrial[6]	470	49	55	62	66	64	55	46	37	13	11	7	5
Educational	59	3	3	4	4	4	4	5	6	6	7	7	6
Hospital and institutional	85	5	4	6	7	7	8	8	8	8	9	8	7
All other nonresidential	38	3	2	1	2	3	4	3	3	5	5	4	3
Military and naval facilities	690	60	62	67	66	72	71	67	65	50	50	38	22
Highways	386	17	16	19	23	31	37	41	44	45	45	40	28
Sewer and water	97	6	6	6	6	6	6	8	10	10	12	11	10
Miscellaneous public service enterprises[9]	55	3	3	3	3	4	6	6	6	6	6	5	4
Conservation and development	130	9	9	8	9	10	10	11	12	12	13	14	13
All other public[10]	11	(11)	1	1	1	1	1	1	1	1	1	1	1
							1946						
tal new construction[2]	$10,458	$495	$511	$597	$701	$814	$925	$1,040	$1,112	$1,126	$1,132	$1,053	$952
ivate construction	8,253	403	430	492	575	662	745	819	864	863	849	800	751
Residential building (nonfarm)	3,183	133	138	161	198	240	284	324	347	356	347	335	320
Nonresidential building (nonfarm)[3]	3,346	189	212	230	257	282	303	317	320	316	316	308	296
Industrial	1,689	100	108	113	119	128	138	149	159	167	171	171	166
Commercial	1,110	59	71	81	98	110	116	116	106	96	91	86	80
Warehouses, office and loft buildings	309	11	14	16	20	22	25	30	33	35	36	35	32
Stores, restaurants, and garages	801	48	57	65	78	88	91	86	73	61	55	51	48
Other nonresidential building	547	30	33	36	40	44	49	52	55	53	54	51	50
Religious	72	4	4	4	5	5	6	6	7	7	8	8	8
Educational	115	5	6	7	8	9	10	11	11	12	12	12	12
Hospital and institutional	81	4	4	5	5	6	7	7	8	8	9	9	9
Remaining types[12]	279	17	19	20	22	24	26	28	29	26	25	22	21
Farm construction	350	8	8	14	20	30	40	50	60	50	40	20	10
Residential	212	5	5	9	12	18	25	30	35	30	25	12	6
Nonresidential	138	3	3	5	8	12	15	20	25	20	15	8	4
Public utilities	1,374	73	72	87	100	110	118	128	137	141	146	137	125
Railroad	258	18	17	19	21	21	21	22	22	23	24	26	24
Telephone and telegraph	305	17	17	21	24	25	24	26	28	30	34	30	29
Other public utilities	811	38	38	47	55	64	73	80	87	88	88	81	72
ublic construction	2,205	92	81	105	126	152	180	221	248	263	283	253	201
Residential building	369	2	4	9	12	21	25	32	37	43	59	73	52
Nonresidential building[5]	325	25	21	23	22	23	26	30	32	36	33	29	25
Industrial[6]	84	9	7	7	6	6	6	6	7	9	9	7	5
Educational	101	6	5	6	6	7	8	10	11	12	11	10	9
Hospital and institutional	85	7	6	7	7	8	8	8	8	8	7	6	5
All other nonresidential	55	3	3	3	3	2	4	6	6	7	6	6	6
Military and naval facilities	188	18	13	13	15	14	14	14	18	16	20	17	16
Highways	772	22	21	31	43	55	69	87	97	100	106	80	61
Sewer and water	194	9	7	9	10	12	16	20	23	26	24	20	18
Miscellaneous public service enterprises[9]	87	4	3	5	6	7	9	10	11	10	9	7	6
Conservation and development	240	10	11	12	15	17	18	25	27	29	30	25	21
All other public[10]	30	2	1	3	3	3	3	3	3	3	2	2	2

See footnotes at end of table.

TABLE H-1: Estimated expenditures for new construction by type of construction: years 1915–47 and months 1939–47[1]—Continued

Type of construction	Expenditures (in millions)												
	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	1947												
Total new construction[2]	$13,977	$873	$823	$859	$928	$1,032	$1,162	$1,264	$1,364	$1,423	$1,497	$1,432	$1,320
Private construction	10,893	703	662	679	713	790	885	966	1,042	1,086	1,129	1,141	1,097
Residential building (nonfarm)	5,260	300	280	285	310	355	405	455	500	540	590	630	610
Nonresidential building (nonfarm)[3]	3,131	275	258	241	238	242	250	254	260	267	275	287	284
Industrial	1,702	159	152	145	142	141	140	139	139	138	137	136	134
Commercial	835	69	61	52	53	58	65	67	69	75	82	93	91
Warehouses, office and loft buildings	216	27	23	17	17	17	16	15	15	14	14	19	22
Stores, restaurants, and garages	619	42	38	35	36	41	49	52	54	61	68	74	69
Other nonresidential building	594	47	45	44	43	43	45	48	52	54	56	58	59
Religious	118	8	8	7	7	8	8	10	11	12	13	13	13
Educational	164	11	11	11	11	11	12	14	16	16	17	17	17
Hospital and institutional	107	9	9	9	9	9	9	9	9	9	8	9	9
Remaining types[12]	205	19	17	17	16	15	16	15	16	17	18	19	20
Farm construction	450	10	10	20	30	40	50	60	75	65	50	25	15
Residential	250	6	6	12	18	23	27	32	40	35	27	15	9
Nonresidential	200	4	4	8	12	17	23	28	35	30	23	10	6
Public utilities	2,052	118	114	133	135	153	180	197	207	214	214	199	188
Railroad	318	21	18	20	22	23	27	31	33	33	32	30	28
Telephone and telegraph	510	32	33	38	25	31	40	44	46	54	59	53	55
Other public utilities	1,224	65	63	75	88	99	113	122	128	127	123	116	105
Public construction	3,084	170	161	180	215	242	277	298	322	337	368	291	223
Residential building	182	38	37	25	16	9	8	9	8	7	9	8	8
Nonresidential building[5]	505	28	27	34	40	42	43	42	45	49	53	50	52
Industrial[6]	25	5	3	3	4	3	2	2	1	1	1	(11)	(11)
Educational	275	12	13	19	22	23	24	23	25	26	27	29	32
Hospital and institutional	81	5	5	5	6	6	7	7	7	8	9	8	8
All other nonresidential	124	6	6	7	8	10	10	10	12	14	16	13	12
Military and naval facilities	204	13	12	12	15	15	15	19	22	22	23	19	17
Highways	1,233	39	36	50	76	100	125	137	149	159	178	119	65
Sewer and water	331	18	17	22	26	28	30	31	32	32	35	32	28
Miscellaneous public service enterprise[9]	117	7	7	9	9	10	11	11	12	12	11	10	8
Conservation and development	396	20	19	21	25	29	35	39	42	44	45	41	36
All other public[10]	116	7	6	7	8	9	10	10	12	12	14	12	9

[1] Construction expenditures represent the monetary value of the volume of work accomplished during the given period of time. Estimates of expenditures for 1915 through 1938 were made by the Office of Domestic Commerce, U. S. Department of Commerce, except for the nonfarm residential building segment, which was estimated by the Bureau of Labor Statistics. For 1939 and subsequent years, the estimates were prepared jointly by the Bureau of Labor Statistics and the Office of Domestic Commerce.

[2] Includes major additions and alterations.

[3] Excludes nonresidential building by privately owned public utilities.

[4] Not available separately; included in total.

[5] Excludes nonresidential building for military and naval facilities.

[6] Excludes expenditures to construct facilities used in atomic energy projects.

[7] Public industrial and commercial building not segregable from private for 1920 through 1932, but the amount involved is negligible.

[8] Includes primarily roads in national parks and forests. Federal contributions to State and local programs are included in those categories, which are shown above according to government ownership.

[9] Covers primarily publicly owned electric light and power systems and local transit facilities.

[10] Covers miscellaneous construction items such as airports, monuments, memorials, etc.

[11] Less than $500,000.

[12] Includes social and recreational buildings, hotels, and miscellaneous buildings not elsewhere classified.

Value of Federal Construction

Federal contract award data compiled by the ureau of Labor Statistics represent the total alue of work under contract that was planned r was to be started immediately or in the near uture. Also included in the totals is the value f Federal force–account work actually started. hese figures were obtained from Federal Gov-rnment progress reports.

Force–account employees are workers hired, not through a contractor, but directly by a business or government agency, and utilized as a separate work force to perform nonmaintenance construction work on the agency's own properties.

Table H–2, which shows the value of contracts awarded and force–account work started on federally financed construction, by type of project, covers 1935–47 and table H–3, giving the data by State, is for 1943–47.

Table H–2: Value of contracts awarded and force-account work started on federally financed construction by type of project, 1935–47[1]

Period	Value (in thousands)									
	All types of projects	Airports[2]	Buildings[3]		Conservation and development		Electrification[4]	Highways, streets, and roads	Water and sewage	All other types[5]
			Residential	Non-residential	Reclamation	River, harbor, and flood control				
1935	$1,478,073	(6)	[7]$7,833	[7]$434,949	$158,027	$280,698	$5,497	$381,037	$136,243	$73,789
1936	1,533,439	(6)	[7]63,465	[7]497,929	73,797	115,913	14,878	511,685	154,807	100,965
1937	930,410	(6)	[7]17,239	[7]327,328	59,051	73,959	6,685	360,865	75,558	69,725
1938	1,609,208	(6)	[7]31,809	[7]644,733	175,382	128,492	24,197	372,238	116,314	116,043
1939	1,586,604	$4,753	231,071	438,151	115,612	109,811	29,775	355,701	118,131	183,599
1940	2,316,467	137,112	244,671	1,293,239	69,028	128,561	17,568	364,048	16,809	45,431
1941	5,931,536	499,427	322,248	4,099,883	41,880	157,804	4,125	446,903	23,672	335,594
1942	7,775,497	579,176	549,472	5,580,917	150,708	67,087	32,538	347,988	152,343	315,268
1943	2,506,786	243,443	375,471	1,322,608	101,270	54,467	12,299	161,852	37,694	197,682
1944	1,297,602	110,872	101,491	773,511	66,679	45,736	4,494	111,805	31,046	51,968
1945	902,265	41,219	53,133	563,868	30,765	41,385	4,608	100,969	23,020	43,298
1946	1,450,252	14,859	435,453	114,203	169,253	131,152	4,556	535,784	13,231	31,761
1947	1,294,069	24,645	51,186	225,328	77,095	230,934	8,107	657,087	8,176	11,511
1946: January	85,688	1,248	14,466	10,595	23,178	5,974	0	29,532	257	438
February	70,639	825	24,626	11,853	3,876	6,128	227	22,744	206	154
March	83,241	863	27,772	8,679	7,501	7,988	84	24,522	68	5,764
April	118,652	2,947	48,593	6,959	9,361	11,771	220	31,089	417	7,295
May	185,110	641	74,765	4,237	9,275	35,220	23	58,535	710	1,704
June	284,353	4,472	73,758	31,648	44,670	23,654	399	89,680	2,750	13,322
July	186,785	828	76,768	12,959	31,002	5,254	0	50,766	8,168	1,040
August	143,221	282	56,495	1,784	975	29,661	0	52,211	68	1,745
September	97,757	358	36,475	6,120	671	932	0	52,666	418	117
October	94,873	261	1,147	2,769	32,909	2,027	80	55,480	169	31
November	45,833	2,012	294	8,702	5,263	635	233	28,593	0	101
December	54,100	122	294	7,898	572	1,908	3,290	39,966	0	50
1947: January	87,251	2,159	388	36,512	2,447	19,231	475	25,561	20	458
February	58,997	237	2,594	10,931	5,188	4,220	589	34,529	173	536
March	99,111	365	6,571	11,156	13,877	23,317	432	42,388	265	740
April	125,109	387	7,852	17,556	8,191	17,016	312	72,218	952	625
May	123,547	2,652	5,967	15,806	4,443	27,336	182	64,248	2,235	678
June	181,438	9,079	21,248	37,014	11,778	39,267	908	57,440	2,714	1,990
July	70,596	1,230	409	6,050	1,763	2,106	284	57,845	40	869
August	121,083	1,346	4,347	29,708	16,186	3,226	309	65,742	24	195
September	89,262	1,109	409	4,744	1,699	20,498	53	59,827	831	92
October	111,191	4,503	586	7,342	3,967	16,683	2,225	73,720	165	2,000
November	114,096	772	711	15,640	628	45,421	1,108	49,220	275	321
December	112,388	806	104	32,869	6,928	12,613	1,230	54,349	482	3,007

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[1] Covers projects financed wholly or partially from Federal funds. Excludes off-continent construction beginning with January 1943. Projects classified as secret by the military are excluded.

[2] Excludes hangars and other buildings, which are included under building construction.

[3] Includes additions, alterations, and repairs.

[4] Excludes loans granted by the Rural Electrification Administration, which were included in this series in publications issued prior to August 1947.

[5] Covers forestry, railroad construction, and other types of heavy engineering projects not elsewhere classified.

[6] Included in "All other types."

[7] Nonresidential construction at the site of three Resettlement Administration projects for which a breakdown of residential and nonresidential costs is not available is included in the residential totals.

TABLE H-3: Value of contracts awarded and force-account work started on federally financed construction, by State, 1943–47[1]

State	Value (in thousands)				
	1943	1944	1945	1946	1947
Total	$2,506,786	$1,297,602	$902,265	$1,450,252	$1,294,069
Alabama	39,594	18,046	24,464	22,468	13,127
Arizona	25,474	14,047	2,550	22,242	9,734
Arkansas	56,697	85,098	17,926	39,129	63,158
California	265,619	285,541	180,786	160,248	95,347
Colorado	7,772	3,002	1,590	29,830	33,628
Connecticut	20,674	4,917	5,993	15,051	6,592
Delaware	6,173	1,395	1,909	1,784	2,990
District of Columbia	14,355	11,806	11,800	11,627	15,216
Florida	145,774	42,359	20,419	20,434	24,434
Georgia	36,243	17,925	9,015	39,271	30,509
Idaho	21,232	4,314	1,564	14,003	9,362
Illinois	121,754	39,831	29,300	38,460	54,421
Indiana	18,074	17,987	19,800	26,314	17,466
Iowa	7,383	6,763	5,125	27,148	17,359
Kansas	13,833	12,312	10,465	24,293	22,486
Kentucky	46,769	24,329	13,077	24,623	21,577
Louisiana	80,785	34,259	15,183	17,655	30,919
Maine	17,022	6,756	587	4,701	4,650
Maryland	67,701	32,426	26,256	18,162	15,927
Massachusetts	36,108	11,446	14,258	27,820	10,877
Michigan	102,384	32,754	12,509	36,749	25,823
Minnesota	31,025	4,019	3,357	25,353	24,127
Mississippi	24,105	10,178	11,921	17,812	38,702
Missouri	30,699	16,846	52,232	34,758	31,047
Montana	$1,537	$3,237	$3,336	$17,438	$8,583
Nebraska	16,977	13,074	21,688	18,776	18,392
Nevada	49,015	5,289	13,110	17,169	3,999
New Hampshire	2,310	2,261	321	3,782	2,678
New Jersey	59,665	22,663	36,777	37,035	23,693
New Mexico	17,751	8,426	10,890	13,610	10,773
New York	111,838	44,484	31,122	101,559	100,002
North Carolina	83,856	43,024	18,419	31,173	25,749
North Dakota	245	3,434	4,945	7,325	27,459
Ohio	116,649	38,302	16,313	47,246	33,743
Oklahoma	30,670	13,251	20,046	40,932	16,231
Oregon	33,345	21,375	13,278	28,782	32,406
Pennsylvania	124,865	76,954	41,947	63,134	64,101
Rhode Island	24,258	5,772	1,410	6,720	3,641
South Carolina	24,856	10,274	4,541	24,415	31,266
South Dakota	2,402	1,063	1,131	16,664	20,169
Tennessee	78,475	31,773	18,655	52,214	37,688
Texas	190,148	64,774	64,770	73,025	86,550
Utah	82,813	32,109	4,273	7,628	8,257
Vermont	1,229	305	166	3,190	2,960
Virginia	78,997	53,685	28,578	24,555	32,301
Washington	112,326	40,739	35,230	66,985	26,749
West Virginia	6,552	12,510	6,624	10,495	12,905
Wisconsin	14,412	6,077	8,480	20,941	23,002
Wyoming	4,346	4,391	4,129	15,524	21,294

State	1946											
	January	February	March	April	May	June	July	August	September	October	November	December
Total	$85,688	$70,639	$83,241	$118,652	$185,110	$284,353	$186,785	$143,221	$97,757	$94,873	$45,833	$54,100
Alabama	560	1,292	1,930	443	5,380	4,096	1,671	3,584	485	1,079	1,023	925
Arizona	11,509	517	1,533	838	3,231	1,482	1,061	965	34	325	456	291
Arkansas	1,618	0	1,302	1,791	1,389	1,220	4,035	27,480	109	110	75	0
California	24,248	11,654	18,689	14,036	4,388	49,691	13,334	3,994	3,173	12,354	2,824	1,863
Colorado	0	501	2,991	622	8,489	9,670	1,467	2,587	1,535	1,568	9	388
Connecticut	837	1,661	1,076	1,227	558	4,298	2,107	906	699	1,242	27	413
Delaware	133	468	71	54	144	552	262	92	0	0	8	0
District of Columbia	95	6,257	99	104	3,312	483	186	258	8	368	275	182
Florida	522	896	2,406	5,043	935	4,079	2,602	1,302	939	286	368	1,056
Georgia	1,313	329	2,326	1,099	14,620	3,212	3,985	4,827	3,783	2,804	136	837
Idaho	26	26	68	1,862	2,958	2,888	1,432	508	708	1,885	1,378	264
Illinois	608	2,423	368	3,246	4,599	4,926	9,019	8,458	2,669	1,683	345	116
Indiana	530	410	1,886	2,148	1,060	3,162	5,063	6,500	2,507	207	1,428	1,413
Iowa	686	2,479	1,831	719	5,317	2,674	5,220	4,819	879	429	1,882	213
Kansas	1,633	1,174	701	2,190	3,461	5,128	1,631	1,939	2,790	742	796	2,108
Kentucky	398	1,221	3,021	1,683	4,748	4,453	1,413	1,489	2,486	603	2,157	951
Louisiana	386	1,853	1,013	4,832	420	1,017	2,146	1,520	2,418	661	0	1,389
Maine	13	10	510	397	663	709	1,001	755	172	285	20	166
Maryland	131	92	1,365	1,256	1,036	8,499	4,234	370	239	815	70	55
Massachusetts	22	1,849	666	4,696	8,977	3,181	4,251	1,517	1,535	408	327	391
Michigan	14	12	11	818	6,265	7,762	4,754	5,533	3,447	3,955	2,089	2,089
Minnesota	165	120	929	3,937	3,678	3,859	3,095	5,211	2,157	1,636	449	117
Mississippi	0	102	218	2,355	2,101	2,718	4,460	3,081	1,636	179	847	115
Missouri	498	0	0	5,664	3,704	2,398	6,132	953	11,329	0	152	3,928
Montana	6	183	196	529	2,469	1,861	3,611	746	149	321	1,843	5,524
Nebraska	1	16	2,874	3,067	1,460	2,295	1,558	1,364	1,177	10	4,110	844
Nevada	11,696	523	68	1,021	731	1,799	359	522	0	0	450	0
New Hampshire	66	0	453	165	945	629	179	246	571	500	23	5
New Jersey	41	2,226	2,612	3,819	3,266	12,105	710	4,857	536	3,925	1,019	1,919
New Mexico	118	2,235	1,975	55	1,197	1,581	736	1,527	1,759	952	1,062	413
New York	14,841	5,182	4,063	1,383	25,227	24,275	10,313	3,349	6,371	2,617	618	3,320
North Carolina	1,448	561	3,975	2,031	3,951	7,638	6,003	2,077	1,523	716	1,121	129
North Dakota	587	0	103	70	101	3,585	1,138	1,139	28	563	11	0
Ohio	1,478	389	1,733	5,265	4,208	18,578	4,109	2,461	3,507	116	1,594	3,808
Oklahoma	870	3,235	1,706	4,259	12,636	1,440	2,654	5,185	3,756	3,267	1,477	447
Oregon	167	2,448	1,910	2,692	5,093	5,757	1,331	1,770	4,515	2,246	373	480
Pennsylvania	48	6,638	1,462	10,089	6,813	11,952	10,587	5,061	1,521	3,890	3,026	2,047
Rhode Island	0	35	111	91	36	707	231	423	4,878	200	8	0
South Carolina	811	466	3,442	68	2,439	2,705	6,692	2,970	2,489	1,514	819	0
South Dakota	195	4	61	1,029	734	5,861	509	1,753	591	343	3,958	1,626
Tennessee	668	668	2,320	1,411	725	5,799	30,616	2,241	3,703	1,359	588	2,116
Texas	4,025	7,934	4,775	4,265	4,024	5,803	8,001	8,673	8,308	7,157	3,665	6,395
Utah	0	443	479	1,284	708	1,524	1,496	872	603	108	0	111
Vermont	49	3	0	849	99	401	713	66	140	695	175	0
Virginia	704	103	984	287	1,551	8,088	1,755	1,804	3,145	635	522	4,977
Washington	1,261	1,878	647	3,131	7,618	18,412	3,146	1,988	723	27,511	485	182
West Virginia	61	3	1,090	983	1,548	3,558	922	720	318	583	312	397
Wisconsin	410	107	309	3,791	4,049	3,508	4,508	1,168	1,703	660	723	5
Wyoming	189	10	883	5,958	2,049	2,335	347	1,591	6	1,361	710	85

See footnote at end of table.

TABLE H-3: Value of contracts awarded and force-account work started on federally financed construction, by State, 1943-47[1]—Continued

State	1947											
	January	February	March	April	May	June	July	August	September	October	November	December
Total	$87,251	$58,997	$99,111	$125,109	$123,547	$181,438	$70,596	$121,083	$89,262	$111,191	$114,096	$112,388
Alabama	515	2,394	739	2,063	423	2,497	1,130	331	421	1,058	977	579
Arizona	1,697	1,293	53	520	1,029	1,751	1,964	205	901	25	690	606
Arkansas	273	379	9,091	2,618	26,906	3,152	686	2,247	3,966	954	12,024	862
California	5,490	2,346	4,624	7,316	8,450	23,152	4,143	14,472	2,780	7,918	6,759	7,897
Colorado	3,692	1,110	10,937	4,453	672	4,248	907	905	3,316	502	2,046	840
Connecticut	38	3	324	1,037	1,788	1,738	11	153	16	343	207	934
Delaware	89	0	149	981	0	39	830	269	218	7	5	403
District of Columbia	95	2	874	3,832	3,129	1,647	195	175	948	130	4,026	163
Florida	1,855	1,720	1,613	3,688	2,161	4,121	909	530	2,919	688	2,599	1,631
Georgia	1,034	1,173	1,257	137	1,474	3,110	1,994	1,672	2,096	815	14,087	1,660
Idaho	702	399	177	163	2,668	2,229	117	307	96	1,222	723	559
Illinois	731	1,122	1,170	3,098	869	28,670	1,041	3,378	2,803	4,322	3,042	4,175
Indiana	306	1,549	349	553	1,495	1,515	1,256	3,917	978	261	2,873	2,414
Iowa	0	2,667	1,620	2,169	2,317	1,224	1,037	898	1,668	1,601	1,280	878
Kansas	1,542	534	1,443	6,062	1,844	1,560	1,037	1,953	2,152	1,572	798	1,939
Kentucky	857	2,865	958	1,715	2,282	1,316	2,355	1,413	1,343	3,443	1,183	1,847
Louisiana	1,177	755	1,998	2,953	2,026	4,822	1,249	338	1,856	3,117	9,376	1,252
Maine	154	9	4	165	282	1,534	222	1,758	33	236	193	60
Maryland	1,276	718	236	2,400	778	7,064	1,088	1,000	201	797	18	351
Massachusetts	182	763	1,385	3,798	506	4,585	856	119	399	762	705	817
Michigan	2,375	1,707	1,663	2,876	645	1,867	3,164	1,337	3,782	2,629	2,913	865
Minnesota	1,236	1,549	1,532	2,961	2,029	4,907	3,567	1,959	1,555	1,868	85	879
Mississippi	14,657	3,461	4,706	1,077	2,252	3,936	1,804	1,662	2,229	1,368	906	644
Missouri	544	2,394	2,688	1,524	1,231	2,406	3,511	560	4,629	2,040	2,456	7,064
Montana	181	142	1,471	599	702	264	313	1,388	463	1,891	274	895
Nebraska	1,072	514	959	2,971	2,064	830	1,028	1,263	1,330	772	344	5,245
Nevada	259	3	124	403	663	764	25	871	431	101	324	31
New Hampshire	0	0	131	139	515	53	463	41	437	560	144	195
New Jersey	247	2,618	533	2,942	1,014	4,591	14	5,654	1,559	1,552	887	2,082
New Mexico	566	1,017	546	1,920	1,316	644	915	669	765	649	1,678	88
New York	25,437	964	4,507	8,051	4,444	4,585	3,315	25,156	2,239	2,914	2,900	15,490
North Carolina	1,931	2,342	3,028	2,391	3,298	2,568	2,032	838	1,656	2,542	2,020	1,103
North Dakota	0	98	11	2,254	258	4,800	267	923	9,011	7,099	62	2,676
Ohio	1,009	306	1,396	2,508	1,695	4,656	1,361	2,066	6,708	3,422	841	7,775
Oklahoma	1,896	131	303	1,012	613	2,854	436	178	4,854	1,737	169	2,048
Oregon	399	1,894	8,051	4,084	1,221	3,821	1,324	2,106	2,136	4,287	841	2,242
Pennsylvania	816	862	7,045	9,569	7,276	6,986	4,881	2,465	3,863	5,652	4,152	10,534
Rhode Island	59	0	71	165	88	768	855	844	38	64	685	4
South Carolina	827	1,504	2,773	2,576	2,196	1,432	901	378	2,064	1,341	14,049	1,225
South Dakota	39	763	275	913	4,210	4,208	1,211	925	891	1,354	164	5,216
Tennessee	2,112	2,173	2,853	2,034	5,459	3,472	3,228	1,159	1,010	10,545	781	2,862
Texas	5,025	7,962	6,227	9,286	8,357	6,669	4,107	11,538	1,782	16,853	4,273	4,471
Utah	129	667	275	163	167	3,868	939	1,006	342	161	297	243
Vermont	27	0	103	190	1,138	181	495	122	272	174	225	33
Virginia	1,474	1,955	2,964	7,188	2,786	5,949	4,279	1,547	1,213	716	405	1,825
Washington	1,658	1,442	3,143	3,359	2,019	3,595	1,005	687	1,023	5,133	576	3,109
West Virginia	1,565	561	430	636	547	1,372	177	608	756	204	4,791	1,258
Wisconsin	3	3	1,553	1,366	3,103	2,280	1,886	2,677	2,180	3,329	3,243	1,379
Wyoming	3	164	749	231	1,142	1,138	1,016	14,416	934	461	0	1,040

[1] Covers projects financed wholly or partially from Federal funds. Projects classified by the military as secret are excluded.

Value of Urban Building

The estimates of the volume (by value) of urban building construction are based primarly on local building permit reports received monthly by the Bureau of Labor Statistics from approximately 2,500 urban places which contained approximately 85 percent of the total 1940 urban population.

Urban, as defined by the Bureau of the Census covers all incorporated places of 2,500 population or more in 1940 and, by special rule, a small number of unincorporated civil divisions. Such estimates measure intentions to build rather than work actually started.

The building permit reports which are received give the total number of individual structures (by type) for which such permits were issued during the month, the valuation of these structures as shown on the permits, and the number of family-dwelling units to be provided in new housekeeping structures.

To obtain the estimates shown in tables H–4 and H–5 for the entire urban United States, all urban places and the reporting urban places are first classified by State, city population group, and location in or outside metropolitan districts. Estimates are then computed for all places in each of these categories by applying to the reported permit data the ratio between the total number of places and the number reporting. The coverage is usually complete in places of 25,000 population or over. For places of 5,000 to 25,000 population, the number reporting is usually less than one-third complete. For places of 2,500 to 5,000 population, the sample is usually not less than one-eighth.

The data on total urban permit valuation, obtained through this weighting process, have not been adjusted for the understatement of actual construction costs ordinarily found to exist in valuations shown on permits. Although some urban places do not require permits to build, the procedure followed to derive estimates for all urban places combined results in the inclusion of data for these nonpermit places which are comparable to permit figures (i.e., an estimate of permit volume for these places if permit systems had been in operation). No allowance is made in the urban permit figures for the lag between permit issuance and start of construction and for some permits which do not result in construction. Since local building permits are not issued for Federal building construction projects, information received from Federal agencies on building construction contracts awarded and value of force-account work started (see tables H–2 and H–3) has been added to the local building permit estimate to obtain the total urban estimate.

Estimated permit valuation of urban building construction is shown in table H–4 by source of funds and class of construction for 1942–47, and in table H–5 the data are shown by State for 1942–47.

NOTE: Upon request, the Bureau of Labor Statistics will supply detailed tables showing permit valuation of building construction and number of new dwelling units in cities having (in 1940) 100,000 population or more. Data are given for the period 1921–47 covering value of all classes of building construction, with separate statistics for new nonresidential and new residential building and the total number of dwelling units.

TABLE H–4: Estimated permit valuation[1] of urban building construction[2] authorized, by source of funds and by class of construction, 1942–47

Period	Valuation (in thousands)											
	TOTAL						NON-FEDERAL[3]					
	All building construction	New residential building			New nonresidential building	Additions, alterations, and repairs	All building construction	New residential building			New nonresidential building	Additions, alterations, and repairs
		Total	Housekeeping	Nonhousekeeping				Total	Housekeeping	Nonhousekeeping		
1942	$2,707,573	$918,413	$895,503	$22,910	$1,510,688	$278,472	$1,066,958	$602,609	$598,570	$4,039	$222,998	$241,351
1943	1,262,133	583,496	570,629	12,867	439,131	239,506	703,584	375,169	374,261	908	106,546	221,869
1944	1,101,350	345,670	341,606	4,064	438,909	316,771	753,441	289,270	286,344	2,926	169,078	295,093
1945	1,966,913	663,160	646,739	16,421	827,614	476,139	1,717,181	631,562	617,559	14,003	639,342	446,277
1946	4,743,414	2,513,789	2,448,275	65,513	1,458,602	771,023	4,303,971	2,158,201	2,114,834	43,367	1,416,497	729,272
1947	5,549,718	2,945,934	2,916,102	29,832	1,712,672	891,112	5,356,457	2,910,735	2,880,925	29,811	1,583,165	862,557
1942: January	213,422	75,310	72,710	2,600	111,404	26,708	107,640	57,378	57,195	183	27,048	23,214
February	332,410	126,945	125,516	1,429	181,383	24,082	121,977	72,909	72,670	239	28,193	20,875
March	281,774	111,935	110,460	1,475	138,617	31,222	160,817	100,608	99,230	1,378	31,600	28,609
April	332,228	109,956	108,725	1,231	192,764	29,508	136,064	81,605	80,374	1,231	26,267	28,192
May	327,376	86,328	86,114	214	216,309	24,739	80,882	40,046	40,021	25	20,113	20,723
June	220,585	67,753	66,252	1,501	127,063	25,769	76,859	37,080	37,044	36	17,776	22,003
July	304,458	52,621	50,470	2,151	226,288	25,549	80,668	41,031	40,285	746	19,237	20,400
August	149,016	49,422	49,303	119	75,910	23,684	72,114	39,754	39,708	46	13,133	19,227
September	175,477	73,020	65,145	7,875	81,565	20,892	73,412	41,341	41,336	5	13,711	18,360
October	157,840	73,832	73,001	831	65,515	18,493	63,322	37,732	37,619	113	9,340	16,250
November	93,986	48,172	45,410	2,762	31,524	14,290	48,161	29,118	29,103	15	5,873	13,170
December	119,001	43,119	42,397	722	62,346	13,536	45,042	24,007	23,985	22	10,707	10,328
1943: January	121,235	50,288	49,759	529	59,157	11,790	32,711	17,352	17,310	42	5,539	9,820
February	106,752	53,633	52,897	736	39,625	13,494	33,472	17,578	17,509	69	4,609	11,285
March	103,388	50,861	49,410	1,451	37,338	15,189	45,620	27,379	27,316	63	4,615	13,626
April	99,815	47,505	42,953	4,552	34,796	17,514	53,335	30,545	30,369	176	7,028	15,762
May	102,409	55,333	54,864	469	29,179	17,897	64,017	38,062	38,006	56	9,259	16,696
June	101,276	41,890	41,450	440	37,607	21,779	63,185	35,794	35,637	157	7,115	20,276
July	106,061	45,908	43,286	2,622	37,491	22,662	65,674	35,610	35,574	36	8,154	21,910
August	103,730	52,227	51,873	354	27,553	23,950	73,231	42,844	42,792	52	7,689	22,698
September	100,620	41,532	40,842	690	32,479	26,609	73,901	34,316	34,209	107	14,456	25,129
October	110,694	49,648	49,432	216	36,812	24,234	72,420	37,931	37,861	70	11,421	23,068
November	105,054	53,808	53,200	608	28,115	23,131	66,146	29,758	29,702	56	14,683	21,705
December	101,099	40,863	40,663	200	38,979	21,257	59,872	28,000	27,976	24	11,978	19,894
1944: January	87,839	32,295	32,084	211	35,462	20,082	55,179	26,111	26,032	79	10,208	18,860
February	73,582	28,185	28,068	117	25,624	19,773	51,722	25,197	25,119	78	8,825	17,700
March	91,831	37,063	36,670	393	30,437	24,331	63,491	29,265	29,048	217	10,967	23,259
April	88,689	29,460	29,146	314	35,618	23,611	60,797	27,078	26,936	142	11,100	22,619
May	107,312	33,918	33,377	541	46,180	27,214	70,642	29,886	29,791	95	14,171	26.585
June	116,086	36,623	36,077	546	49,953	29,510	82,000	31,883	31,675	208	21,801	28,316
July	97,814	30,484	30,016	468	37,641	29,689	68,935	25,134	24,833	301	15,223	28,578
August	86,290	27,709	27,411	298	31,630	26,951	67,071	23,064	22,854	210	17,725	26,282
September	86,181	23,191	22,410	781	33,099	29,891	60,615	20,065	19,715	350	12,340	28,210
October	99,763	21,376	21,305	71	48,132	30,255	63,449	19,783	18,861	922	16,232	27,434
November	91,535	23,387	23,276	111	36,521	31,627	61,572	17,775	17,664	111	16,057	27,740
December	74,428	21,979	21,766	213	28,612	23,837	47,968	14,029	13,816	213	14,429	19,510
1945: January	65,722	14,538	14,065	473	27,973	23,211	45,306	14,538	14,065	473	11.745	19,023
February	82,954	20,391	19,967	424	42,182	20,381	48,694	16,914	16,847	67	13,563	18,217
March	110,238	27,186	26,287	899	54,328	28,724	69,808	26,333	26,102	231	17,102	26,373
April	110,410	39,727	39,501	226	40,792	29,891	75,985	32,617	32,391	226	16,341	27,027
May	131,478	46,560	46,215	345	51,492	33,426	96,514	42,651	42,444	207	23,935	29,928
June	142,977	53,291	52,781	510	44,475	45,211	118,711	48,738	48,324	414	29,165	40,808
July	165,029	60,314	59,799	515	62,837	41,878	134,158	52,152	51,651	501	42,658	39,348
August	167,458	56,502	54,654	1,848	66,973	43,983	157,355	54,818	54,115	703	59,856	42,681
September	185,209	61,011	59,547	1,464	74,097	50,101	180,565	61,011	59,547	1,464	70,769	48,785
October	251,670	86,919	85,447	1,472	106,488	58,263	244,645	86,762	85,290	1,472	102,361	55,522
November	249,928	94,380	91,760	2,620	103,962	51,586	243,904	94,090	91,470	2,620	100.201	49.613
December	303,840	102,341	96,716	5,625	152,015	49,484	301,536	100,938	95,313	5,625	151,616	48.952
1946: January	323,598	142,792	138,228	4,564	123,387	57,419	303,907	123,700	119,416	4,284	123,293	56,914
February	372,987	158,552	151,548	7,004	149,351	65,084	342,172	137,832	132,884	4,948	141,130	63,210
March	745,419	286,320	273,252	13,068	337,718	121,381	721,151	265,921	254,532	11,389	334,802	120,428
April	436,774	259,093	254,692	4,401	109,070	68,611	393,367	223,119	220,553	2,566	107,032	63,216
May	416,175	265,905	262,347	3,558	90,415	59,855	359,925	213,230	211,180	2,050	90,365	56,330
June	412,455	242,848	237,479	5,369	106,229	63,378	348,363	188,875	187,290	1,585	104,531	54,957
July	423,779	247,664	229,956	17,708	110,048	66,067	358,537	193,534	181,285	12,249	105,380	59,623
August	424,844	263,806	257,714	6,092	92,370	68,668	351,003	194,979	193,487	1,492	92,359	63,665
September	347,064	193,514	191,471	2,043	94,673	58,877	316,346	173,792	172,694	1,098	89,709	52,845
October	337,568	194,198	193,593	605	85,262	58,108	324,726	184,405	183,800	605	83,989	56,332
November	272,840	149,941	149,657	284	81,523	41,376	263,347	149,659	149,375	284	73,107	40,581
December	229,911	109,155	108,338	817	78,556	42,200	221,127	109,155	108,338	817	70,800	41,172
1947: January	269,706	132,865	132,192	673	86,879	49,961	249,884	125,194	124,521	673	76,585	48,105
February	279,121	140,171	138,821	1,350	87,720	51,230	269,908	140,171	138,821	1,350	79,760	49,977
March	384,515	207,987	206,531	1,456	111,905	64,624	372,890	206,401	204,945	1,456	103,124	63,365
April	446,222	241,830	240,405	1,425	129,474	74,918	429,581	239,881	238,456	1,425	116,208	73,492
May	428,878	227,947	224,951	2,996	128,196	72,736	419,138	227,947	224,951	2,996	120,724	70,467
June	488,843	261,093	259,371	1,722	141,919	85,830	461,379	254,576	252,854	1,722	130,420	76,383
July	537,317	273,265	271,456	1,809	170,181	93,870	530,253	272,937	271,141	1,796	167,007	90,309
August	567,979	301,591	298,625	2,966	182,041	84,346	538,296	299,987	297,021	2,966	155,677	82,632
September	561,536	309,495	305,416	4,079	162,234	89,807	555,213	307,265	303,186	4,079	159,066	88,882
October	604,165	347,874	344,423	3,451	168,334	87,957	596,962	344,079	340,628	3,451	166,270	86,613
November	501,556	268,866	263,246	5,620	166,472	66,217	480,243	262,348	256,728	5,620	153,140	64,755
December	479,881	232,950	230,665	2,285	177,315	69,615	452,710	229,950	227,673	2,277	155,183	67,577

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[1] Includes value of Federal construction contracts awarded and estimates for building to be started in urban places which do not issue permits.

[2] Urban, as defined by the Bureau of the Census, covers all incorporated places of 2,500 population or more in 1940 and, by special rule, a small number of unincorporated civil divisions.

[3] Covers private and State and local government but excludes New York City Housing Authority projects which, for consistency in handling all public housing, are classified with Federal housing construction.

ABLE H-5: Estimated permit valuation[1] of urban building construction[2] authorized, by source of funds, by class of construction, and by State, 1942-47

State (urban areas)	Valuation (in thousands)							
	All classes		New residential[3]		New nonresidential		Additions, alterations, and repairs	
	Total	Non-Federal[4]	Total	Non-Federal[4]	Total	Non-Federal[4]	Total	Non-Federal[4]
	1942							
otal urban	$2,707,373	$1,066,958	$918,413	$602,609	$1,510,688	$222,998	$278,472	$241,351
labama	33,981	9,469	15,886	5,202	14,689	1,226	3,406	3,041
rizona	19,113	2,359	2,164	1,150	16,103	367	846	842
rkansas	13,889	4,410	3,391	2,572	9,380	736	1,118	1,102
alifornia	361,364	145,544	152,210	91,764	179,831	30,678	29,323	23,102
olorado	27,392	5,165	2,884	2,623	22,511	621	1,997	1,921
onnecticut	74,129	30,747	30,493	16,973	35,256	5,644	8,380	8,130
elaware	4,347	1,150	2,357	134	1,359	398	631	618
istrict of Columbia	80,846	18,957	38,708	15,126	37,169	1,956	4,969	1,875
lorida	48,694	15,936	16,345	7,435	25,015	3,171	7,334	5,330
eorgia	26,356	10,999	11,166	5,783	11,917	2,189	3,273	3,027
daho	1,152	1,112	249	249	392	352	511	511
llinois	164,476	62,567	39,440	31,614	110,244	17,771	14,792	13,182
ndiana	88,156	29,713	18,617	18,284	64,013	6,172	5,526	5,257
owa	19,098	10,014	6,404	5,265	9,867	1,944	2,827	2,805
Kansas	11,184	10,780	7,79[illegible]	7,797	1,448	1,131	1,939	1,852
Kentucky	12,666	4,106	4,292	2,411	7,199	653	1,175	1,042
Louisiana	38,618	9,100	6,456	5,894	29,631	1,213	2,531	1,993
Maine	28,909	4,336	10,000	2,550	17,752	910	1,157	876
Maryland	80,262	24,077	23,497	13,946	53,433	7,344	3,332	2,787
Massachusetts[5]	109,208	33,505	17,613	14,421	75,584	6,760	16,011	12,324
Michigan	177,345	110,306	69,527	65,403	89,789	27,211	18,029	17,692
Minnesota	20,607	15,315	7,681	7,681	8,000	2,775	4,926	4,859
Mississippi	11,918	3,209	5,645	1,498	5,073	598	1,200	1,113
Missouri	33,671	12,566	6,343	6,343	22,534	2,591	4,794	3,632
Montana	1,682	971	1,024	335	215	213	443	423
Nebraska	5,879	5,719	3,125	3,125	1,344	1,200	1,410	1,394
Nevada	4,389	4,389	3,567	3,567	410	410	412	412
New Hampshire	3,773	1,146	740	352	2,068	199	965	595
New Jersey	121,206	54,487	36,532	30,805	70,318	10,307	14,356	13,285
New Mexico	2,931	2,471	1,741	1,741	625	169	565	561
New York[6]	194,498	73,444	49,980	28,514	115,292	18,465	29,226	26,465
North Carolina	13,051	10,606	7,282	5,626	2,615	1,966	3,154	3,014
North Dakota	424	424	142	142	105	105	177	177
Ohio	133,790	75,343	52,000	45,161	63,894	12,883	17,896	17,299
Oklahoma	11,745	10,561	8,995	8,796	1,524	571	1,226	1,194
Oregon	42,105	11,061	18,643	5,107	21,364	3,924	2,098	2,030
Pennsylvania	229,164	75,935	54,959	39,705	151,450	16,958	22,755	19,272
Rhode Island	36,975	4,896	3,499	2,340	30,641	805	2,835	1,751
South Carolina	11,822	4,896	5,272	1,796	4,965	1,993	1,585	1,107
South Dakota	991	972	449	449	153	153	389	370
Tennessee	25,956	8,498	5,287	3,551	17,268	1,640	3,401	3,307
Texas	84,987	48,125	43,310	28,892	31,262	9,536	10,415	9,697
Utah	37,701	6,791	9,768	4,842	26,422	879	1,511	1,070
Vermont	790	392	575	177	80	80	135	135
Virginia	113,243	35,296	51,894	28,362	53,592	3,278	7,757	3,656
Washington	80,955	22,776	42,664	13,589	33,347	4,736	4,944	4,451
West Virginia	13,311	4,820	3,436	2,228	8,465	1,185	1,410	1,407
Wisconsin	48,009	26,689	13,942	10,867	24,888	6,650	9,179	9,172
Wyoming	815	808	422	422	192	192	201	194

See footnotes at end of table.

TABLE H-5: Estimated permit valuation[1] of urban building construction[2] authorized, by source of funds, by class of construction, and by State, 1942-47—Continued

State (urban areas)	Valuation (in thousands)							
	All classes		New residential[3]		New nonresidential		Additions, alterations, and repairs	
	Total	Non-Federal[4]	Total	Non-Federal[4]	Total	Non-Federal[4]	Total	Non-Federal[4]
	1943							
Total urban	$1,262 133	$703,584	$583,496	$375,169	$439,131	$106,546	$239,506	$221,869
Alabama	12,362	6,155	3,614	2,244	5,319	1,094	3,429	2,817
Arizona	4,824	2,339	2,793	916	887	322	1,144	1,101
Arkansas	2,396	2,110	369	369	745	470	1,282	1,271
California	225,602	110,926	113,692	55,363	81,652	27,675	30,258	27,888
Colorado	4,672	4,333	1,290	1,290	846	542	2,536	2,501
Connecticut	28,992	17,346	16,822	9,228	5,850	2,132	6,320	5,986
Delaware	4,631	3,424	3,523	2,395	331	252	777	777
District of Columbia	24,373	15,696	14,974	13,113	6,704	740	2,695	1,843
Florida	25,864	14,277	9,838	7,193	9,122	1,350	6,904	5,734
Georgia	21,157	12,210	14,347	8,534	3,051	329	3,759	3,347
Idaho	1,556	1,394	639	481	341	337	576	576
Illinois	100,524	39,425	29,578	21,981	58,728	6,157	12,218	11,287
Indiana	21,095	10,360	7,318	3,935	9,395	2,270	4,382	4,155
Iowa	6,559	4,292	493	493	4,146	1,901	1,920	1,898
Kansas	9,878	8,433	6,209	5,226	1,167	777	2,502	2,430
Kentucky	5,670	2,739	1,317	1,317	3,341	629	1,012	793
Louisiana	30,518	4,432	2,961	1,908	25,098	359	2,459	2,165
Maine	7,349	3,158	3,837	1,735	2,287	398	1,225	1,025
Maryland	15,836	13,267	9,492	8,760	3,181	1,434	3,163	3,073
Massachusetts[5]	28,985	19,865	6,193	4,912	11,461	4,230	11,331	10,723
Michigan	120,345	75,805	76,954	57,529	29,470	4,688	13,921	13,588
Minnesota	7,564	4,891	124	124	3,933	1,313	3,507	3,454
Mississippi	4,685	2,553	2,774	1,536	817	281	1,094	736
Missouri	10,485	4,881	422	422	7,055	1,748	3,008	2,711
Montana	1,032	833	487	290	190	190	355	353
Nebraska	11,362	5,657	5,465	3,299	4,233	720	1,664	1,638
Nevada	2,222	1,783	1,451	1,086	397	323	374	374
New Hampshire	435	374	11	11	122	76	302	287
New Jersey	39,079	27,000	11,586	9,763	14,819	5,228	12,674	12,009
New Mexico	2,578	1,320	1,453	784	648	86	477	450
New York[6]	56,550	32,714	13,785	6,378	22,585	7,467	20,180	18,869
North Carolina	6,387	5,767	2,431	2,288	1,516	1,221	2,440	2,258
North Dakota	393	229	0	0	284	139	109	90
Ohio	99,039	56,133	58,020	36,167	26,386	5,514	14,633	14,452
Oklahoma	9,810	8,302	6,012	5,117	1,007	447	2,791	2,738
Oregon	21,942	12,693	15,756	7,722	2,519	1,403	3,667	3,568
Pennsylvania	80,214	42,456	31,879	21,724	32,490	6,489	15,845	14,243
Rhode Island	3,795	1,934	562	261	1,538	318	1,695	1,355
South Carolina	3,824	2,917	752	624	1,478	793	1,594	1,500
South Dakota	1,450	1,285	703	703	227	108	520	474
Tennessee	10,358	6,728	2,611	2,611	4,517	900	3,230	3,217
Texas	49,287	32,866	25,736	18,148	11,409	2,916	12,142	11,802
Utah	13,374	10,759	10,138	9,155	1,962	549	1,274	1,055
Vermont	1,079	195	88	26	895	76	96	93
Virginia	38,576	17,667	21,078	12,214	12,072	2,178	5,426	3,275
Washington	56,634	31,812	33,653	18,155	14,336	5,483	8,645	8,174
West Virginia	2,824	1,439	286	286	1,696	334	842	819
Wisconsin	21,240	15,357	7,691	6,662	6,758	2,040	6,791	6,655
Wyoming	2,727	1,053	2,289	691	120	120	318	242

See footnotes at end of table.

ABLE H–5: Estimated permit valuation[1] of urban building construction[2] authorized, by source of funds, by class of construction, and by State, 1942-47—Continued

State (urban areas)	Valuation (in thousands)							
	All classes		New residential[3]		New nonresidential		Additions, alterations, and repairs	
	Total	Non-Federal[4]	Total	Non-Federal[4]	Total	Non-Federal[4]	Total	Non-Federal[4]
	1944							
otal urban	$1,101,350	$753,441	$345,670	$289,270	$438,909	$169,078	$316,771	$295,093
abama	10,958	8,658	2,480	2,480	4,535	2,798	3,943	3,380
rizona	4,717	3,808	1,860	1,502	1,473	928	1,384	1,378
rkansas	5,074	3,016	590	590	2,790	806	1,694	1,620
alifornia	254,075	146,000	99,728	78,319	110,323	27,625	44,024	40,056
olorado	6,493	5,870	1,827	1,827	1,674	1,122	2,992	2,921
onnecticut	11,770	10,398	2,840	2,840	3,509	2,269	5,421	5,289
elaware	1,570	1,034	186	186	651	139	733	709
istrict of Columbia	18,177	8,188	7,421	6,390	9,206	938	1,550	860
orida	29,010	19,353	9,696	6,718	7,964	2,422	11,350	10,213
eorgia	11,423	7,827	4,688	3,110	2,666	1,005	4,069	3,712
aho	2,738	2,438	877	738	978	817	883	883
inois	72,894	58,856	27,966	25,892	28,859	17,472	16,069	15,492
diana	23,386	17,620	8,790	7,789	8,592	4,391	6,004	5,440
wa	11,518	7,512	1,441	1,262	6,749	2,959	3,328	3,291
ansas	9,431	6,898	2,613	2,613	3,288	1,289	3,530	2,996
entucky	6,476	2,939	1,015	680	4,149	1,146	1,312	1,113
ouisiana	23,996	12,627	12,145	8,489	8,981	1,531	2,870	2,607
aine	2,312	1,788	205	205	717	408	1,390	1,175
aryland	15,114	6,506	5,484	1,322	6,207	1,951	3,423	3,233
assachusetts[5]	26,187	20,673	1,211	1,211	9,759	4,615	15,217	14,847
ichigan	72,894	50,975	33,007	23,081	23,245	11,603	16,642	16,291
innesota	19,416	17,604	2,814	2,814	7,032	5,329	9,570	9,461
ississippi	2,735	1,898	1,083	670	827	442	825	786
issouri	18,225	12,201	2,257	2,017	9,186	3,434	6,782	6,750
ontana	3,428	3,099	1,234	940	1,740	1,740	454	419
ebraska	8,501	5,853	2,908	2,908	3,401	753	2,192	2,192
evada	1,367	994	455	139	446	389	466	466
ew Hampshire	941	590	4	4	398	69	539	517
ew Jersey	34,103	27,480	3,903	3,903	14,269	8,681	15,931	14,896
ew Mexico	1,963	1,454	1,256	792	286	271	421	391
ew York[6]	67,674	50,533	2,567	1,793	24,912	10,871	40,195	37,869
orth Carolina	6,923	5,788	469	469	3,559	2,503	2,895	2,816
orth Dakota	789	549	262	262	329	90	198	197
hio	67,109	55,386	28,559	27,547	19,735	10,030	18,815	17,809
klahoma	5,742	4,839	1,925	1,925	1,799	1,238	2,018	1,676
regon	14,761	10,679	5,077	4,702	6,000	2,457	3,684	3,520
ennsylvania	59,104	28,286	8,305	7,236	32,996	5,629	17,803	15,421
hode Island	3,197	2,510	127	127	1,081	438	1,989	1,945
outh Carolina	3,213	1,790	423	423	1,726	399	1,064	968
outh Dakota	1,534	1,126	50	50	846	450	638	626
ennessee	16,010	12,097	5,549	5,549	5,056	1,797	5,405	4,751
exas	53,189	46,456	24,402	23,441	15,760	10,431	13,027	12,584
tah	8,168	6,683	4,560	4,560	2,356	898	1,252	1,225
ermont	197	167	6	6	115	85	76	76
irginia	26,755	11,318	5,735	4,801	16,256	2,524	4,764	3,993
ashington	31,224	20,158	9,962	9,240	14,030	4,196	7,232	6,722
est Virginia	2,915	1,967	222	222	1,322	431	1,371	1,314
isconsin	20,684	17,785	4,837	4,837	6,826	5,067	9,021	7,881
yoming	1,270	1,167	649	649	305	202	316	316

See footnotes at end of table.

TABLE H-5: Estimated permit valuation[1] of urban building construction[2] authorized, by source of funds, by class of construction, and by State, 1942-47—Continued

State (urban areas)	Valuation (in thousands)							
	All classes		New residential[3]		New nonresidential		Additions, alterations, and repairs	
	Total	Non-Federal[4]	Total	Non-Federal[4]	Total	Non-Federal[4]	Total	Non-Federal[4]
	1945							
Total urban	$1,966,913	$1,717,181	$663,160	$631,562	$827,614	$639,342	$476,139	$446,277
Alabama	23,054	18,820	4,969	4,804	11,212	8,250	6,873	5,766
Arizona	11,951	11,276	6,073	6,059	3,695	3,074	2,183	2,143
Arkansas	8,714	6,889	2,780	2,669	3,798	2,199	2,136	2,021
California	366,961	298,355	156,264	144,315	140,825	89,451	69,872	64,589
Colorado	21,183	20,252	11,533	11,533	4,469	4,465	5,181	4,254
Connecticut	23,063	21,198	3,818	3,818	11,868	10,158	7,377	7,222
Delaware	4,988	4,065	597	597	3,177	2,282	1,214	1,186
District of Columbia	26,574	15,354	11,789	9,628	11,126	2,568	3,659	3,158
Florida	68,410	66,599	30,877	30,657	18,446	17,888	19,087	18,054
Georgia	24,044	20,907	6,753	6,753	12,062	9,053	5,229	5,101
Idaho	6,337	6,196	2,607	2,607	2,166	2,134	1,564	1,455
Illinois	130,138	121,185	52,758	49,262	51,516	47,216	25,864	24,707
Indiana	44,011	38,255	12,574	12,574	20,406	15,021	11,031	10,660
Iowa	18,694	17,085	3,972	3,943	9,828	8,353	4,894	4,789
Kansas	13,267	11,806	3,974	3,555	5,122	4,130	4,171	4,121
Kentucky	13,834	10,074	1,683	1,683	10,184	6,684	1,967	1,707
Louisiana	15,596	12,727	6,420	6,420	4,977	2,590	4,199	3,717
Maine	3,386	3,300	589	589	1,717	1,688	1,080	1,023
Maryland	17,336	16,056	4,852	4,852	6,820	5,873	5,664	5,331
Massachusetts[5]	56,822	51,833	10,893	10,893	21,165	17,713	24,764	23,227
Michigan	136,496	128,155	45,876	45,687	63,801	55,901	26,819	26,567
Minnesota	41,831	41,735	17,071	17,071	12,525	12,479	12,235	12,185
Mississippi	8,989	6,709	2,570	2,570	4,435	2,281	1,984	1,858
Missouri	33,388	31,067	5,764	5,764	17,373	16,932	10,251	8,371
Montana	4,254	3,799	1,256	1,256	1,666	1,239	1,332	1,304
Nebraska	15,888	8,638	2,859	2,859	9,974	2,775	3,055	3,004
Nevada	6,307	4,817	2,519	2,519	2,541	1,065	1,247	1,233
New Hampshire	2,023	2,015	663	663	431	431	929	921
New Jersey	69,206	63,610	15,266	13,515	29,388	26,268	24,552	23,827
New Mexico	6,124	3,835	2,101	1,357	3,022	1,638	1,001	840
New York[6]	100,103	90,140	22,801	22,801	43,977	35,936	33,325	31,403
North Carolina	30,696	29,806	8,467	8,467	15,724	14,921	6,505	6,418
North Dakota	2,936	2,936	1,077	1,077	1,194	1,194	665	665
Ohio	127,643	119,885	47,862	46,749	50,541	45,952	29,240	27,184
Oklahoma	23,955	15,869	6,200	6,200	13,912	5,987	3,843	3,682
Oregon	23,569	21,863	8,588	8,093	9,393	8,366	5,588	5,404
Pennsylvania	78,409	63,816	16,362	16,362	32,889	20,668	29,158	26,786
Rhode Island	8,332	8,020	3,021	3,021	1,595	1,561	3,716	3,438
South Carolina	7,251	5,820	1,502	1,502	4,082	2,730	1,667	1,588
South Dakota	3,287	3,142	1,238	1,115	967	967	1,082	1,060
Tennessee	32,952	29,257	8,335	8,335	16,124	13,247	8,493	7,675
Texas	145,474	128,851	46,671	46,456	74,887	59,406	23,916	22,989
Utah	12,932	10,726	4,178	4,178	5,434	4,318	3,320	2,230
Vermont	525	525	237	237	186	186	102	102
Virginia	32,585	28,250	11,886	11,886	13,720	10,402	6,979	5,962
Washington	52,786	37,727	23,825	15,871	17,331	11,707	11,630	10,149
West Virginia	10,462	9,272	2,494	2,494	5,238	4,076	2,730	2,702
Wisconsin	47,650	42,174	15,520	15,070	19,824	15,065	12,306	12,039
Wyoming	2,497	2,490	1,176	1,176	861	854	460	460

TABLE H-5: Estimated permit valuation[1] of urban building construction[2] authorized, by source of funds, by class of construction, and by State, 1942-47—Continued

State (urban areas)	Valuation (in thousands)							
	All classes		New residential[3]		New nonresidential		Additions, alterations, and repairs	
	Total	Non-Federal[4]	Total	Non-Federal[4]	Total	Non-Federal[4]	Total	Non-Federal[4]
	1946							
Total urban	$4,743,414	$4,303,971	$2,513,789	$2,158,201	$1,458,602	$1,416,497	$771,023	$729,272
Alabama	53,093	47,780	26,785	22,655	17,233	16,881	9,075	8,244
Arizona	19,784	17,841	9,088	7,393	8,056	7,900	2,640	2,548
Arkansas	21,895	20,333	10,975	9,736	5,734	5,597	5,186	5,000
California	785,023	753,789	433,720	415,852	242,457	235,689	108,846	102,248
Colorado	47,934	41,335	30,871	26,014	8,265	8,083	8,798	7,238
Connecticut	57,444	53,576	21,279	17,651	22,419	22,404	13,746	13,521
Delaware	7,216	6,942	2,899	2,634	1,967	1,967	2,350	2,341
District of Columbia	46,235	32,498	18,132	14,134	20,993	11,505	7,110	6,859
Florida	160,362	157,176	95,536	93,216	40,052	39,735	24,774	24,225
Georgia	59,257	55,324	30,343	27,335	19,042	18,552	9,872	9,437
Idaho	19,433	16,108	11,885	8,591	4,831	4,831	2,717	2,686
Illinois	293,975	278,846	137,144	122,945	116,784	116,567	40,047	39,334
Indiana	94,355	81,863	54,243	43,659	23,486	22,836	16,626	15,368
Iowa	64,378	52,824	36,103	26,761	19,295	18,069	8,980	7,994
Kansas	41,195	37,407	22,626	19,170	11,656	11,452	6,913	6,785
Kentucky	32,172	28,441	15,405	12,214	13,071	13,004	3,696	3,223
Louisiana	46,019	39,188	23,022	16,807	14,151	14,108	8,846	8,273
Maine	10,954	10,663	3,654	3,419	4,657	4,657	2,643	2,587
Maryland	66,882	65,752	35,079	34,371	22,301	22,269	9,502	9,112
Massachusetts[5]	173,891	156,238	71,211	56,258	60,765	60,593	41,915	39,387
Michigan	264,843	250,563	138,703	125,070	89,978	89,973	36,162	35,520
Minnesota	109,352	101,001	65,212	57,402	24,623	24,211	19,517	19,388
Mississippi	25,521	23,068	13,088	11,266	8,575	8,560	3,858	3,242
Missouri	92,239	82,346	41,504	33,257	34,623	34,489	16,112	14,600
Montana	13,130	10,338	8,149	5,618	3,036	3,036	1,945	1,684
Nebraska	31,404	28,817	13,128	11,649	11,702	11,672	6,574	5,496
Nevada	12,594	12,084	6,786	6,332	3,216	3,177	2,592	2,575
New Hampshire	8,657	8,004	3,951	3,320	2,248	2,248	2,458	2,436
New Jersey	171,462	153,039	82,301	64,584	54,533	54,027	34,628	34,428
New Mexico	15,349	14,451	8,329	8,019	4,198	4,198	2,822	2,234
New York[6]	404,494	293,875	267,829	160,817	72,922	72,223	63,743	60,834
North Carolina	69,275	64,223	35,375	31,535	26,040	25,986	7,860	6,705
North Dakota	9,602	8,146	6,166	4,726	2,517	2,517	919	903
Ohio	263,047	245,006	149,400	132,965	70,354	69,139	43,293	42,902
Oklahoma	49,677	43,734	26,395	22,122	15,537	15,511	7,745	6,101
Oregon	66,913	62,566	32,948	29,882	23,120	22,783	10,845	9,901
Pennsylvania	228,449	209,220	110,872	94,313	67,696	66,141	49,881	48,766
Rhode Island	29,171	22,970	10,808	10,505	12,505	7,562	5,858	4,903
South Carolina	25,451	18,492	9,390	7,538	12,107	7,355	3,954	3,599
South Dakota	16,764	11,635	5,987	4,953	8,511	4,734	2,266	1,948
Tennessee	67,995	62,504	29,750	25,394	26,704	26,289	11,541	10,821
Texas	315,852	298,476	176,226	163,505	97,219	96,410	42,407	38,561
Utah	29,228	26,514	17,316	15,303	7,267	7,142	4,645	4,069
Vermont	4,130	3,379	1,421	1,236	1,122	896	1,587	1,247
Virginia	78,174	72,792	43,504	40,386	21,495	21,173	13,175	11,233
Washington	103,004	99,614	53,117	50,237	32,814	32,731	17,073	16,646
West Virginia	24,657	22,239	12,914	11,090	7,250	6,891	4,493	4,258
Wisconsin	104,241	95,912	48,217	41,494	38,057	37,327	17,967	17,091
Wyoming	7,242	5,036	5,003	2,868	1,418	1,397	821	771

See footnotes at end of table.

TABLE H-5: Estimated permit valuation[1] of urban building construction[2] authorized, by source of funds, by class of construction, and by State, 1942-47—Continued

State (urban areas)	Valuation (in thousands)							
	All classes		New residential[3]		New nonresidential		Additions, alterations and repairs	
	Total	Non-Federal[4]	Total	Non-Federal[4]	Total	Non-Federal[4]	Total	Non-Federal[4]
	1947							
Total urban	$5,549,718	$5,356,457	$2,945,934	$2,910,735	$1,712,672	$1,583,165	$891,112	$862,557
Alabama	65,631	64,356	34,668	34,668	20,493	19,468	10,470	10,220
Arizona	25,351	24,675	11,633	11,633	9,965	9,528	3,754	3,515
Arkansas	34,536	33,263	18,516	18,516	9,955	8,930	6,065	5,817
California	905,352	889,289	533,344	532,043	242,483	230,935	129,525	126,312
Colorado	50,360	45,100	24,839	24,205	16,780	12,350	8,741	8,544
Connecticut	69,137	68,304	31,756	31,756	24,628	23,901	12,752	12,647
Delaware	4,920	4,741	1,676	1,676	1,399	1,280	1,844	1,785
District of Columbia	42,966	40,538	23,912	23,787	8,599	8,007	10,455	8,744
Florida	255,232	253,312	158,802	158,789	59,460	58,015	36,970	36,508
Georgia	76,742	74,417	33,587	33,587	25,571	24,000	17,584	16,829
Idaho	17,060	16,731	7,783	7,783	5,904	5,592	3,373	3,356
Illinois	323,252	319,726	167,377	167,377	105,411	102,590	50,464	49,760
Indiana	108,703	105,821	58,602	58,602	31,536	29,505	18,565	17,713
Iowa	59,580	57,945	27,476	27,476	22,133	20,970	9,970	9,498
Kansas	48,622	47,554	26,271	26,271	13,227	12,566	9,124	8,716
Kentucky	41,633	39,734	19,331	19,331	16,872	15,633	5,430	4,770
Louisiana	67,079	55,696	23,387	23,387	33,050	21,824	10,642	10,485
Maine	12,324	11,736	4,926	4,926	4,828	4,409	2,569	2,401
Maryland	68,211	65,884	43,864	42,902	12,745	11,877	11,603	11,105
Massachusetts[5]	200,317	197,160	92,887	92,879	66,222	63,526	41,208	40,755
Michigan	317,946	313,399	185,056	185,056	86,220	81,874	46,670	46,469
Minnesota	110,713	109,162	61,488	61,488	31,918	31,182	17,307	16,493
Mississippi	31,529	31,152	16,574	16,574	9,753	9,537	5,202	5,041
Missouri	97,864	95,948	43,946	43,700	39,683	38,257	14,235	13,990
Montana	13,798	13,191	5,294	5,294	6,296	5,689	2,208	2,208
Nebraska	38,892	32,851	19,063	19,063	13,901	7,926	5,928	5,861
Nevada	15,904	15,684	9,442	9,442	3,876	3,671	2,585	2,571
New Hampshire	13,565	13,251	6,747	6,747	3,482	3,204	3,336	3.300
New Jersey	234,452	224,917	124,952	119,191	67,250	64,343	42,250	41,384
New Mexico	22,372	21,653	12,843	12,843	6,435	5,742	3,094	3,068
New York[6]	385,357	321,758	190,633	166,957	129,829	93,043	64,895	61,758
North Carolina	88,481	86.638	50,689	50,689	28,302	26,575	9,491	9,375
North Dakota	14,407	10,515	4,792	4,792	7,748	4,020	1,866	1,703
Ohio	328,296	322,328	166,701	165,365	109,749	106,435	51,845	50,528
Oklahoma	61,874	60,330	33,597	33,597	20,450	19,026	7,828	7,707
Oregon	73,979	73,273	32,286	32,286	29,360	28,710	12,333	12,277
Pennsylvania	266,099	258,685	136,764	136,764	74,663	70,787	54,671	51,134
Rhode Island	32,145	30,721	15,260	15,260	9,384	8,962	7,501	6,499
South Carolina	29,607	26,837	12,748	12,748	11,798	9.173	5,061	4,916
South Dakota	12,834	12,515	6,965	6,965	3,553	3,288	2.316	2,261
Tennessee	71,560	69,934	33,490	33.361	26,020	24,765	12.050	11,808
Texas	407,061	400,853	225,403	224,541	129,617	125,695	52,041	50,616
Utah	24,470	23,816	13,835	13,835	7,032	6,393	3.603	3,588
Vermont	3,452	3,429	1,468	1,468	1,286	1,286	698	675
Virginia	113,163	109,944	61,523	61,523	36,500	35,663	15,141	12,758
Washington	106,305	104,564	55,651	55.651	29,815	28,338	20,839	20,575
West Virginia	34,775	33,871	13,142	13,142	15,668	14,945	5,965	5,784
Wisconsin	115,406	113,142	57,792	57,646	39,949	38,097	17,665	17,399
Wyoming	6,404	6,117	3,152	3,152	1,874	1,633	1,378	1,332

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[1] Includes value of Federal construction contracts awarded and estimates for building to be started in urban places which do not issue permits.

[2] Urban, as defined by the Bureau of the Census, covers all incorporated places of 2,500 population or more in 1940 and, by special rule, a small number of unincorporated civil divisions.

[3] Includes value of dormitories and other nonhousekeeping residential buildings.

[4] Covers private, and State and local government but excludes New York City Housing Authority projects which, for consistency in handling all public housing, are classified with Federal housing construction.

[5] Data for Boston are based on permit applications filed.

[6] New York City data for 1921 through 1944 are based on applications filed rather than on permits issued. For the years 1942 through 1944 large projects which were definitely determined to represent postwar plans have been deleted. Figures for 1945 to date are based on inspection records and represent work actually started.

Section I: Housing and Rents

Nonfarm Dwelling Units

All Bureau of Labor Statistics estimates of the number of new dwelling units provided exclude the construction of housing on farms. For the urban and rural nonfarm portions of the country a number of series are prepared.

A new dwelling unit is a complete family accommodation built at a new location from new or re-used material.

Publicly financed units are those built with Federal Government and with other public funds.

Privately financed units are those built with private funds.

Publicly and privately financed units make up the total built with funds from all sources.

By Census definition, urban means all incorporated places of 2,500 population or more in 1940 and, by special rule, a small number of unincorporated civil divisions.

Nonfarm areas include urban areas and rural territory, except farms.

Estimates of the total number of new nonfederally financed permanent dwelling units which were started, under construction, and completed each month beginning with January 1946 in all nonfarm places are shown in table I–1. Both conventional and prefabricated types of permanent units are included. The table excludes all units provided by the conversion of existing structures and by the building of dormitory accommodations, trailers, military barracks, and temporary structures.

For all urban places, estimates of housing starts are based primarily on permit data for urban building (see tables H–4 and H–5). The data contained in the tables to which reference is made reflect intentions to build, rather than actual starts. In the compilation of table I–1, adjustments have been made to allow for some permits which do not result in construction and for the time that usually elapses between the issuance of a permit and the actual start of construction. Such adjustments are based on housing data obtained from permit offices and from contractors contacted in field surveys covering all permit-issuing places of 65 sample areas throughout the United States. The 65 sample areas include 28 large industrial areas (groups of counties surrounding large industrial cities), 21 urban counties with medium-sized or small cities, and 16 predominantly rural counties.

For all rural nonfarm places, estimates of housing units started are based on data collected in field surveys in both permit and nonpermit places of the 65 sample areas previously mentioned. (Starts information for nonpermit places in these areas is obtained by Bureau of Labor Statistics agents from contractors, materials dealers, loan organizations, others familiar with building activity in these localities, and by personal observation). Each month, after obtaining the ratio of housing starts in rural nonfarm places to the number in urban places in these 65 representative areas, this ratio is applied to the estimate of starts for all urban places. The resulting rural nonfarm estimates are then combined with the urban estimates to provide the estimates of total nonfarm housing starts.

Housing completions have been estimated by distributing the total nonfarm starts figure for each month over the period of months during which completion of the units is estimated to occur. The basis for the distribution of units is the time required to complete housing units as found in the 65 sample areas. The estimated nonfarm completions for a given month consist of all units previously started which were estimated to have been completed in that particular month. Units started before 1946 which were estimated to be completed during that year have been included in the 1946 completions estimates.

The estimates of new dwelling units for nonfarm places given in table I–2 cover all new permanent housing units (conventional or prefabricated) financed either by public bodies (Federal and other) or by private organizations. This table also covers new temporary housing units such as those authorized under the Lanham Act for defense and war housing and under the veterans' emergency re-use housing program by the dismantling of temporary war structures and their re-erection at a new site. Excluded units are those provided by the conversion of existing structures (units in the veterans' re-use program provided by conversion of war structures at their original site are in this category) and by the construction of dormitory accommodations, trailers, and military barracks. Only new permanent dwelling units are shown in table I–3.

Derivation of urban estimates is described on page 181. Unlike the urban data in tables H–4 and H–5, which represent only intentions to build, the data in tables I–1, I–2, and I–3 represent work actually started. Adjustments in tables I–2 and I–3 (based on field surveys in the 65 sample areas discussed above) have been made in the urban figures from January 1945 to date to correct for the cancellation of some permits and the time interval between permit-issuance and actual start of construction; no adjustments were made in the data prior to 1945, when permit lapses and time lags were negligible.

For rural nonfarm places, the estimates of housing units started in 1946 and subsequently were also derived as explained above. Before 1946, the estimates were computed from a ratio of rural to urban starts based on the 1940 housing census and adjusted monthly according to trends indicated by building-permit reports received from rural and certain urban places. The resulting rural nonfarm estimates combined with the urban data described above provide the nonfarm housing estimates.

TABLE I–1: Estimated number of new permanent nonfarm[1] family dwelling units started, completed, and under construction, 1946–47[2]

Period	Number of new dwelling units			Number of new dwelling units		
	Started	Completed	Under construction[3]	Started	Completed	Under construction[3]
	1946			1947		
January	[4]37,500	15,900	159,100	[4]39,300	62,600	346,900
February	42,400	17,300	184,200	42,800	60,300	329,400
March	62,000	18,700	227,500	56,000	57,600	327,800
April	67,000	21,000	273,500	67,100	59,200	335,700
May	67,100	25,100	315,500	72,900	59,400	349,200
June	[4]64,100	30,600	349,000	77,200	62,300	364,100
July	[4]62,600	36,700	374,900	81,100	64,800	380,400
August	[4]65,400	43,400	396,900	[4]86,300	69,600	397,100
September	57,600	49,700	404,800	[4]93,800	76,700	414,200
October	[4]57,800	55,500	407,100	[4]94,000	82,700	425,500
November	47,700	61,200	393,600	[4]79,700	86,500	418,700
December	39,300	62,700	370,200	[4]58,800	90,000	387,500

[1] The geographic coverage of this table is broader than that of tables H–4 and H–5, covering urban areas. In addition to the urban areas of 2,500 population or more in 1940 and, by special rule, a small number of unincorporated places, nonfarm areas include all rural areas other than farms.

[2] Data are based on building permits issued, adjusted for lapsed building permits and the time lag between issuance of permits and dates of starts. Included are estimates for dwelling units started in rural nonfarm areas, based on building permits issued and special field surveys in 65 areas. The estimates shown in this table do not include dwellings provided by conversion of existing structures, or trailers and temporary accommodations, regularly included by the National Housing Agency in its reports on the progress of the Veterans' Emergency Housing Programs.

[3] It is estimated that on December 31, 1945, dwelling units under construction totaled 137,500.

[4] Included are the following number of new dwelling units started by the New York City Housing Authority: January 1946, 608; June, 1,338; July, 1,310; August, 3,485; October, 1,286; January 1947, 1,084; August, 192; September, 192; October, 460; November, 650; December, 364.

TABLE I-2: Estimated number of new nonfarm[1] family dwelling units started, by source of funds and permanency of publicly financed units, 1935–47 (privately and publicly financed)

Period	Total new dwelling units	Privately financed units	Publicly financed units		
			Total	Permanent	Temporary and demountable
1935	221,000	215,705	5,295	5,295	....
1936	319,000	304,225	14,775	14,775	....
1937	336,000	332,406	3,594	3,594	....
1938	406,000	399,294	6,706	6,706	....
1939	515,000	458,458	56,512	56,542	....
1940	602,600	529,571	73,029	73,029	....
1941	715,200	619,460	95,740	86,589	[2]9,151
1942	496,600	301,913	195,407	54,809	[2]140,598
1943	350,100	183,660	166,440	7,297	[2]159,143
1944	169,400	138,779	30,621	3,108	[2]27,513
1945[3]	225,700	208,118	17,582	1,241	[2]16,341
1946[3]	776,200	662,526	113,674	8,027	[2]105,647
1947[3]	853,500	845,615	7,885	3,440	4,445
1939: First quarter	105,900	101,084	4,816	4,816	....
Second quarter	142,100	127,379	14,721	14,721	....
Third quarter	137,800	119,874	17,926	17,926	....
Fourth quarter	129,200	110,121	19,079	19,079	....
1940: First quarter	108,600	98,689	9,911	9,911	....
Second quarter	164,300	153,299	11,001	11,001	....
Third quarter	171,600	153,862	17,738	17,738	....
Fourth quarter	158,100	123,721	34,379	34,379	....
1941: First quarter	145,100	122,803	22,297	21,613	[2] 684
Second quarter	223,100	190,842	32,258	27,106	[2] 5,152
Third quarter	211,400	183,073	28,327	25,137	[2] 3,190
Fourth quarter	135,600	122,742	12,858	12,733	[2] 125
1942: First quarter	138,500	111,025	27,475	24,654	[2] 2,821
Second quarter	166,600	81,121	85,479	16,628	[2] 68,851
Third quarter	94,600	63,888	30,712	4,618	[2] 26,094
Fourth quarter	96,900	45,159	51,741	8,909	[2] 42,832
1943: First quarter	118,200	34,075	84,125	3,021	[2] 81,104
Second quarter	82,100	51,681	30,419	936	[2] 29,483
Third quarter	76,100	52,539	23,561	1,400	[2] 22,161
Fourth quarter	73,700	45,365	28,335	1,940	[2] 26,395
1944: First quarter	48,900	37,308	11,592	732	[2]10,860
Second quarter	48,300	42,540	5,760	1,050	[2] 4,710
Third quarter	38,600	32,927	5,763	1,166	[2] 4,597
Fourth quarter	33,600	26,004	7,596	160	[2] 7,436
1945[3]: First quarter	27,900	25,077	2,823	440	[2] 2,383
Second quarter	55,200	45,303	9,897	319	[2] 9,578
Third quarter	57,400	53,802	3,598	482	[2] 3,116
Fourth quarter	85,200	83,936	1,264	....	[4] 1,264
1946[3]: January	42,500	36,901	5,599	608	[4]4,991
February	49,300	42,426	6,874	0	[4]6,874
March	70,400	62,050	8,350	0	[4]8,350
April	79,900	67,041	12,859	0	[4]12,859
May	83,400	67,031	16,369	0	[4]16,369
June	79,800	62,799	17,001	1,338	[4]15,663
July	78,500	61,346	17,154	1,310	[4]15,844
August	81,300	61,902	19,398	3,485	[4]15,913
September	65,800	57,592	8,208	0	[4]8,208
October	58,200	56,492	1,708	1,286	[4]422
November	47,800	47,678	122	0	[4]122
December	39,300	39,268	32	0	[4]32
1947[3]: January	39,300	38,198	1,102	1,084	18
February	42,800	42,800	0	0	0
March	56,700	55,997	703	0	703
April	67,900	67,104	796	0	796
May	73,100	72,944	156	0	156
June	79,400	76,988	2,412	200	2,212
July	81,100	81,064	36	0	36
August	86,800	86,141	659	192	467
September	93,800	93,506	294	275	19
October	94,000	93,527	473	460	13
November	79,800	78,915	885	865	20
December	58,800	58,431	369	364	5

[1] The geographic coverage of this table is broader than that of tables H-4 and H-5 covering urban areas. In addition to the urban areas of 2,500 population or more in 1940 and, by special rule, a small number of unincorporated places, nonfarm areas include all rural areas other than farms.

[2] Such housing consists principally of defense and war housing authorized under the Lanham Act, as amended.

[3] The data for 1945 and subsequent years represent a revision of previous estimates of the Bureau of Labor Statistics to allow for lapsed building permits and for lag between issuance of permits and actual start of construction. These factors were negligible prior to 1945.

[4] Includes those units in the Veterans' Emergency Housing Program provided by dismantling temporary war structures and their re-erection at a new site.

TABLE I-3: Estimated number of new permanent family dwelling units started in nonfarm areas,[1] by source of funds, and by type of structure, 1920–47[2]

Period	Total nonfarm units[3]	Area[4]		Privately financed units	Publicly financed units	Units in —		
		Urban	Rural nonfarm			1-family structures	2-family structures[5]	Multifamily structures[6]
1920	247,000	196,000	51,000	247,000	0	202,000	24,000	21,000
1921	449,000	359,000	90,000	449,000	0	316,000	70,000	63,000
1922	716,000	574,000	142,000	716,000	0	437,000	146,000	133,000
1923	871,000	698,000	173,000	871,000	0	513,000	175,000	183,000
1924	893,000	716,000	177,000	893,000	0	534,000	173,000	186,000
1925	937,000	752,000	185,000	937,000	0	572,000	157,000	208,000
1926	849,000	681,000	168,000	849,000	0	491,000	117,000	241,000
1927	810,000	643,000	167,000	810,000	0	454,000	99,000	257,000
1928	753,000	594,000	159,000	753,000	0	436,000	78,000	239,000
1929	509,000	400,000	109,000	509,000	0	316,000	51,000	142,000
1930	330,000	236,000	94,000	330,000	0	227,000	29,000	74,000
1931	254,000	174,000	80,000	254,000	0	187,000	22,000	45,000
1932	134,000	64,000	70,000	134,000	0	118,000	7,000	9,000
1933	93,000	45,000	48,000	93,000	0	76,000	5,000	12,000
1934	126,000	49,000	77,000	126,000	0	109,000	5,000	12,000
1935	221,000	117,000	104,000	215,705	5,295	183,000	8,000	30,000
1936	319,000	211,000	108,000	304,225	14,775	244,000	14,000	61,000
1937	336,000	218,000	118,000	332,406	3,594	267,000	16,000	53,000
1938	406,000	262,000	144,000	399,294	6,706	317,000	18,000	71,000
1939	515,000	359,000	156,000	458,458	56,542	399,000	29,000	87,000
1940	602,600	396,600	206,000	529,571	73,029	485,700	37,300	79,600
1941	706,100	434,300	271,800	619,511	86,589	603,500	34,300	68,300
1942	356,000	227,400	128,600	301,191	54,809	292,800	20,100	43,100
1943	191,000	124,400	66,600	183,703	7,297	143,600	17,800	29,600
1944	141,800	96,200	45,600	138,692	3,108	117,700	10,600	13,500
1945	209,300	133,900	75,400	208,059	1,241	184,600	8,800	15,900
1946	670,500	403,700	266,800	662,473	8,027	590,000	24,300	56,200
1947	849,000	479,800	369,200	845,560	3,440	740,200	33,900	74,900
1940: January	27,000	18,900	8,100	24,065	2,935	19,300	1,400	6,300
February	34,800	24,800	10,000	30,883	3,917	25,800	2,300	6,700
March	46,800	31,600	15,200	43,741	3,059	37,800	2,400	6,600
April	56,500	38,300	18,200	52,370	4,130	45,600	3,400	7,500
May	57,700	37,900	19,800	52,996	4,704	47,200	4,000	6,500
June	50,000	29,900	20,100	47,833	2,167	43,200	2,700	4,100
July	57,400	36,600	20,800	52,349	5,051	48,700	3,600	5,100
August	56,500	36,900	19,600	51,212	5,288	48,100	3,600	4,800
September	57,800	38,600	19,200	50,401	7,399	46,200	4,500	7,100
October	66,000	43,100	22,900	51,960	14,040	49,600	4,200	12,200
November	48,500	31,100	17,400	38,204	10,296	39,200	2,800	6,500
December	43,600	28,900	14,700	33,557	10,043	35,000	2,400	6,200
1941: January	41,200	27,500	13,700	36,482	4,718	32,300	2,200	6,700
February	43,700	28,100	15,600	35,175	8,525	35,700	2,800	5,200
March	59,600	36,000	23,600	51,230	8,370	50,300	3,300	6,000
April	74,500	47,900	26,600	61,600	12,900	63,000	3,600	7,900
May	69,700	43,400	26,300	65,077	4,623	59,600	3,200	6,900
June	73,700	44,500	29,200	64,117	9,583	62,900	3,400	7,400
July	73,600	44,700	28,900	68,077	5,523	63,400	3,100	7,100
August	69,600	41,600	28,000	61,187	8,413	61,400	3,000	5,200
September	65,000	39,800	25,200	53,799	11,201	58,000	3,400	3,600
October	56,100	33,700	22,400	50,993	5,107	49,800	2,800	3,500
November	46,600	27,800	18,800	41,789	4,811	38,800	1,900	5,900
December	32,800	19,300	13,500	29,985	2,815	28,300	1,600	2,900
1942: January	32,800	21,300	11,500	27,817	4,983	27,000	1,700	4,100
February	51,300	36,100	15,200	35,511	15,789	37,600	2,900	10,800
March	51,600	31,900	19,700	47,718	3,882	44,600	2,700	4,300
April	48,800	31,100	17,700	41,967	6,833	39,900	3,100	5,800
May	25,900	16,600	9,300	20,355	5,545	22,800	1,200	1,900
June	23,000	13,700	9,300	18,750	4,250	19,900	1,100	2,000
July	22,300	13,900	8,400	20,708	1,592	17,600	1,200	3,500
August	23,400	14,600	8,800	21,630	1,770	19,900	900	2,600
September	22,800	14,200	8,600	21,544	1,256	19,200	1,200	2,400
October	22,200	15,400	6,800	18,144	4,056	18,300	1,400	2,500
November	16,700	10,600	6,100	14,447	2,253	13,500	1,400	1,800
December	15,200	8,000	7,200	12,600	2,600	12,500	1,300	1,400
1943: January	9,500	5,900	3,600	9,350	150	7,000	900	1,600
February	10,200	6,300	3,900	9,799	401	8,500	600	1,100
March	17,400	11,300	6,100	14,930	2,470	14,400	1,100	1,900
April	15,300	10,000	5,300	15,200	100	11,500	1,500	2,300
May	19,600	12,900	6,700	18,914	686	15,000	1,800	2,800
June	17,700	11,400	6,300	17,550	150	13,200	1,800	2,700
July	17,600	11,300	6,300	16,700	900	13,500	1,700	2,400
August	20,100	13,100	7,000	19,600	500	13,700	2,200	4,200
September	16,300	10,900	5,400	16,300	0	11,600	1,800	2,900
October	18,300	11,800	6,500	17,980	320	12,500	1,900	3,900
November	15,900	10,900	5,000	14,400	1,500	12,700	1,400	1,800
December	13,100	8,600	4,500	12,980	120	10,000	1,100	2,000

See footnotes at end of table.

TABLE I–3: Estimated number of new permanent family dwelling units started in nonfarm areas[1], by source of funds, and by type of structure 1920–47[2]—Continued

Period	Total onfarm units[3]	Area[4]		Privately financed units	Publicly financed units	Units in—		
		rban	Rural nonfarm			1-family structures	2-family structures[5]	Multifamily structures[6]
1944: January	12,200	8,200	4,000	12,154	46	10,100	1,000	1,100
February	11,800	8,000	3,800	11,700	100	9,900	500	1,400
March	14,000	9,600	4,400	13,414	586	11,800	1,200	1,000
April	13,000	8,600	4,400	12,801	199	10,500	1,100	1,400
May	15,400	10,500	4,900	14,696	704	12,300	1,000	2,100
June	15,200	10,100	5,100	15,053	147	12,400	1,500	1,300
July	13,000	8,700	4,300	12,400	600	11,300	900	800
August	11,500	7,700	3,800	11,084	416	9,500	700	1,300
September	9,600	6,400	3,200	9,450	150	8,200	600	800
October	9,700	6,900	2,800	9,700	0	8,000	800	900
November	9,200	6,500	2,700	9,040	160	7,600	700	900
December	7,200	5,000	2,200	7,200	0	6,100	600	500
1945: January	7,000	4,800	2,200	7,000	0	6,100	200	700
February	7,900	5,600	2,300	7,460	404	6,400	400	1,100
March	10,600	7,200	3,400	10,600	0	9,000	900	700
April	12,400	8,700	3,700	12,400	0	10,100	900	1,400
May	14,600	9,900	4,700	14,600	0	12,900	900	800
June	18,600	11,000	7,600	18,281	319	16,700	600	1,300
July	17,000	11,100	5,900	16,578	422	14,500	700	1,800
August	17,100	11,100	6,000	17,040	60	15,400	600	1,100
September	20,100	12,700	7,400	20,100	0	18,200	700	1,200
October	25,600	16,000	9,600	25,600	0	23,100	800	1,700
November	29,300	18,000	11,300	29,300	0	26,400	1,000	1,900
December	29,100	17,800	11,300	29,100	0	25,800	1,100	2,200
1946: January	37,500	22,400	15,100	36,892	608	32,400	1,300	3,800
February	42,400	25,000	17,400	42,400	0	37,500	1,600	3,300
March	62,000	38,000	24,000	62,000	0	54,200	2,400	5,400
April	67,000	41,000	26,000	67,000	0	59,900	2,400	4,700
May	67,100	41,000	26,100	67,100	0	58,800	3,000	5,300
June	64,100	39,000	25,100	62,762	1,338	55,300	2,500	6,300
July	62,600	37,300	25,300	61,290	1,310	55,600	2,200	4,800
August	65,400	39,500	25,900	61,915	3,485	55,100	2,000	8,300
September	57,600	33,600	24,000	57,600	0	51,900	2,000	3,700
October	57,800	34,600	23,200	56,514	1,286	50,700	1,900	5,200
November	47,700	28,600	19,100	47,700	0	43,600	1,700	2,400
December	39,300	23,700	15,600	39,300	0	35,000	1,300	3,000
1947: January	39,300	24,200	15,100	38,216	1,084	35,000	1,500	2,800
February	42,800	25,000	17,800	42,800	0	39,100	1,600	2,100
March	56,000	31,800	24,200	56,000	0	49,900	2,200	3,900
April	67,100	37,600	29,500	67,100	0	60,500	2,800	3,800
May	72,900	39,300	33,600	72,900	0	65,800	3,100	4,000
June	77,200	42,200	35,000	77,000	200	67,300	3,400	6,500
July	81,100	44,500	36,600	81,100	0	70,500	3,200	7,400
August	86,300	47,400	38,900	86,108	192	74,100	3,300	8,900
September	93,800	50,300	43,500	93,525	275	80,700	3,300	9,800
October	94,000	53,200	40,800	93,540	460	80,100	3,300	10,600
November	79,700	48,000	31,700	78,835	865	67,300	3,400	9,000
December	58,800	36,300	22,500	58,436	364	49,900	2,800	6,100

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[1] The geographic coverage of this table is broader than that of tables H–4 and H–5 covering urban areas. In addition to the urban areas of 2,500 population or more in 1940 and, by special rule, a small number of unincorporated places, nonfarm areas include all rural areas other than farms.

[2] Data for 1920-29 are from the National Bureau of Economic Research; data for 1910-19 and 1930-47 from the Bureau of Labor Statistics. No break-downs are available for 1910-19. Bureau of Labor Statistics data are based on building permits issued and Federal construction contracts awarded which, from 1946, have been supplemented by data from field surveys in nonpermit-issuing places. Beginning in 1945, data from building permits have been adjusted for lapsed permits and lag between permit issuance; and the start of construction. These influences were negligible prior to 1945.

[3] Total nonfarm units scheduled for earlier years (in thousands): 1910—475; 1911—480; 1912—490; 1913—455; 1914—445; 1915—475; 1916—480; 1917—230; 1918—120; and 1919—330.

[4] Urban and rural nonfarm classifications for years 1920-29 are based on 1930 Census: for years 1930-47, on 1940 Census.

[5] Includes 1- and 2- family dwellings with stores.

[6] Includes multifamily dwellings with stores.

Dwelling Units by Type of Occupancy

Data were collected by the Bureau of Labor Statistics showing the relative importance of each type of occupancy of dwelling units in 157 areas at a stated period during 1944–46. The purpose of the studies was to provide the basis for periodic reviews of the samples of rental dwellings on which the Bureau's residential rent indexes are based and to secure occupancy and vacancy data for the National Housing Agency. These surveys of residential dwellings were conducted in combination with regular rent surveys made by the Bureau of Labor Statistics, as part of its study of changes in consumers' prices and living costs for moderate-income city families. Information was obtained by personal visits to occupants of family dwellings in a sample carefully selected to represent all sections and all types of structures in each area. In general, these surveys included all quarters normally considered as dwelling units except public housing, commercial rooming houses and hotels, trailers and tourist cabins, and miscellaneous quarters such as boats and tents.

The cities covered (see table I–4) are not intended as a representative sample of all cities in the country. Selection of cities for survey (either by the Bureau of Labor Statistics or the Bureau of the Census) was based on the need for housing information. Most of the cities which were covered had serious housing shortages at some period during World War II. Nevertheless, the group included more than half of all cities having 100,000 population or more in 1940, exclusive of New York and Chicago.

TABLE I-4: Distribution of family dwelling units by type of occupancy for 157 areas, selected periods 1944–46

Area	Date of survey	Estimated number of dwellings	Percent of dwellings		
			Tenant-occupied	Owner-occupied	Vacant
Alabama:					
Birmingham	Sept. 1944	77,000	63.6	35.9	0.5
Mobile	April 1945	26,000	55.1	44.0	.9
Arkansas:					
Batesville	April 1945	1,206	38.9	60.0	1.1
El Dorado	Oct. 1945	5,000	52.9	45.7	1.4
Hot Springs	Oct. 1945	7,000	59.3	40.5	.2
Little Rock	April 1946	28,000	51.6	47.7	.7
Malvern	Oct. 1945.	1,300	34.1	65.7	.2
Pine Bluff[1,2]	May 1945	8,000	51.8	46.8	1.4
Newport	May 1945	1,216	58.6	39.6	1.8
Walnut Ridge	May 1945	688	38.1	58.4	3.5
California:					
Fairfield-Vacaville area[1,3]	Nov. 1945	1.300	36.5	62.5	1.0
Fresno[1]	Sept. 1945	19.000	36.5	62.9	.6
Los Angeles Co. (urban areas)	June 1945	960,000	52.0	47.2	.8
Modesto area[1]	Jan. 1946	9,500	32.0	67.7	.3
Sacramento[1]	Aug. 1945	37,000	44.6	54.6	.8
Salinas[1]	Jan. 1946	3.500	50.5	49.2	.3
San Diego	May 1945	80,000	51.8	47.0	1.2
San Bernardino area[1]	Dec. 1945	35,000	39.1	60.2	.7
San Francisco	Sept. 1944	243,000	61.5	37.5	1.0
San Jose area[1]	Sept. 1945	36,000	38.8	59.9	1.3
Stockton area[1]	Aug. 1945	22,000	46.7	52.1	1.2
Colorado::					
Colorado Springs	Feb. 1945	12,950	46.3	51.5	2.2
Denver area	June 1945	116,000	55.8	43.6	.6
Glenwood Springs	Mar. 1945	703	46.5	43.7	9.8
Leadville	Feb. 1945	1,297	20.1	64.1	15.8
Pueblo area[1,4]	Aug. 1945	18,000	38.7	59.7	1.6
Rifle	Mar. 1945	423	42.6	56.7	.7
Salida	Feb. 1945	1,459	35.6	58.8	5.6
Connecticut:					
Bridgeport	June 1945	43,000	65.2	33.9	.9
Hartford area[1,4]	Oct. 1945	78,000	76.5	22.9	.6
New Haven area	Oct. 1945	70,000	54.7	43.5	1.8
Norwich City[1]	June 1945	7,000	55.5	43.1	1.4
Waterbury[1,4]	Sept. 1945	32,000	57.8	41.4	.8
District of Columbia	Nov.-Dec. 1945	209,000	64.1	35.5	.4
Florida:					
Jacksonville	Dec. 1944	51,000	62.2	37.2	.6
Panama City area[1]	Oct. 1945	5,000	34.6	61.8	3.6
Tampa area[1]	Dec. 1945	33,000	43.2	55.5	1.3
Georgia:					
Americus	Feb. 1945	2,748	62.4	36.1	1.5
Atlanta	Mar.-Apr. 1945	90,000	61.7	37.9	.4
Brunswick[1,4]	Sept. 1945	4,700	39.2	59.4	1.4
Macon area[1,4]	Apr. 1946	20,000	70.7	28.6	.7
Savannah	Sept. 1945	30,000	75.3	23.8	.9
Toccoa	Mar. 1945	1,465	52.4	46.4	1.2
Waycross	Oct. 1945	4,500	49.0	50.8	.2
Idaho:					
Boise[1]	Aug. 1945	8,500	44.2	54.6	1.2
Idaho Falls	Oct. 1945	4,600	39.4	59.7	.9
Pocatello area[1]	Dec. 1945	6,500	43.3	55.5	1.2
Indiana:					
Evansville—Henderson, Ky.	June 1945	34,000	52.0	46.5	1.5
Indianapolis	Dec. 1944–Jan. 1945	120,000	53.2	45.7	1.1
Iowa:					
Burlington[1]	Dec. 1945	8,200	27.2	71.1	1.7
Des Moines	Nov. 1945	49,000	36.5	62.3	1.2
Kansas:					
Cimarron	May 1945	301	39.8	58.5	1.7
Garden City	May 1945	2,100	41.6	55.5	2.9
Kansas City	Dec. 1944	35,000	35.4	63.3	1.3
Parsons	Oct. 1945	4,500	31.5	66.8	1.7
Topeka[1]	May 1945	22,000	36.0	62.7	1.3
Wichita area	Jan. 1946	42,000	46.8	52.2	1.0
Kentucky:					
Ashland	Oct. 1945	8,000	34.3	65.5	0.2
Henderson[1]	Apr. 1946	4,500	47.8	50.6	1.6
Louisville	Nov. 1945	99,000	54.4	44.9	.7
Mayfield	Feb. 1946	3,000	45.3	54.3	.4
Paducah	Feb. 1946	11,500	51.6	47.7	.7
Louisiana:					
Baton Rouge area[1,4]	May 1945	21,000	57.0	42.4	.6
New Orleans	June–July 1945	145,000	72.9	26.1	1.0
Shreveport area[1,4]	June 1945	33,000	56.8	42.4	.8
Maine:					
Portland	Nov. 1945	23,000	68.8	29.1	2.1
Maryland:					
Baltimore	Nov.-Dec. 1945	250,000	46.1	52.7	1.2
Cumberland[1]	May 1945	10,500	58.7	40.4	.8
Massachusetts:					
Boston area	June–July 1945	407,000	68.0	29.4	2.6
Quincy area	June 1945	34,000	40.5	57.3	2.2
Salem area	Sept. 1945	32,000	43.8	54.1	2.1
Michigan:					
Benton Harbor–St. Joseph area[1,4]	Mar. 1946	10,000	43.6	55.2	1.2
Detroit area	June–July 1945	535,000	49.6	49.6	.8
Ludington	Oct. 1945	2,800	31.2	65.6	3.2
Muskegon area	Sept. 1945	20,000	32.3	65.0	2.7
Minnesota:					
Minneapolis–St. Paul area[5].	Mar. 1946	245,000	49.4	50.2	.4
Mississippi:					
Greenwood	Mar. 1945	4,500	69.5	30.4	.1
Grenada	Mar. 1945	1,737	59.7	39.0	1.3
Water Valley	Mar. 1945	718	29.0	68.1	2.9
Winona	Mar. 1945	540	37.8	60.0	2.2
Missouri:					
Kansas City	Dec. 1944	130,000	55.3	43.7	1.0
St. Louis area, Mo. and Ill.	June–July 1945	359,000	60.0	39.0	1.0
Montana:					
Billings[1]	Dec. 1945	7,800	53.1	46.4	.5
Great Falls[1]	Dec. 1945	10,000	51.3	48.2	.5
Nebraska:					
Fairbury	May 1945	1,758	41.8	56.4	1.8
York	May 1945	1,456	32.0	66.8	1.2
New Hampshire:					
Manchester	Sept. 1944	23,000	61.3	33.9	4.8
Portsmouth-Kittery, Me.[1]	Sept. 1945	5,800	39.2	57.9	2.9
New Mexico:					
Albuquerque[1]	Nov. 1945	11,000	46.1	53.0	.9
North Carolina:					
Wilmington area[1,4]	Aug. 1945	11,000	54.1	43.4	2.5
North Dakota:					
Bismark and Mandan[1]	Mar. 1946	5,500	46.4	53.1	.5
Ohio:					
Akron area[1]	Dec. 1945	90,000	34.8	64.1	1.1
Canton area[1]	Dec. 1945	40,000	37.5	61.6	.9
Cincinnati	Mar.-Apr. 1945	150,000	64.5	34.3	1.2
Cuyahoga Co. (Cleveland)	Dec. 1944–Jan. 1945	368,000	52.5	46.1	1.4
Dayton area[1,6]	June 1945	65,000	48.0	50.8	1.2
Ironton	Oct. 1945	4,400	41.9	57.7	.4
Youngstown area[1]	June 1945	68,000	37.9	60.9	1.2
Oklahoma:					
Ardmore	Nov. 1945	5,000	39.5	59.1	1.4
Muskogee	Nov. 1945	13,000	42.4	54.9	2.7

See footnotes at end of table.

TABLE I-4: Distribution of family dwelling units by type of occupancy for 157 areas, selected periods, 1944–46—Continued

Area	Date of survey	Estimated number of dwellings	Percent of dwellings		
			Tenant-occupied	Owner-occupied	Vacant
Oregon:					
Albany and Corvallis[1]	Aug. 1945	5,500	49.5	48.2	2.3
Astoria area	June-July 1945	6,200	41.0	56.6	2.4
Coos Bay area	May 1945	3,900	40.0	55.0	5.0
Eugene and Springfield[1]	Mar. 1946	9,500	37.4	61.5	1.1
Medford	Feb. 1945	4.609	38.0	57.3	4.7
Portland	Mar.-Apr. 1945	116,000	43.4	55.5	1.4
Pennsylvania:					
Allentown area[1]	Nov. 1945	58,000	47.2	51.7	1.1
Altoona[1]	Sept. 1945	21,000	28.2	70.6	1.2
Erie area[1]	Mar. 1946	34,000	46.3	52.4	1.3
Greensburg area[1]	June 1945	13,000	48.5	50.3	1.2
Johnstown area[1]	Mar. 1946	21,000	54.0	44.8	1.2
Meadville[1]	Nov. 1945	5,800	54.0	44.6	1.4
Philadelphia	Mar.-Apr. 1945	553,000	50.1	48.2	1.7
Pittsburgh	Mar.-Apr. 1946	182,000	57.6	41.8	.6
Scranton	Dec. 1944	36,000	52.1	39.5	8.4
Sharon-Farrell area[1]	June 1945	14,000	34.7	63.8	1.5
Uniontown[1]	May 1945	6,000	54.6	44.1	1.3
Rhode Island:					
Greater Providence area[1] [7]	May 1945	62,000	44.3	50.9	4.8
Quonset Pt. area[1]	May-June 1945	3,200	48.4	45.3	6.3
South Carolina:					
Charleston	Apr. 1946	22,000	74.1	24.4	1.5
South Dakota:					
Watertown	Jan. 1946	2,800	44.5	55.3	.2
Tennessee:					
Columbia	Oct. 1945	3,000	53.2	46.0	.8
Fayetteville	Mar. 1945	1,412	59.3	40.0	.7
Johnson City	Sept. 1945	6,000	46.2	53.2	.6
Knoxville	Nov. 1945	32,000	49.4	49.7	.9
Memphis	Sept. 1944	90,000	59.7	39.8	.5
Paris	Feb. 1945	2,081	50.0	43.8	6.2
Shelbyville	Mar. 1945	2,066	56.1	41.8	2.1
Tullahoma	Mar. 1945	1,515	45.1	51.4	3.5
Winchester	Mar. 1945	688	35.5	62.9	1.6
Texas:					
Abilene	May 1945	10,000	39.9	54.6	5.5
Bonham	Feb. 1945	1,905	42.9	54.5	2.6
Brownsville[1]	Aug. 1945	6,000	38.8	58.2	3.0
Dallas	Apr. 1946	98,000	44.7	54.9	.4
El Paso[1]	Dec. 1945	27,000	56.6	43.0	.4
Houston	Sept. 1945	124,000	58.9	40.7	.4
Lubbock-Slaton[1]	Sept. 1945	11,000	44.1	54.2	1.7
Orange area[1] [4]	Apr. 1946	4,500	41.6	57.2	1.2
San Antonio[1] [2]	May 1945	95,000	52.5	46 1	1.4
Texarkana, Tex. and Ark.[1]	May 1945	9,500	45.8	52.4	1.8
Wichita Falls and Iowa Park.[1]	June 1945	15,000	45.5	52.4	2.1
Utah:					
Tooele	Mar. 1945	1,429	37.2	58.0	4.8
Virginia:					
Norfolk	Nov.-Dec. 1945	43,000	55.9	42.3	1.8
Newport News	Nov.-Dec. 1945	11,000	56.2	40.8	3.0
Portsmouth	Nov.-Dec. 1945	15,000	56.8	41.7	1.5
Richmond[1]	Mar.-Apr. 1945	60,000	64.8	34.9	.3
Washington:					
Aberdeen area[1]	Aug. 1945	11,000	32.9	62.9	4.2
Everett area[1] [4]	Apr. 1946	13,000	34.3	62.5	3.2
Olympia area[1]	May 1945	5,300	38.3	58.8	2.9
Seattle	Sept. 1945	143,000	43.5	55.8	.7
Spokane[1]	Sept. 1945	45,000	30.7	67.3	2.0
Tacoma[1]	Nov. 1945	42,500	35.5	62.9	1.6
West Virginia:					
Huntington	Oct. 1945	22,000	46.3	53.0	.7
Martinsburg[1]	May 1945	4,000	55.4	44.1	.5
Wisconsin:					
Madison[1] [4]	Apr. 1946	24,000	49.6	49.8	.6
Milwaukee	Nov. 1944	169,500	63.3	36.1	.6
Wyoming:					
Cheyenne[1]	Dec. 1945	8,000	45.9	53.0	1.1

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[1] City surveyed by the Bureau of the Census in 1945 and 1946.

[2] Percentage is for that portion of the city corresponding to city limits as of April 1940.

[3] Tenure rates for Suisun City are not included in percentages.

[4] Percentage is for city proper only.

[5] Percentages for Minneapolis and St. Paul cities proper.

[6] Dayton area is Dayton-Oakwood section.

[7] The Greater Providence area includes Pawtucket, Cranston, Warwick, East Providence Town, North Providence Town, and West Providence Town; excludes Providence City.

Rentals, Maintenance, and Repairs

Annual average indexes of residential rents paid by moderate-income families in large cities and of the retail prices of fuels important in residential heating are shown in table I–5.

The rent indexes are components of the Bureau of Labor Statistics consumers' price index for moderate-income families in large cities (described in detail on p. 104), and represent average changes in rents for the same dwellings with the same facilities and services from one time to another. Data are collected at regular intervals from approximately 45,000 tenant families. In computing the indexes, proper representation is given to various grades of housing normally rented by the middle income group. Data for the cities are combined on the basis of relative populations in each city included.

The indexes of retail prices of fuels used in residential heating were discontinued after the computation of June 1947 data because of reduced appropriations. These indexes were designed to measure changes in average prices of major types of residential heating fuels in 55 cities. Anthracite, bituminous coal, coke, kerosene, fuel oil, gas, and wood were included in the series. Prices for the various fuels were combined on the basis of weighting data secured from the Bituminous Coal Division, United States Bureau of Mines, and the Fuel Oil Ration Division of the Office of Price Administration. The weights are representative of the 1939–40 patterns of fuel consumption with adjustments for significant shifts in consumption since that time. Data for the individual cities were combined on the basis of fuel consumption in each city. Indexes also were computed for each of the 55 cities and for major types of fuels.

Average contract rents in private residential dwellings in 57 areas are shown in table I–6. These areas were surveyed in 1945 by the Bureau of Labor Statistics and the Bureau of the Census to obtain needed housing data for the National Housing Agency. The cities included were chosen because of special housing problems existing in the areas at the time of the survey. Thus, they do not represent a properly distributed sample of all cities in the country. Nevertheless, a significant proportion of the major cities in the country were covered.

TABLE I–5: Indexes of rents and fuel costs, 1939–47

Period	Residential rents for moderate-income families in large cities (1935-39 = 100)	Retail prices of fuels used in residential heating (1939 = 100)
1939	104.3	100.0
1940	104.6	103.4
1941	106.2	107.3
1942	108.5	114.4
1943	108.0	120.4
1944	108.2	123.7
1945	108.3	123.9
1946	108.6	130.9
1947	111.2	[1]142.6

[1] Six months' average from January to June; the series was discontinued as of July 1947.

TABLE I-6: Contract monthly rent for tenant-occupied privately financed residential dwellings in 57 cities surveyed in 1945[1]

Area	Date of survey	Estimated number of all dwellings	Tenant-occupied dwellings		
			Contract (median) monthly rent	One-fourth rented at or less than—	One-fourth rented at or more than—
Aberdeen area, Wash.[2]	Aug. 1945	11,000	$22.00	$16.00	$30.00
Albany and Corvallis, Oreg.[2]	Aug. 1945	5,500	30.00	23.00	40.00
Astoria area, Oreg.[2]	June 1945	6,200	25.00	16.00	35.00
Baltimore, Md	Nov.-Dec. 1945	250,000	28.00	17.00	40.00
White	Nov.-Dec. 1945	210,000	30.00	20.00	45.00
Negro	Nov.-Dec. 1945	40,000	22.00	15.00	30.00
Baton Rouge area, La.[2]	May 1945	21,000	22.00	11.00	35.00
White	May 1945	13,500	32.00	(3)	(3)
Negro	May 1945	7,500	10.00	(3)	(3)
Boise, Idaho	Aug. 1945	8,500	30.00	20.00	40.00
Boston, Mass.	June-July 1945	213,000	30.00	25.00	40.00
Bridgeport, Conn	June 1945	43,000	28.00	20.00	37.00
Brownsville, Tex[2]	Aug. 1945	6,000	15.00	6.00	30.00
Canton, Ohio	Dec. 1945	31,500	30.00	23.00	37.00
Coos Bay area, Oreg[2]	May 1945	3,900	25.00	20.00	35.00
Cumberland, Md[2]	May 1945	10,500	25.00	20.00	35.00
Dallas, Tex	May 1945	98,000	26.00	18.50	37.00
Detroit area, Mich	June-July 1945	535,000	35.00	30.00	45.00
White	June-July 1945	490,000	37.00	30.00	45.00
Negro	June-July 1945	45,000	30.00	25.00	35.00
Evansville, Ind and Henderson, Ky[2]	June 1945	34,000	24.00	15.00	35.00
Fresno, Calif[2]	Sept. 1945	19,000	27.50	20.00	40.00
Greensburg area, Pa[2]	June 1945	13,000	25.00	20.00	35.00
Houston, Tex	Nov. 1945	124,000	26.00	18.00	35.00
White	Nov. 1945	96,000	30.00	22.00	40.00
Negro	Nov. 1945	28,000	16.00	11.00	22.00
Knoxville, Tenn	Nov. 1945	32,000	18.00	12.00	35.00
White	Nov. 1945	27,000	20.00	12.00	38.00
Negro	Nov. 1945	5,000	12.00	10.00	15.00
Los Angeles Co. (urban areas), Calif	June 1945	960,000	32.00	25.00	40.00
Louisville, Ky	Nov. 1945	99,000	22.00	13.00	35.00
White	Nov. 1945	83,000	26.00	16.00	40.00
Negro	Nov. 1945	16,000	12.00	9.00	16.00
Lubbock and Slaton, Tex[2]	June 1945	11,000	30.00	18.00	38.00
Martinsburg, W. Va[2]	May 1945	4,000	18.00	13.00	25.00
Mobile, Ala	May 1945	26,000	20.00	10.00	35.00
White	May 1945	17,000	35.00	22.00	45.00
Negro	May 1945	9,000	9.00	8.00	12.00
Muskegon area, Mich[2]	Sept. 1945	20,000	26.00	20.00	35.00
Muskogee area, Okla[2]	Nov. 1945	13,000	26.00	15.00	40.00
White	Nov. 1945	10,500	30.00	20.00	40.00
Negro	Nov. 1945	2,500	9.00	7.00	13.00
New Haven, Conn	Oct. 1945	45,000	25.00	18.00	35.00
New Orleans, La	June-July 1945	145,000	$18.00	$13.00	$28.00
White	June-July 1945	102,000	22.00	16.00	35.00
Negro	June-July 1945	43,000	13.00	9.00	17.00
Newport area, R.I.[2]	June 1945	12,000	30.00	20.00	40.00
Norwich City, Conn[2]	June 1945	7,000	20.00	15.00	30.00
Olympia area, Wash.[2]	May 1945	5,300	33.00	25.00	45.00
Panama City area, Fla[2]	Oct. 1945	5,000	25.00	13.00	40.00
White	Oct. 1945	3,800	32.00	20.00	47.00
Negro	Oct. 1945	1,200	10.00	9.00	13.00
Pine Bluff, Ark[2]	May 1945	8,000	25.00	12.00	38.00
White	May 1945	5,500	35.00	(3)	(3)
Negro	May 1945	2,500	8.00	(3)	(3)
Pocatello area, Idaho[2]	May 1945	6,200	30.00	20.00	40.00
Portland Maine	Nov. 1945	23,000	30.00	20.00	40.00
Portsmouth, N.H. and Kittery, Maine	Sept. 1945	5,800	26.00	20.00	35.00
Providence area, R.I.[2]	May 1945	62,000	23.00	18.00	30.00
Pueblo area, Colo[2]	Aug. 1945	18,000	25.00	15.00	35.00
Quincy area, Mass	June 1945	34,000	35.00	28.00	40.00
Quonset Pt. area, R.I.[2]	June 1945	3,200	30.00	20.00	57.00
Sacramento, Calif[2]	Aug. 1945	37,000	30.00	25.00	40.00
St. Louis, Mo	May-June 1945	259,000	23.00	15.00	35.00
White	May-June 1945	227,000	25.00	17.00	37.50
Negro	May-June 1945	32,000	15.00	11.00	20.00
San Antonio area, Tex[2]	May 1945	95,000	22.00	10.00	35.00
San Diego, Calif	May 1945	80,000	35.00	26.00	43.50
Seattle, Wash	Sept. 1945	143,000	35.00	25.00	42.50
Sharon-Farrell area, Pa[2]	June 1945	14,000	25.00	18.00	33.00
Shreveport area, La[2]	June 1945	33,000	20.00	12.00	30.00
White	June 1945	21,500	30.00	(3)	(3)
Negro	June 1945	11,500	12.00	(3)	(3)
Stockton area, Calif[2]	Aug. 1945	22,000	25.00	18.00	34.00
Spokane, Wash	Sept. 1945	45,000	28.00	18.00	38.00
Texarkana, Texas and Ark[2]	May 1945	9,500	20.00	11.00	33.00
White	May 1945	6,700	30.00	(3)	(3)
Negro	May 1945	2,800	9.00	(3)	(3)
Topeka area, Kans[2]	May 1945	25,000	25.00	15.00	35.00
Uniontown, Pa[2]	May 1945	6,000	30.00	20.00	35.00
Washington, D.C.	Nov.-Dec. 1945	209,000	48.00	38.00	60.00
White	Nov.-Dec. 1945	164,000	52.00	40.00	65.00
Negro	Nov.-Dec. 1945	45,000	35.00	25.00	43.00
Waterbury area, Conn	Sept. 1945	32,000	25.00	20.00	30.00
Wichita Falls and Iowa Park, Tex[2]	June 1945	15,000	30.00	20.00	30.00
Wilmington area, N.C[2]	Aug. 1945	11,000	20.00	10.00	40.00
White	Aug. 1945	7,500	35.00	(3)	(3)
Negro	Aug. 1945	3,500	10.00	(3)	(3)
Youngstown area, Ohio	June 1945	68,000	25.00	18.00	35.00

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[1] The rental data presented in this table are not comparable with the figures on changes in rents published by the Bureau of Labor Statistics in its consumers' price index (see table D-1). The index reflects changes in rent charged for the same dwelling with the same services and facilities. The rents included in this table represent the averages for rental units at the time of the survey. Comparisons of these average rents with averages obtained from similar previous surveys reflect, in addition to changes in rents shown in the index, shifts in the size and type of rental units, and changes in the items included in the contract rent.

[2] Surveyed by the Bureau of the Census. All others were surveyed by the Bureau of Labor Statistics.

[3] Not available.

Section J: Social Security and Related Programs

The Social Security Administration has compiled the information in table J–1, which deals with operations under various social security and related programs in effect from 1937 through 1947.

In addition to giving the amount of benefits and the number of beneficiaries and recipients under insurance and public assistance programs, the table shows the number of persons engaged in work under the Work Projects Administration, the Civilian Conservation Corps, and the National Youth Administration from 1937 until the time of liquidation of these programs.

Beneficiaries of old-age and survivors insurance represent the number in current-payment status at the end of December; amounts are payments certified to the Treasury Department, and include retroactive payments.

Railroad retirement benefits represent employee annuities in addition to pensions to former carrier pensioners. Beneficiaries are as of the last day of December in current-payment status, and amounts are payments certified, including retroactive payments. Data for 1937–39 on railroad annuitants retired for disability are estimated on the basis of reported data for 1940.

Railroad unemployment insurance beneficiaries represent the average number of persons receiving benefits in a 14-day registration period; amounts are adjusted for underpayments and recovery of overpayments.

No data are available on the number of beneficiaries receiving workmen's compensation. Amounts are estimated, and exclude payments for medical care; monthly survivor benefits include a small but undetermined amount of lump-sum death payments.

Federal, State, and local government retirement payments (included in the classification "Other") exclude refunds of employee contributions. The Civil Service Commission retirement and disability benefits include survivor payments under joint and survivor elections. The break-down between retirement and disability benefits is estimated. Payments are principally from the civil-service retirement and disability fund, but also include payments from the Canal Zone and Alaska Railroad retirement and disability funds administered by the Civil Service Commission.

The Veterans Administration separations of retirement and disability payments are estimated on the basis of fiscal-year data; payments for 1937–39 were distributed according to the 1940 distribution. The bulk of these payments are for disability; retirement benefits are for Spanish-American War veterans retired for age.

State unemployment insurance beneficiaries represent the number during an average week in December; benefit payments are adjusted for voided benefit checks.

Servicemen's readjustment allowances for unemployment under title V of the Servicemen's Readjustment Act (the GI Bill of Rights), began in September 1944. Beneficiaries represent the average weekly number during December; amounts are gross and have not been adjusted for voided benefit checks.

Self-employment payments, also made under title V of the Servicemen's Readjustment Act, were first payable in November 1944. Self-employed veterans receive $100 a month less net earnings from their business or profession. Beneficiaries represent the number of veterans paid during December.

Under "Other" programs, specific risks included are as follows:

(1) Old-age retirement covers Federal civil-service programs, other contributory programs (Federal Reserve, Foreign Service, Tennessee Valley Authority, and the Examining Division of the Bureau of the Comptroller of the Currency), noncontributory retirement programs (Army, Navy, Coast Guard, Marine Corps, Coast and Geodetic Survey, Public Health Service, Federal judges, and Lighthouse Service), State and local government programs, and pensions under the Veterans Administration program to Spanish-American War veterans retired for age.

(2) Survivorship statistics are for Federal civil service, State and local government, and workmen's compensation.

(3) Disability includes Federal civil service, State and local government, and sickness compensation under the Rhode Island and California laws and the Federal railroad unemployment insurance law. Sick benefit payments began in April 1943 in Rhode Island, in December 1946 in California, and in July 1947 for railroad workers.

"Other public assistance programs" represents subsistence payments to farmers under the Farm Security Administration program (through June 1942) and general assistance payments. Recipients in this group represent the number of cases rather than the number of different individuals.

NOTE: For a summary of the number of continued claims under the State unemployment insurance program and under the program of veterans' readjustment allowances, see table A–13.

TABLE J-1: Selected data on social security and related programs, 1937–47[1]

[Corrected to July 30, 1948]

Program	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947
	Amount of payments (in millions) for calendar year										
Total amount of payments	$3,136	$4,341	$4,318	$4,177	$3,686	$3,096	$2,351	$2,580	$3,619	$6,968	$6,898
Social insurance and related programs	807	1,290	1,380	1,546	1,471	1,551	1,371	1,634	2,629	5,785	5,412
Old-age retirement	229	277	292	330	379	420	459	523	603	748	903
Old-age and survivors insurance	....	....	....	21	55	80	97	119	157	230	300
Railroad retirement	29	71	78	83	88	92	95	99	106	118	139
Other[2]	200	206	214	226	235	248	267	305	340	400	465
Survivorship:											
Monthly benefits	131	142	154	163	192	214	239	291	430	540	632
Old-age and survivors insurance	....	....	....	8	25	42	58	77	104	130	153
Railroad retirement	(3)	(3)	(3)	1	2	2	2	2	2	2	19
Veterans' pensions and compensation	96	101	109	106	112	111	116	144	254	334	383
Other[4]	35	41	45	48	53	59	63	69	70	74	77
Lump-sum payments[5]	20	30	37	37	40	42	49	57	66	74	79
Disability	425	447	462	482	501	524	543	699	955	1,543	2,011
Railroad retirement	(3)	(3)	(3)	31	31	31	31	31	31	31	39
Veterans' pensions and compensation	285	286	292	298	296	296	299	407	643	1,212	1,622
Workmen's compensation[6]	110	115	120	130	149	170	182	225	242	258	275
Other[7]	30	46	50	23	25	27	31	36	38	43	76
Unemployment	2	394	435	535	359	350	81	67	563	2,627	1,588
State unemployment insurance	2	394	429	519	344	344	80	62	446	1,095	776
Railroad unemployment insurance	....	....	6	16	15	6	1	1	2	40	39
Servicemen's readjustment allowances[8]	....	....	....	....	....	....	....	4	115	1,491	772
Self-employment allowances[9]	....	....	....	....	....	....	....	(10)	12	252	198
Public assistance programs	840	1,008	1,068	1,053	1,003	965	930	942	990	1,183	1,486
Old-age assistance	310	392	430	475	542	595	653	693	726	822	990
Aid to dependent children	70	97	115	133	153	158	141	135	150	209	295
Aid to the blind	16	19	21	22	23	25	25	25	27	31	36
Other[11]	443	499	502	423	285	187	111	89	87	121	165
Federal work programs	1,489	2,043	1,870	1,578	1,212	580	51	....	....	....	....
Work Projects Administration	1,186	1,751	1,566	1,270	937	503	47	....	....	....	....
Civilian Conservation Corps	246	230	231	216	156	34	....	....	....	....	....
National Youth Administration	57	61	74	92	119	43	4	....	....	....	....
	Number of beneficiaries (in thousands), December										
Social insurance and related programs:											
Old-age retirement:											
Old-age and survivors insurance[12]	....	....	....	148.5	266.3	346.6	406.3	504.0	690.9	935.6	1,165.8
Railroad retirement	(3)	(3)	(3)	106.1	112.6	115.2	119.4	124.3	133.9	145.4	152.7
Other[2]	(3)	(3)	(3)	230.0	242.3	256.8	273.7	297.0	324.2	309.3	329.5
Survivorship (monthly benefits):											
Old-age and survivors insurance[12]	....	....	....	74.0	167.4	251.7	341.5	450.8	597.3	706.7	812.9
Railroad retirement	(3)	(3)	(3)	3.3	3.6	3.8	4.1	4.3	4.4	4.5	78 6
Veterans' pensions and compensation	(3)	(3)	(3)	323 2	318.5	315.9	322.7	372.7	697.5	849.4	936.7
Other[4]	(3)	(3)	(3)	25.0	26.0	28.1	29.1	30.2	32.3	34.4	35.5
Disability:											
Railroad retirement	(3)	(3)	(3)	39.8	40.3	39.7	39.6	39.1	39.0	39.6	58.9
Veterans' pensions and compensation	570.0	572.0	584.0	585.2	583.6	579.6	599.1	899.9	1,471.6	2,249.4	2,274.2
Workmen's compensation	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(7)
Other[7]	(3)	(3)	(3)	30.6	32.6	35.4	42.2	46.5	50.4	58.2	111.6
Unemployment:											
State unemployment insurance[13]	(3)	(3)	658.3	666.6	523.0	192.6	64.4	74.9	1,318.9	747.9	621.4
Railroad unemployment insurance[14]	....	....	37.3	73.7	22.4	3.3	.7	1.2	12 7	70 3	46.6
Servicemen's readjustment allowances[13]	....	....	....	....	....	....	....	16.8	405.0	987 9	464 6
Self-employment allowances[15]	....	....	....	....	....	....	....	.8	21.1	155.4	72 9
	Number of recipients (in thousands), December										
Public assistance programs:											
Old-age assistance	1,577.3	1,776.4	1,908.6	2,066.5	2,234.5	2,226.8	2,149.4	2,066.0	2,055 9	2,195.8	2,332.0
Aid to dependent children:											
Children	564.7	684.5	760.0	891.1	940.5	848.7	676.1	639.0	701.8	885 2	1,060.0
Families	227.8	279.7	315.1	370.3	389 9	348.2	272.2	253.7	274 3	346.2	416.2
Aid to the blind	56 0	66.5	69.7	73.4	77.2	79 0	75.7	72 3	71.5	76.7	81 1
Other[11]	1,735.0	1,745.6	1,654.2	1,283.8	824.3	460 0	292.0	258.0	257 0	315.0	356 0
	Number of persons (in thousands), employed in December										
Federal work programs:											
Work Projects Administration	1,594 0	3,156 4	2,109.2	1,826.1	1,023.4	299.5	(16)	....	....	....	....
Civilian Conservation Corps	284 0	275.0	266 0	246.3	126 4	(16)	....	....	....	....	....
National Youth Administration	440.0	611.8	729.8	774.6	616.5	86.3	(16)	....	....	....	....

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[1] Data partly estimated; for 1947, preliminary and subject to revision; slight differences between subtotals and totals result from rounding of figures.

[2] Represents in large part retirement programs for Federal, State, and local government employees; veterans' pensions are also included.

[3] Not available.

[4] Survivor programs for Federal, State, and local government employees and workmen's compensation. Workmen's compensation includes a small but undetermined amount of lump-sum death payments.

[5] Includes old-age and survivors insurance; railroad retirement; Federal, State, and local government retirement; and veterans' program.

[6] Excludes payments for medical care.

[7] Disability programs for Federal, State, and local government employees, and sickness compensation under Rhode Island and California laws. Also includes 11.4 million dollars in benefit payments to 31,200 beneficiaries covered by railroad sickness insurance (number of beneficiaries represents an average 14-day registration period in December 1947).

[8] For unemployment only.

[9] Allowances to self-employed veterans under the Servicemen's Readjustment Act.

[10] Less than $500,000.

[11] Subsistence payments to farmers from 1937 to June 1942, and general assistance for all years.

[12] Beneficiaries represent number who were in current-payment status at the end of December.

[13] Average weekly number.

[14] Average number during a 14-day registration period.

[15] Number during the month. (See also footnote 8.)

[16] Although payment is shown for the year, program ended as follows: For the Civilian Conservation Corps, June 1942; Work Projects and National Youth Administrations, June 1943

Source: Federal Security Agency, Social Security Administration, Division of Research and Statistics. For detailed data, see the Social Security Yearbook, 1947.

Section K: Consumers' Cooperatives

Consumers' cooperative associations are nonprofit organizations, owned and controlled by the consumers of their services. They provide whatever goods or services the members desire. Their major characteristics are that (1) membership is open to all who can use their facilities, (2) each member has one vote only, regardless of his capital investment in the enterprise, (3) share capital receives a fixed rate of interest and never rises above par, and (4) savings (earnings) made by the enterprise, after payment of operating expenses, are returned to the patrons in proportion to their patronage of the business.

Data on membership and volume of business for local cooperatives and their federations, compiled by the Bureau of Labor Statistics for selected years from 1929 through 1946, are given in table K–1. Most of the figures for the local associations are estimates based on a reporting sample varying from 1,200 to 1,500 associations; the estimates are checked and corrected periodically when Nation-wide surveys are made by the Bureau. The data for credit unions are exact statistics obtained each year from the Federal Credit Union Division and from the State banking and insurance officials charged with the supervision of these associations. Figures for the electricity cooperatives are furnished to the Bureau by the Rural Electrification Administration. The federations are circularized by the Bureau of Labor Statistics each year; for them the coverage is practically complete and the data for the most part are exact, not estimated.

TABLE K–1: Estimates of number of cooperative associations, membership, and business, by type of association, selected periods 1929–46[1]

Type of association	1929	1936	1940	1944	1945	1946
Local associations	Number of associations					
Retail distributive	1,114	3,600	3,700	4,285	4,550	4,565
Stores and buying clubs	900	2,400	2,400	2,810	3,000	3,000
Petroleum	198	1,150	1,250	1,425	1,500	1,500
Other[2]	16	50	50	50	50	65
Service	98	266	415	577	602	774
Rooms and/or meals	32	60	150	175	180	200
Housing	45	50	60	59	60	125
Medical care:						
On contract	...	...	...	50	55	55
Own facilities	6	10	30	18	20	50
Burial:[3]						
Complete funeral	5	30	40	36	36	40
Caskets only				4	6	4
Other[4]	10	116	135	235	245	300
Electricity associations[5]	50	275	700	[6]850	[6]850	830
Telephone associations	4,500	5,000	[7]5,000	[7]5,000	[7]5,000	[7]5,000
Credit unions	974	5,355	9,479	9,099	8,882	8,973
Insurance associations	(8)	1,800	1,900	2,000	2,000	2,000
Federations						
Wholesales:						
Interregional	...	1	1	1	1	1
Regional	8	21	24	25	23	25
District	...	9	13	10	11	11
Service federations	1	6	9	21	22	18
Productive federations	...	4	7	12	15	15
Local associations	Number of members					
Retail distributive	186,000	677,750	988,500	1,524,500	1,760,000	2,071,000
Stores and buying clubs	123,000	330,500	485,000	690,000	825,000	1,080,000
Petroleum	56,000	325,000	480,000	810,000	910,000	965,000
Other[2]	7,000	22,250	23,500	24,500	25,000	26,000
Service	9,800	94,150	169,000	318,500	369,200	347,900
Rooms and/or meals	6,000	19,150	25,000	18,000	18,500	22,000
Housing	2,400	3,500	3,750	2,100	2,700	10,000
Medical care:[9]						
On contract	...	...	35,750	95,000	100,000	110,000
Own facilities	(8)	6,500		45,000	51,000	55,700
Burial:[3]						
Complete funeral	800	20,000	24,500	35,000	35,500	36,000
Caskets only				1,400	1,500	1,700
Other[4]	600	45,000	80,000	122,000	160,000	112,500
Electricity associations[5]	(8)	82,500	575,000	1,149,700	[6]1,149,700	1,596,000
Telephone associations	300,000	330,000	[7]330,000	[7]330,000	[7]330,000	675,000
Credit unions	265,000	1,170,000	2,815,600	3,027,700	2,838,034	3,013,792
Insurance associations[10]	...	6,800,000	7,200,000	10,510,000	10,550,000	11,000,000
Federations						
Wholesales:						
Interregional	...	8	15	18	20	22
Regional	377	1,824	2,730	3,790	3,649	4,025
District	...	81	171	152	234	280
Service federations	(8)	(8)	(8)	1,500	1,500	1,498
Productive federations	...	(8)	(8)	140	195	253

See footnotes at end of table.

TABLE K-1: Estimates of number of cooperative associations, membership, and business, by type of association, selected periods, 1929–46[1]—Continued

Type of association	1929	1936	1940	1944	1945	1946
Local associations	Amount of business (in thousands of dollars)					
Retail distributive	$49,000	$182,685	$228,325	$557,000	$657,500	$809,225
Stores and buying clubs	37,700	107,250	129,650	280,000	360,000	500,000
Petroleum	10,800	69,985	92,875	270,000	290,000	300,000
Other[2]	500	5,450	5,800	7,000	7,500	9,225
Service	1,728	3,950	5,530	11,055	12,356	15,417
Rooms and/or meals	1,640	1,000	1,500	2,600	2,700	3,600
Housing[11]	...	2,525	2,530	1,575	1,600	3,000
Medical care:						
On contract	...	50	600	1,300	1,500	1,750
Own facilities	...			2,100	2,500	4,000
Burial:[3]						
Complete funeral	53	160	200	275	300	310
Caskets only				5	6	7
Other[4]	35	215	700	3,200	3,750	2,750
Electricity associations[5]	(8)	(8)	16,650	60,960	[6]60,960	84,930
Telephone associations	5,000	5,485	[7]5,485	[7]5,485	[7]5,485	10,000
Credit unions[12]	54,048	100,200	306,092	212,305	210,886	289,993
Insurance associations[13]	(8)	103,375	125,000	190,000	200,000	205,000
Federations						
Wholesales:						
Interregional:						
Wholesale business	...	(8)	(8)	6,577	6,756	16,900
Own production	...	(8)	(8)	1,538	1,898	(8)
Regional;						
Wholesale business	7,023	41,370	58,742	131,210	149,952	201,910
Service business			585	3,780	3,625	4,285
Retail business			1,252	5,508	3,838	5,265
Own production[14]	...	(8)	6,582	55,476	42,477	62,195
District:						
Wholesale business	...	860	1,986	10,405	11,098	8,349
Service business	...		158	158	120	413
Own production[14]	...	...	259	786	798	1,178
Service federations	...	(8)	(8)	435	541	788
Productive federations	...	(8)	(8)	14,895	15,405	33,351

[1] Some revisions in data previously published, on basis of later information.

[2] Such as consumers' dairies, creameries, bakeries, propane gas associations, lumber yards, fuel yards, etc.

[3] Local associations only; does not include associations of federated type (which are included with service federations) or funeral departments of store associations.

[4] Such as cold storage, water supply, laundry and dry-cleaning, recreation, printing and publishing, etc.

[5] Except for the year 1929, almost all of these are REA associations, data for which were supplied by the Rural Electrification Administration.

[6] Data are for 1944.

[7] Data are for 1936; no information on which to base later estimates.

[8] No data.

[9] Membership figures do not include dependents who are entitled to treatment.

[10] Policyholders.

[11] Gross income.

[12] Amount of loans made.

[13] Premium income.

[14] Data relate only to reporting associations.

Section L: Production, Income, and Expenditures

Industrial Production

The Federal Reserve index of industrial roduction measures changes in the physical olume of production of manufactures and minerals. It does not cover other types of goods nd services and does not reflect price changes. See table L–1.)

The index underwent no major revision after t was first published in 1927 until the recent World War II period. In order to broaden the epresentation of industrial production, a umber of individual series were revised and thers were added in 1940. In 1941, a further evision was made in the index to include the roduction in Government arsenals, quartermaster depots, and shipyards. Further reviions were made in 1943 to include series not reviously covered directly and to replace thers. New seasonal adjustment factors were ntroduced but the general method of computing he index remained unchanged.

The existing index is derived from about 00 individual series relating to 16 groups of manufacturing industries and 2 groups of minng industries. According to the Federal Reserve Bulletin (October 1943): "Some of the individual series are based on statistics of monthly output of materials or finished products while other series relate to consumption or shipments of materials, machinery hours active, or man-hours worked. Statistics of man-hours worked in a number of lines are adjusted to allow for broad changes in output per man-hour, as measured by other data not suitable for use in a monthly production index. Many of the other series are also adjusted to more accurate physical volume figures not available monthly, such as census statistics. All principal groups of industries in manufacturing and in mining are directly represented in the index at some stage in the production process."[1]

Table L–1 gives the indexes of industrial production for the years 1919–47; monthly indexes from January 1946 are given both adjusted and unadjusted. For durable and nondurable manufactures and for minerals, the individual indexes are also shown. The physical volume is the average per working day.

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[1] Federal Reserve Bulletin, October 1943: Revision of Industrial Production Index.

TABLE L–1: Index of industrial production, 1919–47

[Physical volume—1935–39=100]

Period	Total	Manufactures		Minerals
		Durable	Nondurable	
1919	72	84	62	71
1920	75	93	60	83
1921	58	53	57	66
1922	73	81	67	71
1923	88	103	72	98
1924	82	95	69	89
1925	90	107	76	92
1926	96	114	79	100
1927	95	107	83	100
1928	99	117	85	99
1929	110	132	93	107
1930	91	98	84	93
1931	75	67	79	80
1932	58	41	70	67
1933	69	54	79	76
1934	75	65	81	80
1935	87	83	90	86
1936	103	108	100	99
1937	113	122	106	112
1938	89	78	95	97
1939	109	109	109	106
1940	125	139	115	117
1941	162	201	142	125
1942	199	279	158	129
1943	239	360	176	132
1944	235	353	171	140
1945	203	274	166	137
1946	170	192	165	134
1947	187	220	172	149

Period	Total		Manufactures		Minerals
			Durable	Nondurable	
	Adjusted[1]	Unadjusted[1]	Adjusted[1]	Adjusted[1]	Adjusted[1]
1946: January	160	156	166	161	141
February	152	148	138	167	141
March	168	164	183	166	137
April	165	163	190	164	104
May	159	159	175	161	115
June	170	171	193	162	139
July	172	174	202	157	146
August	178	180	208	164	144
September	180	184	212	165	146
October	182	184	214	168	145
November	183	183	214	173	136
December	182	180	211	174	137
1947: January	189	184	221	176	146
February	189	185	222	176	146
March	190	187	225	175	148
April	187	185	222	172	143
May	185	185	218	170	151
June	184	185	219	168	148
July	176	178	207	163	140
August	182	185	210	169	150
September	187	191	217	172	153
October	190	194	223	176	153
November	192	193	224	179	155
December	192	189	229	173	156

[1] The terms "adjusted" and "unadjusted" refer to adjustment of monthly figure for seasonal variation.

Source: Board of Governors, Federal Reserve System.

Labor Costs

In summarizing the operating ratios for 86 ndustries including 2,688 corporations, the 'ederal Trade Commission showed as individ-ial ratios the number of cents per dollar of ales that were allotted to direct and indirect abor (see table L–2). Such labor costs do not epresent the total wage and salary costs for he operations covered. Wages and salaries are ncluded in some of the other expense classifi-ations, notably, research and development, elling expenses, and administrative and gen-ral office expenses. However, all labor cost vhich is a direct charge to the cost of goods old is shown in the two labor classifications.

The figures are for 1940 only and it has not een possible to collect similar information for ater years. Therefore, caution should be used n applying the ratios in table L–2 to any cur-ent situation.

The selection of the corporations in the ample was determined by the importance of he industry to the defense and war effort, the umber of firms necessary to obtain a sample overing at least 35 percent of the sales vol-me of widely scattered industries, or 75 per-ent or more of concentrated industries, which-ver was more practicable. The need of certain ational defense and war agencies for statistics vas also taken into consideration.

The industrial operating information collected was classified by major and minor groups as designated by the Standard Industrial Classification issued by the Division of Statistical Standards of the Bureau of the Budget, Executive Office of the President. The information was tabulated by related industry groups so as to avoid disclosing the financial results for any individual corporation. The key to the major industrial groups is reproduced below for the purpose of aiding in the regrouping of related product industries for comparative purposes.

Number and product group:
20—Food and kindred products
21—Tobacco manufactures
22—Textile-mill products
23—Apparel and other finished products made from fabrics and similar materials
24—Lumber and timber basic products
25—Furniture and finished lumber products
26—Paper and allied products
27—Printing, publishing, and allied industries
28—Chemicals and allied products
29—Products of petroleum and coal
30—Rubber products
31—Leather and leather products
32—Stone, clay, and glass products
33—Iron and steel and their products
34—Transportation equipment (except automobiles)
35—Nonferrous metals and their products
36—Electrical machinery
37—Machinery (except electrical)
38—Automobiles and automobile equipment
39—Miscellaneous manufacturing industries

Table L-2: Operating cost ratios, including direct and other labor cost ratios, of 2,688 corporations in 86 industries, 1940[1]

Industry	Number of corporations	Direct materials	Direct labor	Other labor	Depreciation	Repairs and maintenance	Other costs and finished goods	Corporate taxes	Social security and pension fund payments	Research and development expense	Selling and delivery expense	Advertising expense	Administrative and general office expense	Uncollectible accounts	industria group
	Operating ratios or cents per dollar of sales														
Agricultural machinery and tractors	20	37.36	13.09	7.75	2.36	3.18	6.40	1.52	1.69	1.31	10.79	1.33	1.61	0.91	37
Aircraft	25	36.55	19.14	7.86	2.00	1.26	4.80	1.04	1.22	2.62	1.47	0.26	1.95	0.01	34
Asbestos and abrasives	32	28.91	11.14	8.87	2.16	2.61	10.33	0.97	1.13	0.79	12.20	1.59	4.53	0.16	32
Automobile parts and accessories	64	42.58	13.95	10.06	2.38	3.05	5.41	0.88	1.24	0.70	3.24	0.90	2.63	0.10	38
Beet sugar	14	50.98	5.96	2.36	3.39	4.40	2.81	1.77	0.72	0.05	12.81	0.21	1.95	0.04	20
Biscuits and crackers	7	34.57	11.34	1.62	2.43	1.76	3.27	1.48	1.47	0.03	23.23	2.60	4.73	0.08	20
Blowers; exhaust and ventilating fans	10	27.29	12.29	7.96	1.39	1.94	12.77	0.85	1.22	0.78	9.91	2.62	10.48	0.12	37
Bolts, nuts, washers, and rivets	33	40.55	17.12	7.47	2.60	......	10.16	0.96	1.17	0.06	4.23	0.21	5.86	0.05	33
Bread and bakery products	82	38.84	12.96	(1)	2.12	1.55	6.70	1.15	1.20	0.01	24.24	2.63	3.36	0.06	20
Byproduct coke	7	58.6	8.4	2.2	4.1	4.8	4.4	1.5	0.6	0.2	2.8	0.4	2.4	0.1	29
Cane sugar	17	77.64	3.88	1.92	1.46	1.27	3.80	1.08	0.38	0.01	4.62	0.17	1.75	0.07	20
Cement	23	18.84	11.78	3.81	8.84	7.14	14.15	2.44	0.95	0.22	8.83	0.87	4.57	0.18	32
Cereal preparations	14	47.74	4.98	1.13	1.54	1.22	6.34	0.92	1.49	0.17	5.77	13.08	3.26	0.02	20
Chemicals (industrial)	33	27.83	12.87	(1)	5.25	3.40	15.40	1.41	1.07	1.16	6.10	0.89	3.87	0.11	28
Cigarettes, cigars, and other tobacco products:															21
Cigarettes	10	47.2	6.1	1.5	0.9	0.6	1.7	1.2	0.6	......	4.6	11.3	1.4	0.1	......
Cigars	12	42.0	18.7	3.8	0.9	0.8	5.4	0.8	1.1	......	7.4	5.4	2.9	0.2	......
Other tobacco products	6	33.5	6.2	4.7	1.1	1.2	3.2	1.8	0.9	......	10.6	8.2	6.1	......	......
Clay products (other than pottery)	22	23.08	21.29	5.59	4.43	6.61	9.61	1.27	1.53	0.61	7.92	0.33	5.25	0.16	32
Commercial laundry, dry cleaning, and pressing machines	6	29.23	11.76	10.71	2.50	1.69	10.06	0.96	1.33	1.66	17.51	1.84	4.67	0.98	37
Copper (primary) smelting and refining	13	19.99	18.34	(1)	4.36	6.22	19.47	2.52	0.91	0.10	1.36	0.16	1.30	0.04	35
Corn products	11	55.48	5.40	3.37	2.44	3.05	4.81	1.06	0.82	0.39	6.26	2.00	3.94	0.11	20
Cotton textiles	56	41.95	22.45	2.60	2.51	2.69	14.56	0.93	1.12	0.03	3.41	0.46	1.81	0.08	22
Cranes; dredging, excavating and road-building machinery	29	35.79	11.72	10.10	1.77	1.82	6.58	0.86	1.02	0.87	10.25	1.11	3.90	0.18	37
Distilled liquors	14	(2)	(2)	(2)	1.86	1.32	12.59	2.41	0.53	......	10.52	9.79	4.95	0.23	20
Drugs and medicines	20	27.52	5.74	3.50	1.21	1.23	4.33	1.21	0.92	1.32	13.41	13.94	5.50	0.18	28 & 39
Electrical machinery and apparatus	49	23.41	14.95	11.86	2.30	2.30	9.28	0.84	2.18	4.85	9.13	1.58	3.06	0.08	36
Elevators, escalators, and conveyors	22	26.64	17.06	8.44	1.67	1.55	8.45	1.31	2.37	0.54	7.75	1.04	11.60	0.19	37
Fertilizer	23	64.44	9.21	(1)	2.58	2.52	4.14	1.29	0.67	0.13	6.23	0.80	3.68	0.80	28
Firearms and ammunition	12	24.09	18.82	9.22	2.42	0.86	11.89	1.21	1.74	0.05	4.82	1.68	2.87	0.12	28 & 33
Flour milling	22	70.10	3.10	1.49	0.95	0.62	7.42	0.69	0.49	0.11	6.22	3.03	3.30	0.07	20
Food products machinery	23	31.43	10.00	6.55	2.11	1.01	15.24	0.76	0.92	1.01	14.01	1.50	5.46	0.44	37
Footwear (except rubber):															31
Selling tn non-affiliated distributors	28	41.9	22.2	4.1	1.1	0.8	9.4	0.6	1.3	......	8.4	2.0	2.6	0.2	......
Selling through own retail stores	10	31.8	18.6	1.5	0.9	0.9	19.6	0.8	1.1	......	14.2	1.6	3.2	0.1	......
Forgings (iron and steel)	32	28.10	15.91	8.67	2.60	5.71	12.21	0.96	1.15	0.02	2.53	0.26	3.48	0.07	33
Fruit and vegetable canning	49	51.85	8.28	2.73	1.49	1.31	7.76	0.91	0.83	0.13	6.87	4.49	3.36	0.09	20
Furniture	71	40.27	19.17	5.70	1.40	5.86	2.03	0.92	1.24	0.34	8.85	1.59	4.03	0.22	25
Glass and glassware	22	26.43	17.80	5.16	3.78	4.73	12.60	1.12	1.26	1.15	6.36	1.25	3.06	0.20	32
Gray-iron and malleable-iron castings	217	32.99	25.87	8.44	2.88	2.99	7.04	1.12	1.70	0.27	3.58	0.30	4.88	0.10	33
Gypsum products	9	26.05	9.85	3.25	3.99	3.70	16.69	1.23	0.85	0.36	9.62	1.57	3.41	0.48	32
Hardware	35	27.86	17.75	9.26	1.96	2.87	10.69	1.21	1.43	0.26	8.38	1.06	5.66	0.14	33
Heating and cooking apparatus (except electric)	39	29.57	12.62	8.41	2.26	1.69	12.66	1.17	1.29	0.48	12.63	2.20	3.82	0.29	33
Internal combustion engines	13	32.72	12.12	11.66	2.38	2.21	10.21	0.81	1.23	1.10	7.16	1.33	4.09	0.14	37
Lead and zinc (primary) smelting and refining	17	47.31	9.67	4.38	2.59	3.75	11.68	1.10	1.12	0.47	3.23	0.39	2.70	0.09	35
Lead and zine (secondary) smelting and refining	30	72.69	5.53	1.68	0.91	0.68	5.59	0.49	0.33	0.19	2.75	0.28	3.17	0.19	35
Linoleum and other hard-surface floor coverings	10	36.47	9.66	7.37	2.80	3.13	12.28	1.09	1.52	0.60	8.78	3.67	3.67	0.11	22
Lumber and timber products	77	30.84	23.63	3.86	3.81	3.09	12.74	1.69	1.29	0.23	5.18	0.21	3.95	0.18	24
Machine-tool accessories and machinists' precision tools	29	24.15	16.10	9.51	1.81	2.26	5.10	0.80	1.13	0.68	7.28	0.52	3.36	0.07	37
Machine tools	40	22.69	18.25	10.45	1.99	2.33	5.07	0.97	1.27	0.43	5.72	0.64	3.34	0.05	37
Malt beverage brewing	41	26.85	9.36	3.42	3.57	1.70	8.16	1.36	0.81	0.04	15.70	8.97	4.74	0.26	20
Matches	9	51.26	14.40	1.94	1.84	3.04	4.86	1.19	0.95	0.52	12.75	0.28	3.12	0.24	25
Mechanical measuring instruments	10	23.18	12.85	12.88	1.47	1.19	4.19	0.95	1.82	1.98	13.15	2.17	6.26	0.04	37
Mechanical stokers	9	36.14	18.22	7.74	1.72	2.70	3.79	0.88	1.31	0.74	8.16	1.07	4.31	0.43	37
Men's and boys' clothing:															23
Selling through own retail stores	5	31.8	17.4	0.9	0.2	0.2	7.2	1.3	1.2	......	20.9	4.2	3.0	0.5	......
Selling to trade	21	42.2	27.3	4.3	0.6	0.7	4.6	0.5	1.4	0.1	6.4	3.6	5.4	0.2	......
Selling direct to wearer	3	40.8	24.8	4.0	0.4	0.2	2.3	0.4	1.5	......	18.5	1.7	5.1	0.2	......
Merchant pig iron	10	51.30	14.75	(1)	4.60	5.72	7.01	1.76	0.74	0.08	1.23	0.15	1.34	0.07	33
Mining machinery and equipment	27	35.99	12.17	8.04	1.83	2.07	10.84	0.91	1.03	0.60	8.53	0.81	4.76	0.37	37
Milk and milk products	122	64.06	5.10	(1)	1.48	......	7.34	0.65	0.58	0.03	12.44	1.10	3.34	0.35	20
Motor vehicles	23	49.60	10.58	7.97	2.38	4.60	5.23	0.89	0.96	1.04	3.29	1.94	1.15	0.02	38
Office and store machines	20	9.20	13.69	8.96	4.30	3.77	4.98	1.56	1.62	1.37	26.72	2.63	5.58	0.49	37
Oil-field machinery and tools	23	38.01	13.81	4.76	2.80	2.32	16.11	1.16	1.05	0.42	8.61	0.58	4.15	0.42	37
Paints, varnishes and lacquers	40	50.15	5.74	2.86	1.16	1.03	6.81	1.10	0.89	0.45	13.33	2.46	4.98	0.27	28
Paper and pulp	150	39.64	14.18	4.43	4.25	4.22	8.88	1.40	0.92	0.29	4.49	0.79	3.75	0.18	26
Paving and roofing materials	18	40.54	8.03	8.69	2.71	3.44	12.08	0.99	0.91	0.36	10.97	2.08	3.88	0.24	29
Petroleum (crude) producing	17	42.08	7.71	2.31	8.43	2.70	10.46	4.48	0.78	......	0.32	0.08	5.55	0.04	13
Petroleum refining and marketing	40	42.24	3.71	2.69	5.48	2.92	16.37	2.50	1.17	0.38	12.51	1.25	2.28	0.14	29
Plastics	19	32.78	16.21	6.81	2.73	2.54	7.42	0.99	1.17	0.85	8.34	0.77	4.09	0.33	28 & 39
Plumbers' supplies	16	24.70	15.12	6.54	1.75	3.20	25.92	1.04	1.26	0.13	6.93	0.89	3.49	0.26	32 & 33
Power boilers and associated products	19	50.73	14.73	6.75	1.45	2.01	2.24	0.70	1.18	0.62	6.09	0.40	3.01	0.21	33
Pumps, pumping equipment, and air compressors	20	35.15	12.60	9.43	2.42	1.35	6.91	1.07	1.60	0.95	12.71	1.61	6.17	0.22	37
Railroad equipment	32	45.98	11.73	6.69	3.92	4.54	6.56	1.03	1.38	0.48	2.56	0.33	3.63	0.04	34
Rayon and allied products	14	24.45	18.80	7.91	7.27	4.91	5.40	1.28	1.28	0.70	2.07	0.87	2.71	0.13	28
Refrigeration and air-conditioning equipment	21	42.45	11.05	6.71	2.23	1.32	10.86	0.76	0.97	0.72	8.45	2.02	2.68	0.24	37

See footnotes at end of table.

ABLE L-2: Operating cost ratios, including direct and other labor cost ratios, of 2,688 corporations in 86 industries, 1940[1]—Continued

Industry	Number of corporations	Direct material	Direct labor	Other labor	Depreciation	Repairs and maintenance	Other costs and finished goods	Corporate taxes	Social security and pension fund payments	Research and development expense	Selling and delivery expense	Advertising expense	Administrative and general office expense	Uncollectible accounts	Major industrial group
	Operating ratios or cents per dollar of sales														
bber products	29	41.97	9.22	6.92	2.70	1.83	11.41	1.20	1.01	0.39	12.20	2.07	1.91	0.31	30
ew-machine products and wood screws	23	27.50	20.40	11.01	2.75	....	11.71	1.03	1.44	0.02	4.30	0.36	5.91	0.11	33
ving machines	8	20.47	9.34	4.94	1.66	0.57	3.96	2.35	1.09	0.40	35.55	0.98	3.34	5.68	37
ipbuilding	16	41.17	28.46	5.11	0.97	1.83	1.92	0.68	1.88	0.01	0.64	0.06	3.91	0.05	34
elting and refining equipment	7	35.89	12.09	5.67	0.99	0.72	16.10	0.91	0.96	1.07	9.07	1.72	6.09	0.14	37
ap, cottonseed products, and cooking fats	20	50.35	3.44	2.53	1.25	1.43	4.22	2.93	0.49	0.55	8.89	10.94	2.30	0.16	28 & 20
ecial industry machinery	98	36.83	16.99	7.62	2.17	1.21	6.73	1.08	1.31	0.98	9.60	0.96	6.43	0.50	37
eam engines and turbines	5	31.78	11.89	13.98	2.08	2.30	4.17	0.72	1.21	0.38	4.10	0.66	3.23	0.09	37
eel castings	39	27.71	24.03	9.83	3.52	....	9.83	1.27	1.50	0.40	4.77	0.24	3.78	0 03	33
nned, curried, and finished leather	37	66.02	13.05	2.37	0.86	1.48	5.49	0.64	0.76	0.03	3.53	0.24	2.10	0.15	31
xtile dyeing and finishing (except woolen and worsted)	27	51.60	17.68	4.70	2.82	2.00	8.86	0.84	1.06	0.04	3.02	0.22	2.74	0.12	22
xtile machinery	49	25.05	18.21	13.25	2.63	2.91	7.43	0.82	1.67	1.75	5.64	0.95	5.23	0.11	37
n cans and tinware	9	57.98	8.22	4.39	3.21	2.97	2.97	0.88	0.90	0.35	3.10	0.61	2.31	0.26	33
all board and wall plaster (except gypsum), building insulation and floor composition	15	26.91	9.75	5.67	2.91	2.76	15.70	1.03	0.96	0.37	13.00	3.45	5.41	0.20	32
ater softening equipment	19	43.47	13.36	5.02	0.96	1.12	4.00	0.71	1.12	1.25	11.46	1.55	6.62	0.16	37
ire and cable (electrical)	34	60.96	8.96	4.49	1.61	1.88	5.56	0.64	0.65	0.32	3.85	0.33	2.54	0.10	35
ool carpets and rugs	21	39.38	17.85	4.34	2.18	2.42	5.23	1.06	1.23	0.20	7.21	2.30	4.04	0.34	33
oolens and worsteds	44	57.49	15.35	5.83	1.46	2.03	3.92	0.70	0.94	0.22	3.56	0.32	2.11	0.07	22

[1] Combined with direct labor.

[2] Not pertinent.

Source: Federal Trade Commission, Industrial Corporation Reports, Summary 1940 ries.

National Income and Expenditures

Revised series on national income and expenditures from 1929 through 1946 were made available by the Bureau of Foreign and Domestic Commerce, United States Department of Commerce in the July 1947 National Income Supplement and the July 1948 issue of the Survey of Current Business. These series incorporate several technical changes in the treatment of components and in the use of statistical procedures, designed to yield an interrelated and consistent system of national income accounting. A forthcoming volume is intended to supplement the summary explanation of the changes in concept and method described in the July 1947 bulletin.

Gross national product or expenditure is the market value of the output of goods and services produced by the Nation's economy, before deduction of depreciation charges and other allowances for business and institutional consumption of durable capital goods.

Gross national product and national income statistics are shown in tables L–3 and L–4.

When the handbook was sent to press, personal income distribution by States (table L–5) was not available on a basis comparable with the national totals shown herein.

The series of personal income statistics in table L–6 replaces what was formerly called income payments to individuals. The new term is believed to be more descriptive for an aggregate that includes, as previously, such items as income in kind, income of proprietors, and rental income; it also includes income of nonprofit institutions and of private pension, welfare, and trust funds. The shift from income payments to individuals to personal income also involves some change in concept.

Retail sales, shown in table L–7, supplement the data on personal consumption expenditures, which are shown in table L–6.

Table L–8 presents corporate profits before and after taxes, as has been shown in the revised series published in the July 1947 Supplement and the July 1948 issue of the Survey of Current Business. The revised series of national income includes corporate profits before, rather than after, taxes. This change was made so that national income will more accurately reflect factor costs of current production.

TABLE L-3: Gross national product or expenditure, 1929–47

[In millions]

Item	1929	1930	1931	1932	1933	1934	1935	1936	1937
s national product	$103,828	$90,857	$75,930	$58,340	$55,760	$64,868	$72,193	$84,705	$90,213
Personal consumption expenditures	78,761	70,789	61,153	49,208	46,346	51,882	56,215	62,515	67,121
Durable goods	9,362	7,275	5,569	3,694	3,503	4,255	5,158	6,374	7,005
Nondurable goods	37,742	34,052	28,955	22,743	22,254	26,732	29,377	32,887	35,232
Services	31,657	29,462	26,629	22,771	20,589	20,895	21,680	23,254	24,884
Gross private domestic investment	15,824	10,209	5,362	886	1,306	2,807	6,146	10,540	11,440
New construction[1]	7,824	5,566	3,561	1,668	1,142	1,420	1,890	2,783	3,687
Producers' durable equipment	6,438	4,926	3,162	1,781	1,783	2,531	3,351	4,531	5,414
Change in business inventories	1,562	—283	—1,361	—2,563	—1,619	—1,144	905	3,226	2,309
Net foreign investment	771	690	197	169	150	429	—54	—93	62
Government purchases of goods and services	8,472	9,169	9,218	8,077	7,958	9,750	9,886	11,743	11,590
Federal	1,311	1,410	1,537	1,480	2,018	2,991	2,931	4,815	4,552
War[2]	1,344	1,432	1,549	1,484	2,022	2,997	2,935	4,818	4,557
Nonwar[2]									
Less: Government sales[3]	33	22	12	4	4	6	4	3	5
State and local	7,161	7,759	7,681	6,597	5,940	6,759	6,955	6,928	7,038

Item	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947
s national product	$84,683	$90,426	$100,477	$125,294	$159,628	$192,573	$212,231	$213,429	$209,266	$231,636
Personal consumption expenditure	64,513	67,466	72,052	82,255	90,835	101,626	111,401	122,830	147,363	164,755
Durable goods	5,754	6,729	7,854	9,750	6,845	6,515	6,890	8,254	16,242	20,963
Nondurable goods	34,032	35,258	37,594	43,960	52,952	61,205	67,473	75,367	87,478	96,487
Services	24,727	25,479	26,604	28,545	31,028	33,906	37,038	39,209	43,643	47,305
Gross private domestic investment	6,311	9,004	12,983	17,211	9,330	4,591	6,395	9,244	26,458	30,031
New construction[1]	3,309	3,986	4,600	5,661	3,212	2,010	2,347	3,314	8,903	11,662
Producers' durable equipment	3,975	4,577	6,108	7,676	4,702	3,761	5,402	7,272	12,784	17,751
Change in business inventories	—973	441	2,275	3,874	1,416	—1,180	—1,354	—1,342	4,771	618
Net foreign investment	1,109	888	1,509	1,124	—207	—2,245	—2,099	—1,438	4,672	8,898
Government purchases of goods and services	12,750	13,068	13,933	24,704	59,670	88,601	96,534	82,793	30,773	27,952
Federal	5,280	5,157	6,170	16,923	52,027	81,223	89,006	74,796	20,792	15,616
War[2]	5,286	1,258	2,223	13,794	49,567	80,384	88,615	75,923	21,184	16,926
Nonwar[2]		3,908	3,956	3,173	2,664	1,480	1,552	1,031	2,469	
Less: Government sales[3]	6	9	9	44	204	641	1,161	2,158	2,861	1,310
State and local	7,470	7,911	7,763	7,781	7,643	7,378	7,528	7,997	9,981	12,336

ncludes construction expenditures for crude petroleum and natural gas drilling.

The classification of purchases of goods and services into war and nonwar conforms, eneral, to the Daily Treasury Statement classification of general and special account enditures. War purchases include also that part of the capital formation of govern- nt enterprises which is attributable to their war activities. Government contributions to the National Service Life Insurance Fund are classified as war; all other government contributions for social insurance, as nonwar.

[3]Consists of sales abroad and domestic sales of surplus consumption goods and materials.

TABLE L-4: National income by distributive shares, 1929-47

[In millions]

Item	1929	1930	1931	1932	1933	1934	1935	1936	1937
National income	$87,355	$75,003	$58,873	$41,690	$39,584	$48,613	$56,789	$66,941	$73,627
Compensation of employees	50,786	46,515	39,470	30,826	29,330	34,067	37,107	42,675	47,696
Wages and salaries	50,165	45,894	38,886	30,284	28,825	33,520	36,508	41,754	45,948
Private	45,206	40,720	33,607	25,297	23,660	27,420	29,984	33,866	38,432
Military	312	315	308	295	270	271	306	338	358
Government civilian[1]	4,647	4,859	4,971	4,692	4,895	5,829	6,218	7,550	7,158
Supplements to wages and salaries	621	621	584	542	505	547	599	921	1,748
Employer contributions for social insurance	101	106	111	126	133	147	171	418	1,234
Other labor income	520	515	473	416	372	400	428	503	514
Income of unincorporated enterprises and inventory valuation adjustment	13,927	10,963	8,214	4,921	5,207	6,603	9,858	12,164	12,249
Business and professional	8,262	7,032	5,316	3,206	2,925	4,276	4,987	6,074	6,630
Income of unincorporated enterprises	8,120	6,277	4,705	2,911	3,450	4,330	5,037	6,194	6,659
Inventory valuation adjustment	142	755	611	295	—525	—54	—50	—120	—29
Farm[2]	5,665	3,931	2,898	1,715	2,282	2,327	4,871	6,090	5,619
Rental income of persons	5,811	4,786	3,620	2,508	2,018	2,095	2,288	2,682	3,140
Corporate profits and inventory valuation adjustment	10,290	6,563	1,631	—1,995	—1,981	1,098	2,997	4,946	6,166
Corporate profits before tax	9,818	3,303	—783	—3,042	162	1,723	3,224	5,684	6,197
Corporate profits tax liability	1,398	848	500	382	524	746	965	1,411	1,512
Corporate profits after tax	8,420	2,455	—1,283	—3,424	—362	977	2,259	4,273	4,685
Dividends	5,823	5,500	4,098	2,574	2,066	2,596	2,872	4,557	4,693
Undistributed profits	2,597	—3,045	—5,381	—5,998	—2,428	—1,619	—613	—284	—8
Inventory valuation adjustment	472	3,260	2,414	1,047	—2,143	—625	—227	—738	—31
Net interest	6,541	6,176	5,938	5,430	5,010	4,750	4,539	4,474	4,376

Item	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947
National income	$67,375	$72,532	$81,347	$103,834	$136,486	$168,262	$182,407	$181,731	$179,289	$202,500
Compensation of employees	44,747	47,820	51,786	64,280	84,689	109,102	121,119	122,908	117,294	127,501
Wages and salaries	42,812	45,745	49,587	61,708	81,681	105,537	116,882	117,556	111,710	122,159
Private	34,564	37,519	41,130	51,537	65,628	78,671	83,333	82,046	91,016	104,727
Military	370	398	591	1,862	6,285	14,478	20,706	22,476	7,761	3,876
Government civilian[1]	7,878	7,828	7,866	8,309	9,768	12,388	12,843	13,034	12,933	13,556
Supplements to wages and salaries	1,935	2,075	2,190	2,572	3,008	3,565	4,237	5,352	5,584	5,342
Employer contributions for social insurance	1,423	1,540	1,624	1,983	2,302	2,677	2,935	3,803	3,951	3,520
Other labor income	512	535	575	589	706	888	1,302	1,549	1,633	1,822
Income of unincorporated enterprises and inventory valuation adjustment	10,768	11,282	12,660	16,504	22,724	25,951	27,370	29,051	35,064	38,866
Business and professional	6,347	6,776	7,720	9,566	12,112	14,128	15,435	16,791	20,436	23,216
Income of unincorporated enterprises	6,126	6,942	7,772	10,210	12,464	14,266	15,486	16,853	21,815	24,384
Inventory valuation adjustment	221	—166	—52	—644	—352	—138	—51	—62	—1,379	—1,168
Farm[2]	4,421	4,506	4,940	6,938	10,612	11,823	11,935	12,260	14,628	15,650
Rental income of persons	3,278	3,465	3,620	4,322	5,371	6,150	6,735	6,991	6,702	7,131
Corporate profits and inventory valuation adjustment	4,292	5,753	9,177	14,615	19,824	23,692	24,039	19,776	16,812	24,709
Corporate profits before tax	3,329	6,467	9,325	17,232	21,098	24,516	24,333	20,389	21,840	29,784
Corporate profits tax liability	1,040	1,462	2,878	7,846	11,665	14,153	13,525	11,641	9,000	11,709
Corporate profits after tax	2,289	5,005	6,447	9,386	9,433	10,363	10,808	8,748	12,840	18,075
Dividends	3,195	3,796	4,049	4,465	4,297	4,477	4,680	4,720	5,605	6,880
Undistributed profits	—906	1,209	2,398	4,921	5,136	5,886	6,128	4,028	7,235	11,195
Inventory valuation adjustment	963	—714	—148	—2,617	—1,274	—824	—294	—613	—5,028	—5,075
Net interest	4,290	4,212	4,104	4,113	3,878	3,367	3,144	3,005	3,417	4,293

[1] Includes the pay of employees of government enterprises and of permanent United States residents employed in the United States by foreign governments and international organizations.

[2] Inventory valuation adjustment data for farms are not available separately.

EDITOR'S NOTE:

TABLE L–5: Personal income distribution, by States

This table was in process of revision when the Handbook was sent to press and will be supplied later.

TABLE L-6: Personal income and disposition of income, 1929–47

[In millions]

Item	1929	1930	1931	1932	1933	1934	1935	1936	1937
rsonal Income	$85,127	$76,195	$64,835	$49,274	$46,629	$53,230	$59,861	$70,575	$73,976
Wage and salary receipts	50,023	45,747	38,735	30,132	28,673	33,363	36,346	41,574	45,382
Total employer disbursements	50,165	45,894	38,886	30,284	28,825	33,520	36,508	41,754	45,948
Less: Employee contributions for social insurance	142	147	151	152	152	157	162	180	566
Other labor income	520	515	473	416	372	400	428	503	514
Proprietors' and rental income	19,738	15,749	11,834	7,429	7,225	8,698	12,146	14,846	15,389
Dividends	5,823	5,500	4,098	2,574	2,066	2,596	2,872	4,557	4,693
Personal interest income	7,524	7,140	7,022	6,571	6,180	5,980	5,680	5,575	5,580
Transfer payments	1,499	1,544	2,673	2,152	2,113	2,193	2,389	3,520	2,418
ss: Personal tax and nontax payments	2,643	2,507	1,858	1,455	1,464	1,595	1,888	2,258	2,921
Federal	1,263	1,134	607	331	474	595	827	1,130	1,723
State and local	1,380	1,373	1,251	1,124	990	1,000	1,061	1,128	1,198
uals: Disposable personal Income	82,484	73,688	62,977	47,819	45,165	51,635	57,973	68,317	71,055
ss: Personal consumption expenditures	78,761	70,789	61,153	49,208	46,346	51,882	56,215	62,515	67,121
uals: Personal saving	3,723	2,899	1,824	—1,389	—1,181	—247	1,758	5,802	3,934

Item	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947
rsonal income	$68,327	$72,607	$78,347	$95,308	$122,159	$149,432	$164,500	$170,339	$178,054	$195,198
Wage and salary receipts	42,258	45,149	48,929	60,907	80,515	103,489	114,839	115,208	109,754	120,091
Total employer disbursements	42,812	45,745	49,587	61,708	81,681	105,328	117,075	117,542	111,740	122,159
Less: Employee contributions for social insurance	554	596	658	801	1,166	1,839	2,236	2,334	1,986	2,068
Other labor income	512	535	575	589	706	888	1,302	1,549	1,633	1,822
Proprietors' and rental income	14,046	14,747	16,280	20,826	28,095	32,101	34,105	36,042	41,766	45,997
Dividends	3,195	3,796	4,049	4,465	4,297	4,477	4,680	4,720	5,605	6,880
Personal interest income	5,482	5,417	5,395	5,402	5,395	5,507	5,947	6,670	7,883	8,732
Transfer payments	2,834	2,963	3,119	3,119	3,151	2,970	3,627	6,150	11,413	11,676
ss: Personal tax and nontax payments	2,862	2,440	2,604	3,293	5,962	17,815	18,926	20,909	18,878	21,621
Federal	1,635	1,235	1,364	2,016	4,668	16,517	17,536	19,379	17,162	19,661
State and local	1,227	1,205	1,240	1,277	1,294	1,298	1,390	1,530	1,716	1,960
uals: Disposable personal income	65,465	70,167	75,743	92,015	116,197	131,617	145,574	149,430	159,176	173,577
ss: Personal consumption expenditures	64,513	67,466	72,052	82,255	90,835	101,626	111,401	122,830	147,363	164,755
uals: Personal saving	952	2,701	3,691	9,760	25,362	29,991	34,173	26,600	11,813	8,822

TABLE L-7: Retail sales, 1929–47[1]

[In millions]

Year	All retail stores	Durable goods stores	Nondurable goods stores
1929	$48,459	$14,180	$34,279
1930	41,989	10,269	31,720
1931	34,752	7,372	27,380
1932	25,013	4,034	20,979
1933	24,517	4,844	19,673
1934	28,743	5,959	22,784
1935	32,791	7,626	25,165
1936	38,338	9,863	28,475
1937	42,150	11,071	31,079
1938	38,053	8,591	29,462
1939	42,042	10,379	31,663
1940	46,388	12,418	33,970
1941	55,490	15,604	39,886
1942	57,552	9,846	47,706
1943	63,680	9,339	54,341
1944	69,484	9,967	59,517
1945	76,572	11,498	65,074
1946	100,255	20,756	79,499
1947	117,724	28,666	89,058

[1] Estimates of retail sales are based on weighted identical samples, adjusted to Census data, supplemented by various retail sale series for specific industries and by sales tax receipts data. Detailed information on the method of estimating may be found in the 1942 Supplement to the Survey of Current Business (pp. 186–187); and in the November 1943 issue of the Survey (pp. 6–14 and 19–20). Estimates and revisions are published currently in the Survey of Current Business.

TABLE L-8: Corporate profits before and after Federal and State income and excess profits taxes, 1929–47[1]

[In millions]

Industry	1929	1930	1931	1932	1933	1934	1935	1936	1937
	BEFORE TAXES								
private industries	$9,818	$3,303	—$783	—$3,042	$162	$1,723	$3,224	$5,684	$6,197
Agriculture, forestry, and fisheries	20	—35	—68	— 69	—29	—28	16	28	14
Mining	466	125	—122	—89	—12	179	195	322	469
Contract construction	121	93	1	—88	—51	—27	0	27	42
Manufacturing	5,038	1,704	—274	—1,291	840	1,388	2,234	3,606	3,711
Wholesale and retail trade	776	—17	—416	—726	85	409	544	912	815
Finance, insurance, and real estate	1,200	199	—303	—661	—672	—575	—299	22	251
Transportation	1,056	433	—96	—330	—241	—162	—86	93	57
Communications and public utilities	925	715	587	451	383	558	569	661	785
Services	151	83	—36	—183	—109	—17	7	45	66
Rest of world[2]	65	3	—56	—56	—32	—2	44	—32	—13
	AFTER TAXES								
private Industries	8,420	2,455	—1,283	—3,424	—362	977	2,259	4,273	4,685
Agriculture, forestry, and fisheries	13	—39	—69	—70	—31	—33	8	18	5
Mining	416	101	—130	—97	—23	154	168	279	404
Contract construction	102	75	—8	—92	—55	— 32	—9	14	26
Manufacturing	4,403	1,327	—480	—1,423	583	1,056	1,742	2,885	2,936
Wholesale and retail trade	651	—92	—473	—767	8	291	407	705	615
Finance, insurance, and real estate	917	50	—384	—727	—728	—670	—422	—171	60
Transportation	919	359	—132	—357	—269	—212	—138	21	—20
Communications and public utilities	812	611	496	357	303	457	469	536	635
Services	122	60	—47	—192	—118	—32	—10	18	37
Rest of world[2]	65	3	—56	—56	—32	—2	44	—32	—13

Industry	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947
	BEFORE TAXES									
private industry	3,329	6,467	9,325	17,232	21,098	24,516	24,333	20,389	21,840	29,784
Agriculture, forestry, and fisheries	—7	9	24	63	84	114	120	122	140	151
Mining	219	318	442	622	616	527	517	428	486	876
Contract construction	28	32	70	188	311	235	127	97	171	262
Manufacturing	1,601	3,712	5,601	11,140	12,695	14,309	13,972	10,870	11,264	18,200
Wholesale and retail trade	401	838	1,116	2,179	2,624	3,132	3,429	3 633	4,828	4,743
Finance, insurance, and real estate	295	340	487	671	871	1,138	1,447	1,609	1,838	2,047
Transportation	—178	160	332	910	2,092	2,864	2,452	1,427	661	1,095
Communications and public utilities	728	870	1,012	1,171	1,370	1,519	1,588	1,571	1,526	1,430
Services	47	74	104	189	337	548	585	615	805	775
Rest of world[2]	195	114	137	99	98	130	96	17	121	205
	AFTER TAXES									
private industries	2,289	5,005	6,447	9,386	9,433	10,363	10,808	8,748	12,840	18, 075
Agriculture, forestry, and fisheries	—12	2	13	38	41	47	50	50	76	82
Mining	183	272	364	464	405	353	361	294	346	617
Contract construction	15	18	44	97	113	70	36	29	103	157
Manufacturing	1,147	2,958	3,840	5,713	5,209	5,605	5,985	4,402	6,558	11,037
Wholesale and retail trade	262	641	785	1,235	1,160	1,293	1,376	1,518	2,849	2,799
Finance, insurance, and real estate	141	192	276	330	458	654	852	881	1,042	1,207
Transportation	—238	70	179	570	1,095	1,244	1,038	556	339	639
Communications and public utilities	578	696	748	733	701	739	768	738	926	869
Services	18	42	61	107	153	228	246	263	480	463
Rest of world[2]	195	114	137	99	98	130	96	17	121	205

Source: Tables 17 and 19, page 20, Survey of Current Business, July 1948.

[1] Special attention should be directed to the following characteristics of the estimates corporate profits before tax, and profits after tax, during recent years. These characteristics are described only in terms of profits before taxes, but they affect also ofits after taxes, since these are obtained as residuals.

(1) Originally reported profits before tax have been reduced to the extent that they ere overstated by amounts subsequently recaptured by the government by renegotiaon of war contracts. Taxes have also been reduced to take account of the reduced tax bility arising from renegotiation.

(2) By shortening the emergency amortization period for war facilities to less than the e-year span initially used, the Presidential Proclamation signed September 29, 1945, rmitted corporations to deduct additional amortization in the years 1941 to 1945 in the mputation of profits for tax purposes. Our estimates of profits and taxes correspond tax law in that amortization has been recomputed for 1941 to 1945, thus reducing ofits and taxes in these years. In contrast, most corporation reports to stockholders arged the entire amount of additional amortization charges against 1945 profits.

(3) Corporate income and excess profits taxes were reduced from the amount rerted on original tax returns for 1943, 1944, and 1945, by estimated amounts of tax edits arising in 1944, 1945, and 1946 from carry-backs of unused excess profits tax edits and net operating losses.

(4) No adjustments have yet been made to take account of tax rebates which may arise from changes in the excess profits tax credit under Section 722 (dealing with claims that profits in the 1936-39 base period were abnormally low) of the Internal Revenue Code. Also, no allowances have been made for the possible effects of reopening renegotiation cases as a result of the reduction in wartime profits caused by the recomputation of emergency amortization charges discussed above.

Corporate profits, tax, dividends and sales data are derived, with certain adjustments, from corporation income tax returns (except for the years 1945 and 1946, for which the estimates are preliminary). During the period 1934 to 1941 each single corporation, with certain exceptions, was required to file a separate return. These were classified industrially on the basis of the principal activity of the corporation. From 1929 to 1933 and from 1942 to date the filing of consolidated returns for affiliated corporations was generally permissible upon payment of a small additional tax. The consolidated group of affiliated corporations was then classified according to the principal activity of the group. Thus discontinuities in the industrial detail of the data occur between 1933 and 1934 and between 1941 and 1942.

[2] Profits received by domestic corporations from foreign branches are here excluded, and are included in the industry of the recipient corporation. Data for their elimination are not available by industry.

Average Income-Tax Payments by Income

Income-tax payments for a married worker supporting an adult and two children were compiled by the Bureau of Labor Statistics from Bureau of Internal Revenue tax forms. The amount of income taxes payable by such families in the income brackets from $1,000 to $10,000 for 1939–47, shown in table L–9, were computed by using Internal Revenue Form 1040, Individual Income Tax Return (long form) and applying to it allowances for deductible expenses, personal exemption, credit for dependents, and earned-income credit provided by Internal Revenue Tax Form 1040A (short form).

Allowances were made for deductible expenses of 6 percent of annual income for years prior to 1944 and 10 percent for 1944 and subsequent years. These deductible expenses were subtracted from total annual income to obtain net income. All income was considered to be earned. The allowance for earned-income credit is 10 percent of net income. The normal tax and surtax were computed by using the tax rates given in the instructions provided with Internal Revenue Form 1040 and were combined to obtain the total income tax. The defense tax was also added for 1940 and the victory tax for 1943.

TABLE L–9: Average income-tax payments of families, by size of income, 1939–47[1]

Average annual income	Average income-tax payments								
	1939	1940	1941	1942	1943	1944	1945	1946	1947
$1,000	......	......	......	......	$9	$12	$12	......	......
$1,500	......	......	......	......	22	26	26	......	......
$2,000	......	......	......	......	35	39	39	......	......
$2,500	......	......	$3	$71	120	102	102	$48	$48
$3,000	......	......	41	158	219	206	206	133	133
$3,500	......	$7	86	244	319	310	310	218	218
$4,000	$3	26	131	331	419	413	413	304	304
$4,500	20	44	176	427	528	518	518	390	390
$5,000	37	63	221	528	642	630	630	484	484
$8,000	148	207	637	1,196	1,389	1,353	1,353	1,094	1.094
$10,000	291	376	993	1,734	1,980	1,915	1,915	1,577	1,577

[1] Family consisting of husband, wife, and two children.

Distribution of Urban Families by Income

The Bureau of Labor Statistics cooperated[1] in a study of the income distribution of urban families of two or more persons, covering 1935–36, and made two subsequent studies for 1941 and 1944. All information was obtained by personal interview, using a detailed questionnaire. Results of all three surveys are given in table L–10; the size and character of the 1941 and 1944 samples are described in footnotes to this table. Although the samples were small, they were designed to insure the greatest possible efficiency and reliability in yielding national estimates of the distribution of national income. The estimates for 1935–36 were based on a much larger sample, primarily designed to allow study of the effect of various factors on income and expenditures.

A family was defined as a group of persons, usually related, who lived together during a designated period, who contributed to the family income or received a large part of their support from family funds. Relatives of the family head who ordinarily lived with the family but were temporarily away from home (but not living on military reservations) were included as family members. In the 1935–36 survey, sons and daughters living with their parents but paying some amount for board and lodging and not pooling their incomes in the common fund were classified as single individuals rather than as members of the family. In 1941, sons and daughters were more often than not treated as family members, even though they paid for room and board, and, in 1944, it was the usual practice to include them in the family.

Money income was defined in each survey as the sum of all types of money income received by family members during the year: wage and salary earnings (less occupational expenses), entrepreneurial net income or withdrawals, and nonearned income from all sources, exclusive of inheritances, large gifts, and lump-sum insurance settlements. In the 1935–36 survey, however, the portion of inheritances and large cash gifts used for current living expenses was treated as current income. Excluded from net money income (in all three surveys) were gains or losses from the sale of capital assets owned at the beginning of the year and funds obtained through borrowing.

---

[1] The Bureau of Labor Statistics jointly with the Bureau of Home Economics of the United States Department of Agriculture cooperated with The Works Progress Administration and the National Resources Committee in this study.

TABLE L–10: Distribution of urban families of two or more persons, by annual money income, selected periods 1935–44

Money income classes	Percent of total		
	1935-36[1]	1941[2]	1944[3]
All classes	100.0	100.0	100.0
Under $500	11.5	3.7	1.4
$500 and under $1,000	24.7	10.9	5.0
$1,000 and under $1,500	23.7	13.2	5.0
$1,500 and under $2,000	15.9	18.3	8.6
$2,000 and under $3,000	14.7	30.8	22.7
$3,000 and under $5,000	6.2	16.6	37.6
$5,000 and over	3.3	6.5	19.7

[1] Estimate of National Resources Committee, based on the Study of Consumer Purchases, adjusted by the Bureau of Labor Statistics to a money income classification. See Bureau of Labor Statistics Bulletin 822, table 3 (p. 202).

[2] The urban section of the Study of Spending and Saving in Wartime covered 1,300 families and single persons in 62 cities selected to give proper representation to city size groups, region, State, rental levels, racial composition, and proximity to a metropolis. See Bureau of Labor Statistics Bulletin 822, table 1, (p. 68).

[3] The Survey of Prices Paid by Consumers included 1,700 families and single persons in 28 metropolitan districts and 20 cities with populations under 50,000, selected to represent all cities of 2,500 or more, with respect to region, State, and city size. See Monthly Labor Review, February 1946, City Family Composition in Relation to Income, 1941 and 1944, table 2 (p. 178).

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UNITED STATES DEPARTMENT OF LABOR
L. B. Schwellenbach, *Secretary*

BUREAU OF LABOR STATISTICS
Ewan Clague, *Commissioner*

HOURS OF WORK AND OUTPUT

Bulletin No. 917

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LETTER OF TRANSMITTAL

United States Department of Labor,
Bureau of Labor Statistics,
Washington, D. C., May 21, 1947.

The Secretary of Labor:

I have the honor to transmit herewith a report on the effects of long working hours.

This report was prepared in the Industrial Hazards Division by Max D. Kossoris and Reinfried F. Kohler, assisted by Irving Zeig, Benjamin Minowitz, and Gladys C. Locke. This is one of the Bureau's pioneer studies in the general field of working conditions.

Ewan Clague, *Commissioner.*

Hon. L. B. Schwellenbach,
Secretary of Labor.

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Hours of Work and Output

Introduction and Summary

"What constitutes the optimum workweek?" is a question frequently asked by management. Presumably, what is meant by this question is: "What schedule of working hours will give me the best results?"

The answer supplied by this survey is that there is no such thing as an optimum workweek. Workers perform differently under the same hours because of a variety of factors: the incentive to produce; the physical demands which the job makes upon them; the degree to which they control the work pace; the conditions under which they work; whether they work on day, evening, or night shift; whether or not, and how frequently, shifts are rotated; and—less tangibly—whether their relations with management are cordial or otherwise.

This study shows, furthermore, that the way in which a longer work schedule is achieved has a decided bearing on the results. Thus, a 55-hour schedule may be achieved by working 5 days at 10 hours and 1 day at 5, or 6 days at 9 hours, or 5 days at 11 hours, or 7 days at 8 hours. The results in terms of efficiency, absenteeism, and output may well be different for each of these schedules, even though the total hours worked per week are identical, or nearly so. Obviously, too, the labor cost per unit of output achieved may vary considerably under these various patterns.

Generally speaking, the study indicates that, everything else being equal, the 8-hour day and 40-hour week are best in terms of efficiency and absenteeism and that higher levels of hours are less satisfactory. The results of the same increases in hours may vary widely according to the physical exertion required and the degree of control which the worker has over the job. Where the controlling factor is the pace of the machine, and if the worker can retard or speed up production only during relatively minor intervals of time—such as taking 5 minutes to take off a completed part and place a part to be processed on the machine, while the machine operation may take a half hour or more—the controlling factor is the machine. If, on the other hand, the machine works as fast or faster than the operator, then efficiency definitely depends on the exertion of the worker. It is under these types of conditions, or the similar ones in which no machines are involved at all, that the fatiguing factor of long hours comes into play.

In the 78 case studies presented here, covering 2,445 men and 1,060 women workers in 34 plants in a considerable variety of industries, it was generally found that the longer schedules resulted in larger output. In only a few instances were lengthened hours so long that no increase in output resulted. At times, the increment of additional output hardly warranted the ime expended and the cost involved. As a rule, however, the longer hours yielded higher output—but at a regressive rate. As hours went up, the proportionate return decreased, and unit labor cost increased. But, during the war, cost was no consideration, and output was essential at any cost. During a peacetime economy, however, the emphasis is on efficient, low-cost operation. Then the relative costs of production at various daily and weekly schedules of hours are very important.

The survey does not include any studies—except in a few clothing plants—on the effects of hours less than 40 per week. It is not possible, therefore, to make any suggestions as to the relative value of shorter work schedules. It should be quite obvious, however, that the shorter the workweek, the less any worker can afford to absent himself. The longer the workweek, the greater is the pressure for some time out to attend to personal matters—shopping, seeing the dentist or physician, attending to family matters, or just a day off for additional rest—and the less is the urgency not to lose a day's pay. It is literally true that workers cannot afford to be ill when working shorter hours and that they frequently come to work in spite of great discomfort.

Much was said and written about absenteeism during the war. Some managements attributed the higher absenteeism during the longer hours to the fatigue engendered by the longer work schedules. In addition, they realized that the long hours imposed considerable hardships on workers, particularly women, who had duties outside the plant. Others thought workers were earning so much money that they didn't know what to do with it and consequently did not see the necessity of working a full schedule. At times, this explanation appeared to have considerable basis in fact. For instance, the labor in one large foundry had been recruited from the South and received much higher hourly pay than ever before. Absenteeism ran high—presumably because this type of labor had not yet raised its standard of living to a point high enough to require the pay for a full week's work. But, whatever the reason, one fact stands out clearly in the survey: the longer the hours, the more scheduled worktime lost through absenteeism.

As a rule, the absenteeism loss of women exceeded that of men. That was generally true at every level of hours. It is known that women lose more time than men through illness, and that the periodic menstrual cycle has a bearing on this problem. When home responsibilities and the care of a household or children are added, it is not difficult to find additional explanations for this difference.

Injuries also increased as hours increased, not only in absolute numbers, but also in the rate of incidence. In most of the observed instances, the number of injuries per million hours worked was very much higher at the longer hours. Sometimes an effective accident-prevention program managed to hold the rates down to about the same level. At other times the rates went up in spite of everything that was done.

Briefly, the findings for the various types of daily and weekly schedules of hours observed may be summarized as follows:

. *The 5-day workweek—with increases in daily hours*

(a) Men at moderately heavy, but essentially machine-paced work, we early as efficient during a 10-hour day as they had been during an 8-hou ay. Absenteeism remained at about the same level.

(b) Women at light and operator-paced work were 4 to 5 percent less effi- ient during a 9- or 9½-hour day than during an 8-hour day. There was, owever, no marked change in absenteeism.

. *Adding a sixth day—with daily hours constant*

(a) Men at moderately heavy work performed about as well during the -day week as they had during the 5-day week in terms of efficiency and ab- enteeism. As a rule, daily hours were held at 8.

(b) Women at light work were about as efficient during a 6-day week at hours per day as they had been during a 5-day schedule. But absenteeism creased substantially.

(c) For both men and women, output increased substantially in the same roportion as hours.

Eliminating the sixth day—without changing daily hours

(a) Men at heavy or moderately heavy work were 5 to 10 percent more ficient during a 10-hour day, but with the sixth day eliminated. Their effi- ency was 13 to 15 percent better during an 8-hour daily schedule. There as little difference in absenteeism.

(b) Women at light work were about 7 or 8 percent more efficient during e 5-day week, with daily hours at 8 under both weekly schedules. Absen- eism tended to be less during the 5-day week.

(c) The reason for the differences in efficiency and absenteeism when add- g a sixth day and when eliminating the sixth day appears to lie in two fac- rs: (1) When hours are not too long for the physical demands involved, the ice characteristic of the 5-day week can be maintained fairly well during e 6-day week. Absenteeism is held down fairly well because of the overtime iy for the sixth day. (2) When the sixth day is eliminated, workers try to coup some of the lost earnings by speeding up during the 5-day week.

Any comparison of the 5- and 6-day schedules, with daily hours usually ld to 8, must take into account whether the sixth day is to be added or taken vay. The results are quite different.

Adding a sixth day—and increasing daily hours

(a) For both men and women at any type of work except work that was tirely automatic, the increasing of daily hours from 8 to 9 or 10 and adding sixth day, resulted in substantially poorer performance. Particularly was is true when daily hours were raised to 10 and weekly hours to 60 or more. osenteeism increased substantially for workers of both sexes, and particu- ly for women.

(b) In comparison with the pattern of the 6-day week without an increase daily hours, the 6-day schedule with increases in daily hours to 9 or 10

s decidedly less desirable. In some instances the increases in daily hours peared to have been a complete waste.

. Changing from 6 days to 5½—but increasing daily hours

(a) For women, this usually involved working 8¾ hours for 5 days and 4 hours on Saturday. Efficiency was better in every instance during the 5½-day week.

The difference in absenteeism was obscured by opposite results. Some workers found it possible to take off the one-half day Saturday because they had earned more per hour during the other days of the week. Other workers, who had the one-half day off on Saturday, found it possible to work the other half, rather than take off the entire day to attend to other needs.

(b) For men, the number of cases observed was too few to warrant any conclusions. From results in other patterns, one may hazard the guess that efficiency would rise during the 5½-day week, but that there would be little difference in absenteeism.

6. The 6-day week—with increases in daily hours

When daily hours were increased during the 6-day week, usually from 8 hours to 9 or 10, with increases in weekly hours from 48 to 54 or 60, efficiency was substantially poorer during the longer workweek for both men and women at all types of work. Absenteeism was considerably higher. Generally, it took about 3 hours of work to produce 2 additional hours of output when hours exceeded 48 per week.

7. The 6-day week—with decreases in daily hours

(a) At moderately heavy or heavy work, the efficiency of men was substantially better during the 8-hour day than it had been during the 9- and 10-hour day. Only 1 hour's output was lost for every 2 hours taken off the schedule.

(b) No observations can be presented for women workers.

8. The 7-day week—Sunday work

(a) Given a regular daily 8-hour schedule, workers performed better when no Sundays were worked. After protracted periods of 7 days of work per week, workers actually produced as much, or more, in 6 days as they formerly had in 7 days. In the cases studied, it was literally true that Sunday work meant 8 days' pay for 6 days' output.

Absenteeism was high on Sunday. Men who worked on Sunday frequently took some weekday off.

(b) Occasional, but regularly scheduled Sunday work, appears to have been better than irregular overtime during other days of the week.

9. The pattern of daily efficiencies

The daily efficiency pattern does not emerge very clearly as daily and weekly hours are increased. The one which appears to fit observations most closely is about as follows:

(a) During a 40-hour week, with 5 days at 8 hours, efficiency builds up o a peak on Wednesday or Thursday, with a slight drop on the remaining ays of the week.

(b) As hours are increased to 10 per day, for a total of 50 per week, the nidweek peak disappears and the whole week's efficiency level remains fairly onstant, at about the Monday level.

(c) When a sixth day is added, at about 8 hours, the daily efficiency level tays flat—but drops to a level lower than that which had prevailed during he 5-day week at 10 hours per day.

0. The pattern for daily absenteeism as workdays exceed 5 a week

(a) There appears to be no constant pattern for the 5-day week.

(b) When the week consists of 6 workdays, absenteeism for both men and vomen is highest on Saturday. The absenteeism rate is particularly high if aily hours are 9 or 10, rather than 8.

(c) Saturday absenteeism is particularly high for women. Their absenteesm rates, however, are higher than those for men on all other days of the veek as well.

(d) For the night shift, absenteeism is highest on the first night of the veek, if work begins Sunday night. There is, however, no week-end peak.

1. Work injuries

Work injuries increase disproportionately as daily hours are raised above and weekly hours are raised above 40. The frequency rate of work injuries ises even more sharply as weekly hours are raised to 54 or more.

2. Output

With few exceptions, the longer hours resulted in greater output than that roduced during the shorter schedules. As a rule, however, the increase in utput fell considerably short of the increase in hours. For hours above 8 per ay and 48 per week, it usually took 3 hours of work to produce two addiional hours of output when work was light. When the work was heavy, it ook about 2 more hours of work to produce 1 hour of additional output.

3. Work without wage incentive

The foregoing observations apply primarily to workers at piecework or nder some fairly direct form of wage incentive. When work was done at day ates, without any wage incentive, the workers were as productive at longer chedules as they had been at shorter schedules. The work pace remained ssentially the same.

It must be added, however, that long schedules had no adverse effect on vorkers operating under wage incentives if their pace during the shorter work chedule was moderate. Under such conditions they not only could maintain heir efficiency at the longer hours, but were even capable of improving it. It s likely however, that this would not hold true for weekly hours above 60, ecause of the cumulative effects of fatigue.

CHAPTER I.—The Objective

The prevalence of the 8-hour day and 40-hour week in the manufacturing plants in the United States makes it difficult to determine the effects of longer schedules of daily and weekly hours over a protracted period of time. Except in cases of unusual emergency, the general objection to overtime penalties usually holds hours to these accepted levels.

During the war, however, cost was no barrier. The pressure for maximum output, coupled with the withdrawal of millions of men from the labor force for the armed services, created a tremendous labor problem which was solved in one, and usually both, of two ways: (1) by expanding the labor force by drawing on whatever reserves were available, and (2) by working longer hours. The considerable variety of hourly patterns worked during the war afforded the unusual opportunity to observe their results.

English studies during both World Wars have indicated the folly of working excessively long hours, such as 70 or 80 per week. Immediately after Dunkirk, efficiency dropped sharply and absenteeism increased alarmingly after only a period of weeks, in spite of the drastic emergency. During brief spurts, it was possible to draw on the reserve strength of workers and to obtain greatly increased output. Over extended periods, however, it was found that the output at the high levels of hours might be no higher, and sometimes was actually lower, than it had been at the shorter hours. Efficiency declined, absenteeism and injuries increased, and the inevitable result was an output level which fell far short of the corresponding increase in hours.

Workweeks of 70 and 80 hours were infrequent in this country, even during the worst manpower shortages during the war. But weeks up to 60 hours were not uncommon, and workweeks of 54 and 58 hours were scheduled quite generally.

The simplest way of increasing weekly hours was to retain the 5-day week, but to lengthen daily hours to 9, 10, or 11. The next step was to add a sixth day. Subsequently a seventh day might be added. In other plants, the 8-hour day was maintained at first, and the workweek was lengthened by the addition of a sixth day, frequently at 8 hours. As this schedule proved inadequate, daily hours were increased to 9 or 10, with a shorter schedule on Saturday, usually varying from 4 to 8 hours. Obviously, there was no uniform pattern. Each plant tried to adjust itself to a schedule in keeping with its labor supply, production facilities, and backlog of orders.

As a rule, the limiting factor in any consideration of the effectiveness of varying work schedules is that of fatigue. The human being is not a machine and cannot keep on working with the same efficiency hour after hour. His effectiveness will vary with the physical demands which his job makes on him. He will tire faster at some types of work than at others. Where the demands on him are greater than he can bear, he either breaks down or he lows down so as to stretch his available energy over a longer working chedule.

This study, however, is not a clinical or physiological study of fatigue. The precise character of fatigue and the changes in muscular function or nervous reaction to stimuli that are involved must be left to the medical profession. This study is an attempt to determine, from industry's own experience, he ways in which this fatigue manifests itself as a practical factor limiting production—by lowering efficiency, increasing absenteeism, increasing the ncidence of work injuries, and ultimately, by effecting the level of total output. As the objective of the longer work schedule is to increase output, the criterion of the effectiveness of any one schedule of hours is the output level which can be maintained consistently at that level of hours.

The task of finding plants suitable for study was difficult. Out of more than 800 plants visited, only about 50 met the necessary qualifications. The majority of the 800 plants were willing to cooperate and were interested in finding out what their experiences showed when subjected to objective statistical measurements. But most of the plants visited could not be included in the urvey for a variety of reasons.

In order to permit the effects of various schedules of hours to emerge clearly, it was necessary to rule out all other variables. A plant, therefore, could not be studied if, during the various periods to be surveyed, hours were not maintained consistently at fairly fixed and definite schedules. During hese periods, the operations performed by the workers to be studied had to emain essentially unchanged, and the number of identical workers involved had to be reasonably large. Obviously, if the nature of the work changed materially and if the composition of the work force was changed, factors other than hours could be responsible for the changes observed. Furthermore, output had to be measurable, and records had to be available on hours, output, and absenteeism for the group of workers to be studied.

Most frequently, the absence of records was the stumbling block. It was amazing to find hundreds of plants that had no records of output, except perhaps for entire departments, and that kept no records on absenteeism or work injuries. The plants which most frequently lent themselves to the survey were plants which used some method of wage incentive and consequently had to keep some record of output and earnings for individual workers. But even in these plants, the only record frequently available was one of pay-roll earnings.

The requirements of the survey demanded further that weekly working schedules must have been altered substantially, and that the contrasting schedules must have been in effect long enough—preferably at least 6 months to a year—to permit a valid comparison of worker performance for at least two distinct levels of hours. It usually was necessary to rule out transitional periods of 1 to 4 months, during which work schedules frequently fluctuated, for the effectiveness of the new schedule to emerge clearly.

In the presentation of the completed case studies, the objective was to state the findings simply; shorn, as much as possible, of statistical verbiage and concepts. In contrast with the fairly comprehensive preliminary publications of the first 12 plant studies,[1] those included in this volume have been reduced to statements of essentials only. Each group of workers studied is presented as a separate case study; the industrial operations include plants engaged in the production of castings, forgings, radios, airplanes, industrial machinery, motors, shells, dental equipment, rubber products, cigars, clothing, hats, candles, and drugs.

No account was taken of sociological factors which undoubtedly influenced the effectiveness of workers in many ways. No attempt, for example, was made to evaluate the needs for changes in store hours so as to facilitate shopping for the industrially employed women with household duties, or the adequacy of transportation and housing facilities, or the myriad other factors which congested wartime conditions entailed. The objectives of this survey were more limited: to measure objectively the effects of working hours on the performances of workers and to determine how these schedules compared in obtaining the goal of increased output.

In the discussion of each work schedule, findings will be shown separately for heavy, moderately heavy, and light operations. In the first category are operations such as are found in forge shops and foundries, and in which the work normally involves the handling of heavy materials. The category of light work involves, as a rule, the manual handling of materials up to about 5 pounds, or the mechanical handling of somewhat heavier objects. The moderately heavy group falls somewhere between these two. Th purpose of this classification is to indicate, in a general way, the type of physical demands made upon the workers.

Findings are classified also as to pace control. In some operations, such as those involving automatic or semi-automatic screw machines, the pace was entirely controlled by the machine. In other types of machine operations the pace was essentially controlled by the machine, but the worker could exert some control by means of the speed with which he removed a processed part from the machine and replaced it with another to be processed. As a rule, operations classified as machine-paced involved a cycle in which the time interval subject to operator control was quite small as compared with the interval required by the machine. The third category is the operator-paced operation, in which the speed of the operation was controlled either entirely or primarily by the efforts of the operators.

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[1] Studies of the Effects of Long Working Hours, Part 1 and Part 2, Bulletins 791 and 791 A, U. S. Bureau of Labor Statistics, 1944.

CHAPTER II.—5-Day Week

Only 2 of the 13 case studies falling into this pattern of schedules involved nen. Both of these studies were made in the same department of a plant nanufacturing gear couplings. The 39 men in case study 7 (a) were a group of operators who had been at this work for many years. The 50 men in case tudy 7 (b) were men hired during the war. They were experienced mechancs, but not as experienced on this particular job as the men in group 7 (a).[2] n both studies, the men were engaged in a variety of machining operations n metal working machines. The work was machine-paced and moderately eavy.

As table 1 shows, a change from 8 hours per day to 10, but with the retenion of the 5-day week, resulted in a drop of 4 percent in hourly efficiency, ven though the time interval subject to operator control was small. Scheduled work time lost because of absenteeism rose to 7 percent for each group, lthough the time loss for the group of "new" employees (7 (b)) was subtantially above that of the old employees (7 (a)) during the 40-hour week.

ABLE 1.—*Effects of changes in daily and weekly hours on efficiency and absenteeism during the 5-day week*

Case study and type of work	Number of workers	Sex	Changes in hours				Efficiency percent change	Absenteeism rate [1]	
			Daily		Weekly				
			From	To	From	To		From	To
achine-controlled pace:									
7a — Moderately heavy......	39	Male	8	10	40	50	—4.0	2.7	7.0
7b — Moderately heavy......	50	....do	8	10	40	50	—4.0	5.4	7.0
perator-controlled pace:									
45a — Light........	13	Female	8	9	40	45	—5.4	(²)	(²)
45b — Light........	13	....do	8	9½	40	48	—16.2	(²)	(²)
46 — Light.........	24	....do	8	9½	40	46½	—1.0	3.2	4.6
47a — Light........	10	....do	9	9½	44½	46½	—4.0	2.8	2.8
47b — Light........	10	....do	8	9½	40	46½	—6.3	5.4	3.1
48a — Light........	21	....do	8	9½	40	46½	—2.6	3.1	2.1
48b — Light........	21	....do	8	9	40	44	—3.5	3.1	2.5
49a — Light........	13	....do	8	9	40	44	—3.0	1.9	.8
49b — Light........	13	....do	8	9½	40	47½	—1.3	5.5	4.3
58 — Light........,	28	....do	8	8 or 9	40	43	+1.3	8.4	16.7
66 — Light.........	9	....do	9	10	45	50	+1.2	5.3	5.8

[1] Percentage of scheduled worktime lost.

[2] Not determined.

The other 11 studies all involved women operators engaged in light work. Reference to the case studies themselves will show them as occupied most frequently in the stripping of tobacco leaves. In almost every study, the pace was fast and entirely controlled by the operators, who worked at piece rates.

In only one of these studies did weekly hours go as high as 50. As a rule they remained below 48. There were two reasons for this: (1) women frequently were barred from longer hours by State legislation, and it was necessary to obtain special permission to exceed the established limits; and (2), women frequently objected to working longer hours because of home duties.

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[2] To facilitate comparisons, certain individual case studies have been broken down into groups (a) and (b), in both text and tables.

In all but two of the case studies (58 and 66), the longer daily hours resulted in decreases in efficiency, ranging from as low as 1.0 percent to as high as 16.2 percent. In the two instances in which hourly efficiency increased, the increases were slight—1.3 and 1.2 percent, respectively. In case study 58, however, the absenteeism loss jumped from 8.4 percent of the scheduled employee-hours to 16.7 percent.

As a general proposition, the changes in absenteeism were minor. It is important to bear in mind that these operators were free from work on Saturday and Sunday, and that the women had the opportunity to do much of their shopping and household chores over the 2-day week end.

In every instance but one, the increased hours resulted in increased output. In that one (case study 58) the sharp increase in absenteeism overbalanced the slight increase in efficiency, so that a 43-hour week actually resulted in a somewhat lower output than obtained under the 40-hour week. Reference to table 2, however, indicates that in all cases but 2 (49 (b) and 66), the increase in output was not in direct proportion to the additional hours worked.

TABLE 2.—*Effects of changes in weekly hours on output during the 5-day week*

Case study and type of work	Weekly hours changed —		Percent change in —		Output-input ratio
	From	To	Hours	Output	
Machine-controlled pace:					
7a — Moderately heavy	40	50	+25.0	+23.5	0.9
7b — Moderately heavy	40	50	+25.0	+18.0	.7
Operator-controlled pace:					
45a — Light	40	45	+12.5	+6.4	.5
45b — Light	40	48	+20.0	+.6	(1)
46 — Light	40	46½	+16.3	+13.3	.7
47a — Light	44½	46½	+4.5	+.2	.1
47b — Light	40	46½	+16.3	+11.8	.7
48a — Light	40	46½	+16.3	+14.2	.9
48b — Light	40	44	+10.0	+6.7	.7
49a — Light	40	44	+10.0	+7.9	.8
49b — Light	40	47½	+18.8	+18.6	1.0
58 — Light	40	43	+7.5	—1.1	—.1
66 — Light	45	50	+11.1	+11.8	1.1

(1) Less than 0.1.

In the case of the men in studies 7 (a) and 7 (b), a 25-percent increase in hours resulted in 23.5 and 18 percent of increased output. As the output-input ratios show, for each additional workhour 0.9 and 0.7 of the hourly output at the lower level of hours resulted. In both of these studies, however, operations were machine-paced, so that the hours of actual machine time corresponded fairly closely to the actual working time.

All of the other studies show output depending primarily on the speed and endurance of the operators. In general, the data indicate that every 3 additional hours of work per week resulted in an equivalent output increase of only 2 hours. The ratio of output hours gained to the additional hours worked is 0.7 or less in case studies 45 (a), 45 (b), 46, 47 (a), 47 (b), 48 (b), and 58. In case 45 (b), the output of the 48-hour week was barely better than it had been under the 40-hour week—apparently 7½ hours were completely wasted. Similarly, in 47 (a), the 44½-hour week was as productive as the 46½-hour week.

The proportionate increase in output observed in case study 49 (b) reflects a persistent drive by management for increased output. In case study 66, the better ratio seems to be due primarily to the increase of 1.2 percent in efficiency at the light and repetitive task of winding small coils. The pace of these operators, however, was more moderate and could be maintained more easily.

It may be concluded from these results that, for women, at light, operator-paced operations, the effect of lengthening daily hours from 8 to 9 or 9½, and weekly hours from 40 to 46 or 47, is a drop in efficiency of 4 to 4½ percent. Except for one extreme case, the absenteeism loss was not affected materially.

Case study 7 for men at moderately heavy work (groups 7 (a) and 7 (b)), indicates that where the work pace is controlled by the machine, thus affording the operator some brief rest periods while waiting for the machine to perform its operation—for example, an automatic multiple-drill press—the increase in output is more nearly proportional to the increase in hours.

CHAPTER III.—5-Day Week vs. 6-Day Week

A.—Increasing workdays from 5 to 6; no change in daily hours

Another way of increasing weekly hours was to hold daily hours constant, but to add a sixth day to the workweek.

This method was observed in the 15 studies enumerated in table 3. In 8 of these, the work was moderately heavy, and, except for case study 7, usually involved a change from 40 hours per week to 48. In case study 7, in both groups (a) and (b), the change was from a 50-hour week to one of 58. In each instance, the group studied was composed of men.

The effects on efficiency of this lengthening in weekly hours in the moderately heavy work groups were nearly evenly divided: in three instances the addition of the sixth day resulted in decreases of efficiency, and in five, it resulted in increases. The changes were not markedly large in either group, and it may be concluded that the addition of a sixth day without increasing daily hours had no adverse effect on efficiency.

In most of these cases, the change in the percent of scheduled worktime lost because of absenteeism did not vary appreciably. The reduction in study 7 (a) from a time-loss rate of 7.0 percent under the 5-day week to 4.5 percent under the 6-day week reflects the efforts of a labor-management committee to reduce absenteeism. The efforts of this committee appear to have been less effective on the more recently hired workers in the same department—their rate increased from 7.0 percent to 8.1 percent.

Of the seven studies for light work shown in table 3, five involved women, and one, an increase in weekly hours from 50 to 58. The other six studies reflect the changes subsequent to the introduction of Saturday work, but with daily hours maintained at 8.

As table 3 shows, the addition of the sixth day had no adverse effect on efficiency in the light-work groups, even though all of it was operator-paced. Case studies 73 (a) and 73 (b) reflect the experiences of groups whose pace was moderate, as was true of case 74 in the table. It seems reasonable to assume that these groups responded to the wartime urgency as well as the chance to increase their overtime earnings by increasing their work pace.

It is to be noted, however, that in every instance the shift to a 6-day week resulted in marked increases in absenteeism for the female operators. The time-loss percentage was doubled and more than quadrupled in case studies 73 (a) and 73 (b), and more than doubled in 38. In case study 58, it rose from 8.4 to 10.3. As a rule, the absenteeism loss for women was higher than that for men under both the 5-day and 6-day weeks.

The composite effects of changes in efficiency and changes in absenteeism are reflected in the output changes shown in table 4.

In every instance, the longer workweek resulted in increased production.

TABLE 3.—*Effects on efficiency and absenteeism of increasing workdays from 5 to 6 per week, without changes in daily hours*

Case study and type of work	Number of workers	Sex	Daily hours	Weekly hours changed —		Efficiency percent change	Absenteeism rate [2]	
				From	To [1]		From	To
Machine-controlled pace:								
7a — Moderately heavy..	39	Male	10	50	58	—2.1	7.0	4.5
7b — Moderately heavy..	50	....do	10	50	58	—1.0	7.0	8.1
8 — Moderately heavy...	700	....do	8	40	48	+1.0	1.8	(3)
Operator-controlled pace:								
51 — Moderately heavy...	32	....do	8	40	44½	—1.9	1.2	4.2
69 — Moderately heavy...	21	....do	8	40	48	+3.5	.7	1.7
70 — Moderately heavy...	8	....do	8	40	48	+1.6	1.1	1.4
71 — Moderately heavy...	10	....do	8	40	48	+1.9	1.7	2.8
74 — Moderately heavy...	14	....do	8	40	48	+3.9	3.0	4.6
31 — Light..............	10	Female	10	50	58	+ .2	6.8	7.7
37 — Light..............	9	Male	8	40	48	+1.4	1.4	.5
38 — Light..............	8	Female	8	40	48	— .4	3.0	6.8
58 — Light..............	28	. . .do	8	40	46	—1.6	8.4	10.3
72 — Light..............	13	Male	8	40	48	+ .8	1.0	1.7
73a — Light.............	9	Female	8	40	48	+1.2	2.0	4.7
73b — Light.............	9	....do	8	40	48	+7.3	2.0	9.2

[1] Where weekly hours are less than 6 times daily hours, shorter hours were worked on Saturday.

[2] Percentage of scheduled worktime lost.

[3] Not determined.

It is also apparent that the higher absenteeism rates were offset by the greater efficiencies, so that total output increased in about the same ratio as did hours. The instances that show serious deviation from this conclusion are studies 7 (a) and 7 (b), 38, 51, and 58.

Cases 7 (a) and 7 (b) differed from most of the other case studies because the regular daily hours were 10. In nearly every other case, daily hours were 8. It is significant that with a 10-hour day, only about 2 hours' output was realized for every additional 3 hours worked above 50, even though the pace at these operations was controlled by machines.

In case study 51, the increase in hours was from 40 to 44½, accomplished by introducing a 4½-hour Saturday. The additional Saturday half day resulted in an increase in total output equivalent to the work of 2⅓ additional hours. As a result, about half the Saturday hours were nonproductive.

In case study 38, the important factor was the increase in absenteeism during the 6-day week for the female workers. And in case study 58, both lower efficiency and higher absenteeism were involved.

The proportional increase in output in case study 31 requires some comment. Here, it will be noted, the 10-hour-day schedule prevailed. But contrary to the experience in case study 7, the female operators maintained the same efficiency during the 58-hour week as they had during the 50-hour week, although absenteeism increased slightly. The reason for the good performance during the longer workweek was better management. During the 58-hour week, materials were taken to and from the machines by other workers, thus enabling the machine operators to spend all their time at the machines. During the 50-hour week, the operators had to move these materials, meanwhile letting their machines remain idle. It is doubtful whether the same favorable result would have been obtained under the longer hours had this change not been introduced. As it was, the managerial change

TABLE 4.—*Effects on output of changes in weekly hours by increasing workdays from 5 to 6, holding daily hours constant*

Case study and type of work	Weekly hours changed —		Percent change in —		Output-input ratio
	From	To	Weekly hours	Output	
Machine-controlled pace:					
7a — Moderately heavy	50	58	+16.0	+10.1	0.6
7b — Moderately heavy	50	58	+16.0	+10.2	.6
8 — Moderately heavy	40	48	+20.0	+21.0	1.1
Operator-controlled pace:					
51 — Moderately heavy	40	44½	+11.3	+ 5.9	.5
69 — Moderately heavy	40	48	+20.0	+22.8	1.1
70 — Moderately heavy	40	48	+20.0	+21.4	1.1
71 — Moderately heavy	40	48	+20.0	+20.8	1.0
74 — Moderately heavy	40	48	+20.0	+22.8	1.1
31 — Light	50	58	+16.0	+15.1	1.0
37 — Light	40	48	+20.0	+22.8	1.1
38 — Light	40	48	+20.0	+14.9	.8
58 — Light	40	46	+15.0	+10.7	.7
72 — Light	40	48	+20.0	+20.2	1.0
73a — Light	40	48	+20.0	+17.9	.9
73b — Light	40	48	+20.0	+19.3	1.0

permitted as good a performance during the 6-day week, at 10 hours per day, as had obtained during the 5-day week.

For all other studies shown in table 4, output during the longer workweek increased directly with the increase in weekly hours. In some instances this could be attributed to the stimulus of the war effort. In others, it appeared that the constant building up of a backlog of orders stimulated workers to greater effort. Observation also indicated that in a number of instances the operator pace was only moderately fast, so that the pace could be increased without introducing much of an element of fatigue.

On the whole, it may be concluded that these studies indicate that the addition of a sixth day had no disadvantageous effect on output, provided daily hours were held to 8 per day.

B.—Decreasing workdays from 6 to 5; no change in daily hours

The difference between the 5- and 6-day week, with daily hours constant, can be measured not only in cases in which the sixth day was added, but also in cases in which the sixth day was eliminated.

It was pointed out in the preceding section that, for the 8-hour day at least, the addition of the sixth day had no appreciable adverse effects on efficiency and absenteeism loss. It would be reasonable to presume, therefore, that the elimination of the sixth day would not affect these factors either.

That exactly the reverse is true is demonstrated by tables 5 and 6. As a general rule, the elimination of the sixth day increased efficiency considerably during the shorter workweek.

The single exception to this rule is case study 29. Here, however, the reduction in weekly hours was part of a general retrenchment program, from an expanded wartime to a more modest peacetime scheme of operation, which involved lay-offs for a considerable portion of the work force. The slowing down during the shorter workweek may fairly be ascribed to a slowing down because of this factor rather than to the change in hours.

TABLE 5.—*Effects on efficiency and absenteeism of decreasing workdays from 6 to 5 per week, without changes in daily hours*

[Pace controlled by operator]

Case study and type of work	Number of workers	Sex	Daily hours	Weekly hours changed —		Efficiency percent change	Absenteeism rate [2]	
				From [1]	To		From	To
1 — Heavy	45	Male	10	60	50	+0.7	(3)	(3)
6 — Heavy	16	....do	10	58	50	+4.9	4.7	4.2
3 — Moderately heavy	15	....do	10	58	50	+11.2	5.0	5.5
29 — Moderately heavy	33	....do	10	58	50	—5.4	3.6	3.2
64a — Moderately heavy	18	....do	10	58	50	+7.4	3.6	3.4
64b — Moderately heavy	18	... do	9–10	58	45–50	+9.1	3.6	(3)
65 — Moderately heavy	14	....do	10	55	50	+3.0	3.5	3.3
69 — Moderately heavy	21	....do	8	48	40	+12.4	1.7	(3)
70 — Moderately heavy	8	....do	8	48	40	+16.1	1.4	(3)
58a — Light	28	Female	8-9	48	43	+5.0	10.7	16.7
58b — Light	28	....do	8-9	46	43	+2.9	10.3	16.7
58c — Light	28	....do	8	48	40	+3.7	10.7	8.4
59 — Light	17	....do	8	48	40	+12.0	12.1	15.2
60 — Light	25	... do	8	48	40	+6.9	13.7	13.8
61 — Light	26	....do	8	48	40	+5.1	9.4	9.2
62 — Light	25	... do	8	48	40	+1.5	6.4	9.6
63 — Light	9	. . do	8	48	40	+7.9	10.4	12.4
72 — Light	13	Male	8	48	40	+12.6	1.7	(3)

[1] Where weekly hours are not 6 times daily hours, shorter hours were worked on Saturday.

[2] Percentage of scheduled worktime lost.

[3] Not determined.

In most instances involving heavy or moderately heavy work, the 10-hour day was retained for male operators under the shorter workweek. If case study 29 is disregarded, the dropping off of a full day on Saturday, usually an 8-hour day, resulted in efficiency increases ranging from 4.9 percent to 11.2 percent for men working under wage incentives. In case study 1, the pace of the 45 men in a foundry, working without a wage incentive, was about the same under both schedules.

Where the workday was only 8 hours the results were nearly as striking. Elimination of the sixth day increased hourly output, i. e., efficiency, by 12.4 percent in case study 69 and 16.1 percent in case study 70.

Just as there was little change in the absenteeism rate for men when the sixth day was added, so there was little change in absenteeism when the sixth day was removed. As will be pointed out later, this was not the case for women.

With one exception, the light operations observed in this change of work pattern involved women. As a rule, hours were reduced from 48 to 40 with the retention of the 8-hour day. In every instance efficiency was better under the shorter schedule, the improvements ranging from 1.5 percent to 12.0 percent.

Not only were the absenteeism losses for women greater than those for men under either pattern of the workweek, they also indicated opposite trends. In cases 58 (a) and 58 (b), the percentage of time lost under the shorter schedule was alarmingly high—16.7 percent, and more than half again as high as under the longer schedule. In case study 59, it rose from 12.1 to 15.2 percent. In case 63, it rose from 10.4 to 12.4 percent, and in 62, from 6.4 to 9.6 percent. As the shorter schedules usually came after VE-day, it is possible that there was a general relaxation and less emphasis on good attendance. It may be observed also that many of these workers had no intention of continuing work in the plants indefinitely. For many of them, VE-day meant impending marriage and the setting up of households. For married women, it frequently indicated the resumption of household duties. These considerations obviously do not apply to men.

Table 6 provides the comparison between the additional hours worked on the sixth day and the resulting additional output. So as to provide a direct comparison with table 4, the computations in this table are shown with the shorter schedules of hours as a base—i.e., as though the longer schedule had followed the shorter schedule. A few studies shown in table 5 are omitted because output could not be computed because of the lack of essential data.

In case study 6, the 16 men at hot and heavy forge work turned out as much at 50 hours as they had at 58 hours. In fact, operations at 58 hours were discontinued when it was realized that the longer work schedule was no more productive than the shorter one had been. The data indicate that the output level might even have gone lower had the change not been made. However, the 10-hour day was maintained. It was not possible, therefore, to determine whether a shorter workday might not have proved as effective as the 10-hour day.

TABLE 6.—*Effects on output of changes in weekly hours by increasing workdays from 5 to 6, holding daily hours constant*

[Pace controlled by operator]

Case study and type of work	Weekly hours [1] changed —		Percent change in —		Output-input ratio
	From	To	Hours	Output	
1 — Heavy	50	60	+20.0	+20.0	1.0
6 — Heavy	50	58	+16.0	0	0
3 — Moderately heavy	50	58	+16.0	—3.2	—.2
29 — Moderately heavy	50	58	+16.0	+23.8	1.5
64 — Moderately heavy	50	58	+16.0	+7.7	.5
65 — Moderately heavy	50	55	+10.0	+6.5	.7
58a — Light	43	48	+11.6	+14.2	1.2
58b — Light	43	46	+6.9	+12.0	1.7
58c — Light	40	48	+20.0	+12.9	.7
59 — Light	40	48	+20.0	+11.1	.6
60 — Light	40	48	+20.0	+12.2	.6
61 — Light	40	48	+20.0	+13.9	.7
62 — Light	40	48	+20.0	+22.4	1.1
63 — Light	40	48	+20.0	+13.8	.7

[1] For ease of comparison with table 4, percentage changes in hours and output have been computed from the lower level of hours.

In case study 3, the output level at 58 hours at moderately heavy work in a foundry was actually lower by 3.2 percent than that for 50 hours.

The reason why performance at 58 hours was better in case study 29 has been given. In only one other case, 58, was performance superior during the longer workweek of 46 to 48 hours than during the 5-day week of 43 hours. The 5-day week, however, involved irregular overtime and included, on the average, 3 days at 9 hours. In both instances a 6-day week at regular hours seems to have been superior to a 5-day week involving overtime.

The group of men in case study 1 were on day work. They retained their pace—which was not fast—under either schedule.

In every other case, the higher efficiency during the 5-day week was sufficiently better to offset from one-third to one-half of the additional hours formerly worked on the sixth day. There is no question that these cases indicate the marked superiority of the 5-day week over the 6-day week, with daily hours unchanged.

What, then, accounts for the apparently contradictory conclusions drawn from these cases and those examined in section A of this chapter, in which it was concluded that the sixth day, when added to a 5-day week, was nearly 100 percent effective in increasing output in direct proportion to the increased hours?

The answer very likely lies in the amounts earned. When hours were lengthened by the addition of the sixth day, all additional hours were paid for at time and a half. Under an incentive system, as most of the plants were, this meant one and one-half times the rates payable for work produced. Consequently there was a strong incentive to produce proportionately more on Saturday than on other days. The next day was Sunday, a day of rest. And, whereas daily hours were 10, the Saturday hours usually were 8.

On the other hand, when hours were cut back, this overtime was lost. Consequently there was the incentive to recoup as much of it as was reasonably possible during the shorter workweek—and therefore the higher efficiency and proportionately better output.

Obviously, then, the posing of the question whether, with daily hours kept constant between 8 and 10, there is any marked difference between the 5-day week and the 6-day week, involves determining first whether weekly hours are to go up or down. There is no question that, except perhaps for heavy work, a regular 6-day week results in greater output than is produced during the 5-day week. The case studies indicate that, as a rule, light operations could be carried on during the 6-day week at the same efficiency as during the 5-day week and that the additional output was almost in direct proportion to the additional hours worked. On the other hand, when hours were reduced after a sixth day had been worked for a protracted period of time, the 5-day week proved more efficient in terms of hourly output than was the 6-day week.

C.—5-day week vs. 6-day week; changes in daily hours

1. ADDING A SIXTH DAY.

In the 14 studies shown in table 7, comparisons are given for worker performances under 5- and 6-day weeks with changes (usually increases) in daily hours. In each instance, the comparison is for identical workers.

In the group of case studies for workers engaged in moderately heavy work, composed almost entirely of men, daily hours were usually raised from 8 to 9 or 10, and weekly hours from 40 to from 55 to 60. In spite of the fact that the work was machine-paced in study 7, both groups (a) and (b) performed more poorly at the longer hours. Efficiency was 5.0 and 6.0 percent

TABLE 7.—*Effects on efficiency and absenteeism by increasing weekly workdays from 5 to 6, with changes in daily hours*

Case study and type of work	Number of workers	Sex	Changes in hours				Efficiency percent change	Absenteeism rate [2]	
			Daily		Weekly				
			5 days at —	6 days at—	From	To [1]		From	To
Machine-controlled pace:									
7a — Mod. heavy	39	Male	8	10	40	58	—6.0	2.7	4.5
7b — Mod. heavy	50	do	8	10	40	58	—5.0	5.4	8.1
Operator-controlled pace:									
20 — Mod. heavy	65	Male and female	8	10	40	60	—22.3	5.7	10.8
21 — Mod. heavy	55	do	8	11	40	66	—20.6	3.7	13.3
64 — Mod. heavy	18	Male	8	10	40	55	—6.0	2.7	2.6
65 — Mod. heavy	14	do	10	8	50	48	+3.2	3.3	3.1
67 — Mod. heavy	14	do	8	10	40	55	+5.6	1.8	2.9
74 — Mod. heavy	14	do	8	9½	40	57	+17.1	3.0	2.9
25 — Light	43	do	7½	10	37½	58	+15.3	2.1	3.3
26 — Light	25	Female	7½	(3)	37½	54	+16.9	3.0	3.3
38a — Light	8	do	8	8.8	40	48	+2.3	3.0	11.8
38b — Light	8	do	8	9	40	54	+3.1	3.0	14.4
50a — Light	24	do	8	9½	40	53	—9.2	4.5	9.4
50b — Light	24	do	8	9	40	48	—10.3	4.5	8.3

[1] Where weekly hours are less than 6 times daily hours, shorter hours were worked on Saturday.

[2] Percentage of scheduled worktime lost.

[3] 3 days at 8 hours, 3 days at 10.

lower at the higher hourly level. In case study 67, the reverse was true. Here, however, operations were performed by semi-automatic machines and the longer workweek permitted a higher degree of utilization of the machines. Consequently, average hourly output, as reflected by the measure of efficiency, was 5.6 percent better.

In case study 65, the workweek was cut by 2 hours, and daily hours were 8 during the 6-day week as against 10 during the 5-day week. The shortening of the workday increased efficiency by 3.2 percent even though a sixth day had been added.

The sharp increases in daily hours from 8 to 10 and 11 in studies 20 and 21 resulted in drastic decreases in efficiencies—22.3 percent and 20.6 percent. Simultaneously, absenteeism rates doubled and tripled. The workers in both of these groups were engaged respectively on the day and night shifts of a plant producing shells. There certainly could not have been any closer connection with the war effort, and morale in the plant was good. Nevertheless, the large increases in hours curtailed hourly output sharply, and even the urgency of producing shells could not keep workers on the job steadily.

In the group of light, operator-paced operations, daily hours were higher during the 6-day week than they had been during the 5-day week. Generally, they had been raised from 8 to 9 or 10. Except for the two experiences shown for case study 50, parts (a) and (b), workers performed better at the higher levels of daily and weekly hours. Particularly marked are the efficiency increases in studies 25 and 26, in which 8- or 10-hour days were substituted for 7½-hour days. In case study 25, a group of 43 experienced male machine operators were engaged in high precision machining of small parts for guns and a variety of control devices for lubricating systems. In study 26, the group consisted of 25 experienced female workers engaged in assembling the small parts produced by men in study 25. In explaining the sharp increase in efficiencies of the two groups, plant management gave two reasons: (1) the participation of the employees in the war effort (during the longer schedule of hours) acted as a powerful stimulus to better worker performance; (2) the longer runs on each job during the longer workday spread unproductive time over a longer period of productive effort. Apparently the work during the longer workweek was not so hard as to cause a fatigue serious enough to bring about a slowing down of the workers. Conversely, the speed of the workers during the short workweek could not have been very fast, if it was possible for them to work so much faster during a very much longer workweek over a long stretch of time.

In study 38, efficiency was better at both 48 and 54 hours for a group of 8 women than it had been at 40 hours. The work performed was very light. It must be noted, however, that during the longer hours the percent of scheduled employee work-hours lost because of absenteeism rose to 11.8 and 14.4 percent, as against only 3.0 percent during the 40-hour week.

Case study 50 records the only serious drop in efficiency, 9.2 and 10.3 percent, respectively, when daily hours were increased from 8 to 9 or 9½, and weekly hours were increased from 40 hours to 53 and 48. The 24 female operators were engaged in packing candles in a candle-manufacturing plant and worked under a bonus system with three-quarter pay for all units produced in excess of set standards. In 50 (b), daily hours had been raised from 8 to 9, with an additional 3 hours on Saturday. In 50 (a) daily hours had been lengthened to 9½ with 5½ hours on Saturday. Although the efficiency level at this schedule was still decidedly poorer than that for 40 hours, it was somewhat better than it had been for the 48-hour week. The data indicate that the 3-hour Saturday was much too short to compensate for the additional hours worked. Furthermore, absenteeism losses were twice as high during the longer workweeks as they had been at 40 hours.

Table 8 shows the comparison of increases in weekly hours and increases in output.

In the moderately heavy types of work, the results are decidedly mixed. In studies 20 and 21, only 0.1 of an hour's output, measured at the 40-hour performance level, was gained for every additional hour worked, or, to put it more clearly, 1 hour's output for every 10 hours worked in excess of 40. What was accomplished in 60 and 66 hours could have been accomplished in 42 and 44 hours, respectively. The other 18 and 22 hours were completely wasted.

In case study 65, the decrease of weekly hours by 2, from 50 to 48, reduced output by only 0.4 of an output hour, obviously because of the better efficiency during the 8-hour day.

The semi-automatic type of operation in case study 67 explains the proportionately better output during the longer workweek. For every 5 hours worked above 40 per week, the equivalent of 6 hours' output was obtained.

TABLE 8.—*Effects on output by increasing workdays from 5 per week to 6, with changes in daily hours*

Case study and type of work	Weekly hours changed —		Percent change in —		Output-input ratio
	From	To	Hours	Output	
Machine-controlled pace:					
7a — Moderately heavy	40	58	+45.0	+36.0	0.8
7b — Moderately heavy	40	58	+45.0	+30.0	.7
Operator-controlled pace:					
20 — Moderately heavy	40	60	+50.0	+5.5	.1
21 — Moderately heavy	40	66	+65.0	+9.0	.1
64 — Moderately heavy	40	55	+37.5	+29.6	.8
65 — Moderately heavy	50	48	—3.9	—.7	.2
67 — Moderately heavy	40	55	+37.5	+43.6	1.2
74 — Moderately heavy	40	57	+42.5	+67.2	1.6
25 — Light	37 ½	58	+54.7	+81.2	1.5
26 — Light	37 ½	54	+44.0	+67.6	1.5
38a — Light	40	48	+20.0	+11.7	.6
38b — Light	40	54	+35.0	+22.6	.6
50a — Light	40	53	+32.5	+13.9	.4
50b — Light	40	48	+20.0	+ 3.3	.2

The explanation for the 1.6 output-input ratio for study 74, indicating 1.6 output hours gained for every hour worked above 40, is that the original pace under the 40-hour week had not been fast and that it was improved materially under the urgency of wartime needs. The 17 additional hours worked yielded the equivalent of 27 hours of output at the pace maintained during the 40-hour week.

In the group of light, operator-paced work, differences were less marked. Because of the sharp increases in efficiency, the output of the workers in studies 25 and 26 increased half again as much, proportionately, as did hours. But in each of the two other studies (38 and 50), output failed to keep up with increased hours. In study 38, nearly half the hours worked above 40 were nonproductive if the output level at 40 hours is used as a base of measurement. That observation is even more pertinent to case study 50, where 48 hours yielded only 41.3 hours of output (50 (b)), and where 53 hours of work yielded only 45.6 hours of output (59 (a)).

In comparison with the studies discussed in section A of this chapter, the performance of the workers discussed in section C is decidedly poorer. The obvious difference between the two groups is that the one discussed in this section experienced sharp increases in daily hours.

2. DROPPING THE SIXTH DAY.

In five studies, it was possible to observe the results of dropping the sixth day concurrently with changing daily hours. It two cases, 36 and 30, hours were lengthened during the 5-day week so as to offset the hours lost by dropping the sixth day, and still giving the workers a 2-day week end. In study 44, the company tried to accommodate itself to the needs of female workers under a 6-day week by using a schedule which gave them 3 days at about 6 hours, 1 at 5½ hours, and 2 at 8½. When the 2-day week end was introduced, hours were changed to a uniform schedule of 8.7 per day for each of the 5 days.

Case studies 72 and 78 present reductions in both daily and weekly hours. Operations in case study 78 were semi-automatic.

The 17 men in study 36 worked an 11-hour day and an 8-hour Saturday on the day shift, but shifted every 2 weeks to a 5-day, 12-hour schedule as a night shift. As table 9 shows, their efficiency was 6.1 percent better during the 5-day week, even though hours were 12 per day rather than 11.

The better performance of 10 female workers (case 30) during a 10-hour day, as compared with one of 7.7 hours, was due to a managerial change discussed earlier, which kept the operators at their machines constantly rather than requiring them to get and deliver their work materials. While the study shows that management can obtain better production by better work procedures, in spite of the lengthening of hours, it is not really a comparable measure of the effects of hours.

The regular workday of 8.7 hours proved more efficient than the irregular daily hours during the 6-day week in study 44. Efficiency was 2.1 percent better—but absenteeism during the longer workday schedule, although it provided for a free Saturday, rose from 2.2 percent for the irregular 6-day week to 9.7 percent under the longer workday.

TABLE 9.—*Effects on efficiency and absenteeism by decreasing weekly workdays from 6 to 5, with changes in daily hours*

Case study and type of work	Number of workers	Sex	Changes in hours				Percent change in efficiency	Absenteeism rate [2]	
			Daily		Weekly				
			From 6 days at [1]—	To 5 days at—	From	To		From	To
Operator-controlled pace:									
36 — Mod. heavy....	17	Male	11	12	63	60	+6.1	7.9	6.1
30 — Light..........	10	Female	7.7	10	46	50	+9.5	4.9	8.3
44 — Light..........	26	...do	([3])	8.7	40	43.5	+2.1	2.2	9.7
72 — Light..........	13	Male	9	8	54	40	+2.7	2.3	([4])
Machine-controlled pace:									
78 — Light..........	30	....do	8	7	48	35	—3.6	5.7	4.1

[1] Where 6 times daily hours is less than total hours shown per week, shorter hours were worked on Saturday.

[2] Percentage of scheduled worktime lost.

[3] 3 days at 5⅚ hours, 2 days at 8½ hours, 1 day at 5½ hours.

[4] Not determined.

The net effect of these changes is shown in table 10. Here again all computations were made from the lower level of hours, as though hours had been increased from this level rather than reduced to it, so as to make the results comparable with earlier tables.

In study 36, the 3 extra hours worked on the day shift were more than wasted—the longer schedule actually produced less than the shorter one. Not only were the 3 additional hours nonproductive—the total output fell short of the output produced at 60 hours by the equivalent of 2.4 hours' production. At the performance level of the 60-hour week, the day shift could have reached its actual output in 57½ hours rather than 63.

Similarly, the 40-hour week in study 44 was nearly as productive as the 43½ hour week had been. The 3½ extra hours netted only 1 hour's output. A 41-hour week, with a workday of scarcely more than 8 hours, would have netted the same result.

As pointed out earlier, the semi-automatic operation in case study 78 made the work schedule for workers relatively unimportant. Output increased in direct proportion to hours of operation.

Case study 30 presents a different result. Here, in light and operator-paced work, the additional 4 hours worked produced 6.8 hours of additional output. But, as already explained, this study really does not measure the effects of a change in hours.

While the studies shown here are instructive, there are too few of them to permit any conclusions to be drawn.

TABLE 10.—*Effects on output by decreasing workdays from 6 to 5, with changes in daily hours*

Case study and type of work	Weekly hours changed —		Percent change in —		Output-input ratio
	From	To	Weekly hours	Output	
Operator-controlled pace:					
36 — Moderately heavy	60	63	+5.0	—4.1	—0.8
30 — Light	46	50	+8.7	+14.9	1.7
44 — Light	40	43.5	+8.8	+2.6	.3
Machine-controlled pace:					
78 — Light	35	48	+37.1	+40.1	1.1

D.—6-day week vs. 5½-day week; no change in weekly hours

The frequency of high absenteeism rates for women during a full 6-day week has been mentioned briefly in preceding discussions. In some instances hourly schedules were altered deliberately so as to allow women time off for shopping and for attending to other personal matters that could be done only while stores and offices were open.

One such attempt was to provide for a half holiday on Saturday. So as not to lose any worktime, however, daily hours were increased sufficiently on the 5 full workdays to equal the total weekly hours during the full 6-day week.

The results of such a change were observed in six case studies, and are shown in table 11. While the number of workers observed in each instance was small, varying from 5 to 15, the results of these changes in work schedules were traced through periods of many months. Except for four men included in case study 39, all of the workers were women, and in each instance the speed of the operations was entirely under the control of the workers. All of them worked under group wage incentives in a plant manufacturing office supplies, and most of them were experienced workers who had been with the company for many years.

Except in one instance, study 41, daily hours on 5 days were increased from 8 to 8.8, and hours on Saturday were decreased from 8 to 4. In study 41, the hours on Saturday were 5½, and hours on the other 5 workdays were 8½.

In every instance the new arrangement of hours resulted in a higher efficiency. The increases ranged from as little as 0.3 percent to as high as 9.4 percent.

TABLE 11.—*Effects on efficiency, absenteeism, and output when changing from a 6-day week to a 5½-day week without changing weekly hours*

[Pace controlled by operator]

Case study and type of work	Number of workers	Sex	Hours per week	Daily hours changed —			Percent change in efficiency	Absenteeism rate [1]		Percent change in output
				From	To			From	To	
				6 days at —	5 days at —	Sat. at —				
39 — Moderately heavy	8	Male & female	48	8	8.8	4	+9.4	7.5	7.4	+9.6
37 — Light	9	Male	48	8	8.8	4	+3.3	.5	4.4	—1.0
38 — Light	8	Female	48	8	8.8	4	+2.7	6.8	11.8	—2.8
40 — Light	5	....do	48	8	8.8	4	+.3	22.1	12.5	+12.8
41 — Light	5	....do	48	8	8.5	5.5	+1.1	18.5	5.5	+17.4
42 — Light	15	....do	48	8	8.8	4	+2.7	8.0	4.7	+ 6.3

[1] Percentage of scheduled worktime lost.

It may be of some significance that the highest efficiency increase took place in the group of four men and four women engaged in packing bundles for shipment, with the weight of materials handled varying from light to fairly heavy. The heavier work was done by the men. The effect of the new work schedule apparently was more marked where the physical exertion was greater.

The evidence as to the effects on absenteeism is not as uniformly in one direction. In study 39, the new arrangement had no effect on the absenteeism rate, which remained nearly the same. In studies 37 and 38, the absenteeism losses increased respectively from 0.5 to 4.4 percent of scheduled hours, and from 6.8 percent to 11.8 percent. On the other hand, the high rate of 22.1 dropped to 12.5 in study 40, from 18.5 to 5.5 in study 41, and from 8.0 percent to 4.7 percent in study 42. The higher absenteeism in studies 37 and 38 appears to have been due to a greater tendency to take off the half day on Saturday. On the other hand, the data suggest that the improvements in studies 40 and 41 may have been due largely to the fact that these workers frequently took off the one-half day on Saturday rather than a full day, as they had under the full 6-day week.

The increased absenteeism in studies 37 and 38 caused slight drops in total output, 1.0 and 2.8 percent, in these two groups. The other four groups, however, showed substantial improvements in the total output level, varying from a low of 6.3 percent to a high of 17.4 percent.

Generally, the 5½-day schedule appears to have been more effective than the full 6-day week for female operators.

CHAPTER IV.—6-Day Week

A.—Increases in daily and weekly hours

The most frequently observed method of lengthening weekly hours was to increase daily hours during a workweek of 6 days. The longer workday most frequently was of 9, 9½, or 10 hours' duration.

Except as other factors entered into the situation, hourly efficiency was poorer during the longer workday.

Case studies 22 and 23, involving men employed at hot and fairly heavy work in a foundry, show that hourly efficiency rose by 0.2 percent and 4.1 percent under the longer hours. These men worked at straight day-work rates and without wage incentives. As was found in similar instances elsewhere, the pace at the shorter hours under these conditions was not so fast at operations paced entirely by the operators but that it could be maintained during a longer schedule of hours—short, of course, of hours so long that fatigue would inevitably accumulate.

TABLE 12.—*Effects on efficiency and absenteeism of increasing daily and weekly hours, during a 6-day week*

[Pace controlled by operator]

Case study and type of work	Number of workers	Sex	Changes in hours				Percent change in efficiency	Change in absenteeism rate [2]	
			Daily		Weekly [1]				
			From	To	From	To		From	To
5 — Heavy	48	Male	9	10	52	58	—3.0	3.3	2.8
22 — Heavy	65	....do	8	9½	48	55½	+.2	6.6	8.9
23 — Heavy	68	....do	8	9	48	54	+4.1	6.9	8.5
9 — Moderately heavy	275	....do	7½	10	45	58	0	4.2	6.9
74 — Moderately heavy	14	....do	8	9½	48	57	+12.7	4.6	2.9
11 — Light	66	Female	7½	9½	45	55	+.1	3.3	4.5
12 — Light	61	....do	7½	9½	45	57	—7.0	3.0	4.7
13 — Light	26	....do	7½	9½	45	55	—8.0	2.2	5.8
14 — Light	22	....dc	7½	9½	45	55	—7.1	3.3	4.1
15 — Light	59	....do	7½	9½	45	57	—3.4	3.0	4.7
16 — Light	100	Male & female	7½	9½	45	55	—3.6	1.7	3.6
17 — Light	50	Male & female	7½	9½	45	57	—6.7	3.6	6.1
30 — Light	10	Female	7⅔	10	46	58	+21.4	4.9	15.4
31 — Light	10	....do	7⅔	10	46	58	+20.1	5.7	7.7
32 — Light	15	Male	7⅔	10	46	61	+8.0	3.5	5.7
33 — Light	15	....do	7⅔	10	46	61	+13.3	3.9	6.7
34 — Light	92	....do	7⅔	10	46	58	+7.0	2.0	4.2
35 — Light	16	....do	9	10½	54	61½	—4.3	5.1	6.3
37 — Light	9	....do	8	9	48	54	—4.5	.5	3.8
38 — Light	8	Female	8	9	48	54	+3.5	6.8	14.4
42 — Light	15	....do	8	9	48	54	+5.0	8.0	8.3
43 — Light	40	....do	6 & 8	7½	40	44	+3.1	1.9	7.3

[1] Where 6 times daily hours is less than hours shown, shorter hours were worked on Saturday.

[2] Percentage of scheduled worktime lost.

A 12.7-percent improvement in efficiency was found for the 14 men at moderately heavy work in a rubber plant. These workers, under an individual wage-incentive system, and under the urgency for much-needed rubber supplies during the war, found it possible to step up their average hourly output even though daily hours had been lengthened from 8 to 9½.

Case studies 30, 31, 32, 33, and 34 all reflect better hourly performances at light, operator-paced work during a 10-hour day than formerly at a 7⅔-hour day in a plant manufacturing air brakes. The workers were engaged in light operations at metal working machines, or in assembling and testing completed parts. Working conditions in the plant were exceptionally good, and the entire plant was air-conditioned.

The improvement in performance, while a real one, was not directly related to the change in hours, but to a managerial change which permitted the operators to spend all their time at their machines rather than spend part of it in getting new work materials and removing the loads of completed work. While these studies indicate the possibility of better worker performance under longer hours because of improvements instituted by management, the composition of the jobs themselves was so modified as to make the data noncomparable for the two work schedules. The studies are shown here to indicate that longer hours do not necessarily restrict production if other improvements can be made.

In the groups of heavy and moderately heavy work, studies 5 and 9 require comment. In study 5, 48 men were engaged in hot and heavy drop-forge work. When hours were lengthened from 9 to 10 per day, with 7 and 8 on Saturday, hourly efficiency dropped by 3.0 percent, although absenteeism remained fairly stable.

In study 9, 275 men were engaged in welding operations in the construction of various parts which were to go into battleships. The work involved considerable climbing about and permitted the use of individual initiative and resourcefulness. The work was not routinized, repetitive, or monotonous. Under these conditions, workers found it possible to maintain the same hourly efficiency under the 10-hour day and 58-hour week as they had under the 7½-hour day and 45-hour week. Their absenteeism, however, increased from a loss of 4.2 percent of hours scheduled to be worked to 6.9 percent.

In the group of light operations, all operator-paced, and generally consisting of repetitive, monotonous types of work, the general result of increasing daily hours—when no other factors were introduced to distort the comparison—appears to have been a drop in efficiency and an increase in absenteeism. Study 11, which indicates practically no change in efficiency, represents 66 female workers at day work without a wage incentive. The observation made earlier about the pace of day-rate workers under various levels of hours again applies here.

The ultimate criterion of the effectiveness of longer hours is the level of output. As table 13 shows, the longer daily work schedule, usually consisting of 10 hours or less, did result in appreciably more output than had been realized during the shorter schedules. Nevertheless, the increase in weekly hours rarely was matched by a proportionate increase in output. The only instances in which this did occur involved instances of managerial improvements (cases 30 to 34) and lack of wage incentives (cases 11, 22, and 23). The one exception in case study 74, in which the output gained paid off for the additional hours in a ratio of nearly two to one. This study was commented upon earlier.

Generally, however, the ratio of the equivalent of output hours gained to additional hours worked was about 0.6 or 0.7, indicating that 3 hours of work were required to produce the output of 2 hours at the shorter schedules. In terms of labor cost, at overtime rates, this means about 4½ hours' pay for 2 hours of additional output.

TABLE 13.—*Effects on output by increasing daily and weekly hours, during a 6-day week*

[Pace controlled by operator]

Case study and type of work	Weekly hours changed —		Percent change in —		Output-input ratio
	From	To	Hours	Output	
5 — Heavy	52	58	+11.5	+3.7	0.3
22 — Heavy	48	55½	+15.6	+13.2	.8
23 — Heavy	48	54	+12.5	+13.5	1.1
9 — Moderately heavy	45	58	+28.9	+25.9	.9
74 — Moderately heavy	48	57	+18.8	+36.2	1.9
11 — Light	45	55	+22.2	+20.9	.9
12 — Light	45	57	+26.7	+15.2	.6
13 — Light	45	55	+22.2	+8.4	.4
14 — Light	45	55	+22.2	+12.6	.6
15 — Light	45	57	+26.7	+20.0	.8
16 — Light	45	55	+22.2	+15.9	.7
17 — Light	45	57	+26.7	+14.8	.6
30 — Light	46	58	+26.1	+36.4	1.4
31 — Light	46	56	+26.1	+48.2	1.8
32 — Light	46	61	+32.6	+39.9	1.2
33 — Light	46	61	+32.6	+45.9	1.4
34 — Light	46	58	+26.1	+31.9	1.2
35 — Light	54	61½	+13.9	+4.2	.3
37 — Light	48	54	+12.5	+3.9	.3
38 — Light	48	54	+12.5	+6.7	.5
42 — Light	48	54	+12.5	+17.8	1.4
43 — Light	40	44	+10.0	+7.4	.8

B.—Decreases in daily and weekly hours

In five studies the available data permitted conclusions as to the effectiveness of reducing daily and weekly hours while maintaining a 6-day week. This is the reverse of the schedule change discussed in section A.

As is apparent from table 14, all of the operations involved were heavy or moderately heavy and the speed of work was within the control of the operator.

The 48 men in case study 5 working at hot and heavy upset forging had their daily hours reduced from 10 to 9, with a consequent reduction in weekly hours from 58 to 52. This cut-back occurred a few months prior to the conclusion of the survey in this plant, and the ultimate leveling-off point of the rising efficiency under the shorter hours could not be determined. At this point, however, efficiency was better than at any point during the 58-hour week. Although absenteeism increased slightly under the shorter hours, from 2.8 percent to 4.2 percent, the output level at 52 hours was as good as that at 58 hours. In other words, as a long-run proposition, and disregarding the periods of transitional adjustment of the workers to the different schedules, workers at heavy work produced as much in 52 hours as they formerly did in 58. It would have been interesting to determine if an even lower schedule would have done as well. However, no lower hours were worked.

In study 18, 140 operators—of whom about 20 were husky women, selected for size and strength, and all others were men—were engaged in the

Table 14.—*Effects on efficiency, absenteeism, and output of reducing daily and weekly hours, during a 6-day week*

[Pace controlled by operator]

Case study and type of work	Number of workers	Sex	Changes in hours				Percent change in efficiency	Absenteeism rate [1]		Percent change in weekly —	
			Daily		Weekly						
			From	To	From	To		From	To	Hours	Output
5 — Heavy	48	Male	10	9	58	52	[2] +8.0	2.8	4.2	—10.3	0
18 — Mod. heavy	140	Male and female	10	8	58	48	+15.1	10.7	10.4	—17.2	—7.9
51 — Mod. heavy	32	Male	9	8	53	48	+8.8	5.5	7.0	—9.4	—3.0
65 — Mod. heavy	14	......do	10	8	55	48	+6.3	3.5	3.1	—12.7	—6.7
74 — Mod. heavy	14	......do	9½	8	57	48	+1.3	2.9	(3)	—15.8	(3)

[1] Percentage of scheduled worktime lost.

[2] This is the last value observed for a sharply rising trend in efficiency after hours had been cut back to 52.

[3] Not determined.

production of metal landing mats under a group wage-incentive system. Daily hours were reduced from 10 to 8, and weekly hours from 58 to 48. Efficiency increased by 15.1 percent. The absenteeism loss remained about the same under both schedules.

A reduction of only 5 hours, by reducing daily hours from 9 to 8, brought about an 8.8-percent improvement in efficiency in case study 51. Here, 32 men were engaged in general foundry work. In case study 65, 14 men were engaged in heavy machining operations and in welding. A reduction in daily hours from 10 to 8 was followed by an increase of 6.3 percent in efficiency.

The improvement was least marked in case study 74, in which the improvement in efficiency was only 1.3 percent when daily hours were reduced from 9½ to 8. (But see comment on case study 74 on p. 154.)

As already indicated, output was as good at 52 hours as at 58 in the heavy work described in case study 5. Except for study 74, in which final output could not be computed, the output lost because of the shortening of hours was the equivalent of half or less of the hours reduced. In case study 18, using the output level at the shorter hours as a yardstick, only 4 hours of output had been gained because of the 10 extra hours worked. A 52-hour week would have been as good as the one of 58.

Approximately the same ratio held for the 14 men in case study 65. About 3.5 hours of output were gained for the additional 7 hours worked.

The ratio of output gained was still lower in case study 51. The equivalent output hours gained by working 9 hours a day rather than 8, or 48 a week rather than 53, amounted to only 1.5. In other words, it took 5 hours of work to produce 1½ hours of output. In terms of actual occurrence, only 1½ hours of output were lost when 5 hours were taken off the work schedule.

The studies indicate that for heavy or moderately heavy work during a 6-day week, the 8-hour day is superior to the 9- and 10-hour day and that, on the whole, for every 2 hours added to the workweek, only 1 hour's output—or less—was realized.

CHAPTER V.—7-Day Week

The 7-day workweek is generally recognized as undesirable. In the course of this survey, only four clean-cut cases of regular Sunday work could be studied. There were other instances of occasional Sunday work to break bottlenecks in production, but in none of these was the 7-day workweek used as a regular schedule.

In studies 27 and 28, made in a plant engaged in processing metal parts on a variety of metal working machines, the performances of 29 experienced male operators and 22 experienced female operators could be studied. The men worked on materials varying in weight from 1 pound to over 100 pounds and operated lathes, milling, grinding, and similar types of metal working machines. The women worked on smaller machines and handled materials varying in weight from 1 ounce to several pounds.

For the men, the comparison is between a workday of 8 hours for a nominal weekly total of 48 hours and a schedule which involved work on two additional Sundays a month. Actually, however, the nominal 48-hour week without Sunday work involved considerable overtime, so that daily hours frequently came to 10, and sometimes to as high as 15. The change from this schedule to the one requiring work on two Sundays a month therefore meant substituting the Sunday work for the irregular overtime. A complication, the effect of which could not be evaluated, was that the irregular overtime schedule preceded our entry into the war, whereas the Sunday work schedule occurred during the war.

In any event, the shift in the schedule meant a substitution of an average (over a month) of a 53.9-hour schedule per week for one of 51.5 hours. This slight change in weekly hours—but with alternate Sunday work substituted for irregular overtime—resulted in an increase of efficiency of 16.3 percent.

Scheduled worktime lost because of absenteeism, however, rose from 3 percent to 7.2 percent.

Although the higher absenteeism offset in part the improvement in efficiency, total output was 16.6 percent better. In part, this increase was due to a slightly higher average number of hours—53.9 hours as against 51.5, or an increase of about 5 percent. The 2½ additional hours netted the equivalent of 8½ hours of additional output.

For the 22 women operators (case study 28) the 2 days a month of Sunday work and the nominal 8-hour day on 6 days averaged to 52.5 hours per week per month. Later, but still during the war period, this schedule was replaced by a nominal 8-hour day for 6 days a week. Both schedules included a paid one-half hour lunch period, so that daily hours actually worked came to only 7½.

When Sunday work was eliminated, efficiency jumped by 22.9 percent. The reduction in the nominal work schedule, it will be observed, was from 52½ to 48 hours, a curtailment of only 9 percent. At the same time, the absenteeism loss decreased from 10.9 to 7.4 percent.

Total output was 16.7 percent higher under the shorter schedule, with Sunday work eliminated. The reduction in the average workweek of about 4½ hours netted 9 hours additional output.

The third study was one of the most interesting and revealing in the entire survey. It covered 30 identical operators in a small plant employing about 100 persons engaged in the production of drills and reamers.

The work was light and almost entirely operator-paced. Each worker was paid in full for all production in excess of fixed standards, with fixed increases for specified percentages of output above the standard. However, a ceiling on earnings limited pay for additional output to 30 percent, beyond which workers received no pay. The data revealed that workers did not exceed the production necessary to yield this result, although they could have done so.

In June 1944, when the survey was made, the plant was on three shifts of 8 hours each, for 6 days per week. This schedule was attained after several years of experience with Sunday work. The original schedule was 5 days at 8 hours, or 40 hours per week. Then followed a 48-hour week, with a sixth day added. This was followed by a 7-day week of 56 hours, continued for 5 months. The plant's absenteeism record had grown so bad by that time that it was shut down, first, every third Sunday, then every other Sunday, and finally every Sunday.

This study, therefore, pertains primarily to the effectiveness of Sunday work. The findings were as follows:

1. Efficiency was highest during the 6-day, 48-hour week. In comparison with the average output per hour worked during the 7-day, 56-hour week, the average efficiency level during the shorter workweek was 29 percent greater.

There is reason to believe that the level during the shorter workweek would have been higher still had it not been for the company's bonus policy, under which production in excess of 30 percent above the standard was not compensated. This fact probably explains why there is only a 1-percent difference between the average hourly efficiency during the 6-day week and the schedule under which employees worked every other Sunday.

When employees were given every third Sunday off, after a long stretch at 7 days per week, efficiency jumped by nearly 17 percent. It went up another 11 percent when the plant worked only every other Sunday. If a similar improvement is assumed in the absence of a bonus scheme which sets a maximum limit on production, the estimated hourly output during the 6-day week would be still higher, by 6 to 8 percent. In other words, the data suggest that, had there not been the bonus limitation, the average efficiency during the 6-day, 48-hour week would have been one-third again as high as that of the 7-day, 56-hour week.

Not only was the 7-day week more costly: it was also only about 75 percent as efficient as the 6-day week.

As the chart shows, efficiency clearly improved as additional Sunday work was dropped. Efficiency was lowest when all Sundays were worked, and highest when no Sundays were worked.

2. The time lost because of absenteeism by the 30 selected operators was lower when Sunday work was discontinued entirely, as against the schedule under which every other Sunday was worked. The relative percentages, 7.3 and 8.2, appear to be quite high. The average time losses during the two earlier periods—4.1 percent when every Sunday was worked and 7.8 percent when 2 Sundays were worked out of 3—are not directly comparable with these figures because during the earlier schedules the company paid an attendance bonus: $5 for perfect attendance during the first month, $10 for the second month, and $15 for the third.

When Sunday work was scheduled, absenteeism was highest on Sunday. Next in order came Saturday; and third, Monday. Attendance was best on Friday—but Friday was pay day.

Management attempted to curb absenteeism by listing the names of the absentees. But the operators apparently did not care. In explanation of the high absenteeism rates, management advanced two reasons: (1) The 7-day week was too long. The men were tired and wanted some time off, even though it meant the loss of the attendance bonus and double pay for Sunday work. (2) Earnings were high, and the men had no time to spend their money. (The weekly bonus varied between $5 and $25, averaging about $10 per employee. Good operators averaged earnings of $1.50 to $1.65 an hour.) Consequently the value of money shrank, and the social aspects of spending some time with their families and friends assumed larger proportions with the operators.

3. Under the limitations of bonus earnings, the output of the 30 selected—and skilled—operators was highest during the schedule calling for work on every other Sunday, i.e., 1 week at 7 days and the next at 6. If the assumption of the efficiency level in the absence of the bonus limitation is sound, however, it appears that the output level during the straight 6-day week, at 48 hours, would have been equally as high.

Sunday work clearly was not economical. Instead of increasing weekly output, it actually decreased it—and at higher labor cost.

In case study 24, the performances of 31 men were traced through two long periods, the first of which required 8 hours of work for 7 days a week for a 54-hour week, and the second called for a 10½-hour day, with 8 hours on Saturday, for a total of 58 hours, but with no Sunday work. (The 8-hour day included a 15-minute lunch period, and the second, a one-half hour lunch period, both of which were paid for by the company. The lunch period has been excluded in the computation of actual results.)

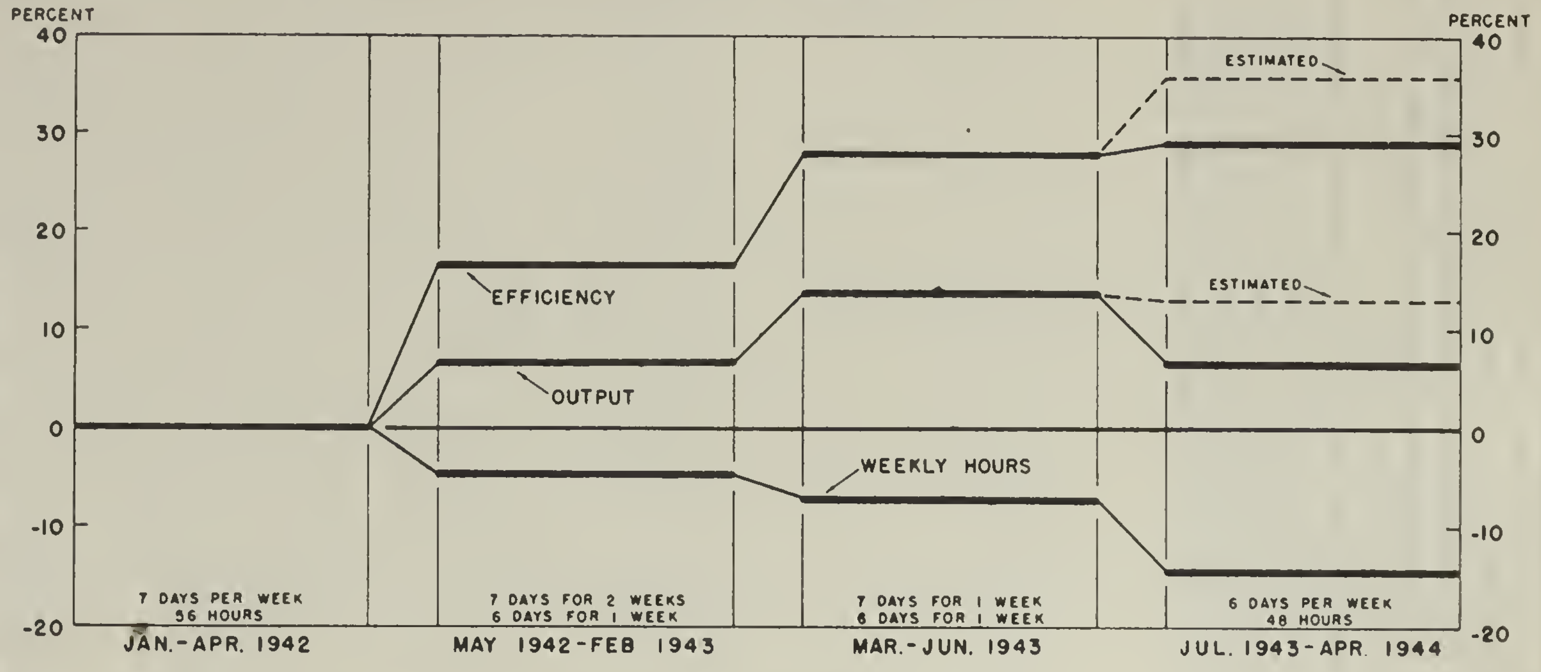
The men machined small metal parts for machine-gun tripods, aircraft engines, and other military equipment. The work was light and operator-paced.

Although there was no direct wage-incentive system, workers were paid specified hourly rates only if they maintained specified levels of output. Upgrading of rates was predicated on efficiency of performance.

CHART I

CHANGES IN AVERAGE WEEKLY HOURS, EFFICIENCY, AND OUTPUT

30 MALE OPERATORS



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Efficiency was better by 14.3 percent without Sunday work, even though daily hours had been lengthened from 7¾ to 10. Absenteeism was about the same under both schedules and amounted to a time loss of 5 percent of scheduled man-hours. The absence peak during the 6-day week fell on Saturday, reflecting the desire or need for a longer week end. Under the Sunday schedule, attendance was worst on Sunday, with Monday only slightly better. Operators who worked on Sunday, at double pay, frequently took Monday off, losing only straight pay.

The longer workweek was more productive than the Sunday work schedule. Although weekly hours had been increased by only about 7 percent, output increased by somewhat better than 22 percent. The elimination of Sunday work not only saved the cost of double pay for that day, but also netted 15 percent of output beyond the 7 percent of additional hours worked.

CHAPTER VI.—Intermittent Work Schedules

In some industries, of which clothing manufacturing perhaps is a good example, irregular hours were worked frequently during the war. In part, this was the result of shortages of materials at various times, and, in part, the pressure to get orders finished on schedule when materials were available. Case studies 52 to 57 trace the performances of workers at various types of operations in plants manufacturing clothing. Hours varied from 24 per week or less to as high as 55. As the work pace was fast, the results obtained at the various schedules are fairly good indications of the effects they engender should they be worked as regular, sustained schedules.

A Rural Plant

Studies 52 and 53 were made at a plant manufacturing men's trousers. The plant was located in a small rural community, and many of the operators had outside interests such as farming, gardening, hunting, and fishing. During the planting and harvesting seasons, their tendency was to hold work hours to an absolute minimum so as to have the time for these other activities. Most of the workers had high school educations, were self-reliant, and skeptical of anything that smacked of company patronage. In turn, management made no effort to make the plant or working conditions comfortable or attractive.

For the 96 women discussed in case study 52, work schedules varied from 24 hours to 48. All operations were performed at power sewing machines and were entirely paced by each operator working at piece rates. Hourly earnings averaged about 80 cents and ranged from as low as 60 cents to as high as $1.25.

The highest efficiency level, i. e., output per hour worked, was obtained for a workweek of 24 to 28 hours. At successive levels of 32, 36, and 40 hours, efficiency was slightly lower, but did not vary appreciably. But the 48-hour week was 4 percent poorer in efficiency than the 40-hour week, and 7.1 percent poorer than the 24-hour week.

Because of the nature of available records, and the intermittent schedules, it was not possible to determine absences that lasted an entire week or more. The figures used reflect absences of less than a week. Measured on this basis, the absenteeism loss increased slowly but steadily as hours increased from 24 to 40, when it reached 6.3 percent of scheduled hours. But at 44 hours it was only 3.3 percent, and at 48 hours, 1.2 percent. Obviously the workers were anxious to earn the time-and-a-half pay for overtime.

As a general rule, weekly output increased in direct proportion to hours. As hours exceeded 40, the lower efficiency was offset by better worker attendance.

In the same plant, 13 male pressers were studied for work schedules varying from 20 to 55 hours (study 53). Here, too, the pace was fast. The physical demands on the operators of the presses, however, were much more severe. Work frequently was hot and humid. Earnings averaged $1.10 per hour.

As in the case of the sewers, the efficiency of the male pressers was highest during the 24 to 28 hour week. Again, as in the case of the sewers, the efficiency level decreased slowly but steadily as hours rose to 40, for a total drop of about 3 percent. After 40 hours, efficiency dropped more sharply. The 55-hour week was 6 percent poorer than the 40-hour week, and 9 percent poorer than the 24-hour week. It is significant, however, that hours below 24 were not as efficient as those from 24 to 28.

Similar to the absenteeism experience of the women operators, the loss percentage for the men rose steadily to 7.8 percent at 40 hours. And again, as in the case of the sewers, work attendance at hours above 40 was very much better. At 44 hours, absenteeism caused a loss of only 1.9 percent of scheduled hours, and at 48 hours, attendance was perfect. At 55 hours, however, time lost had risen slightly to 1.2 percent.

Weekly output generally kept pace with changes in weekly hours, the lower absenteeism rates at the hours above 40 offsetting the lower efficiencies. The downward trend in efficiency, however, indicates that weekly output would have suffered rather severely had the long hours been sustained for any long period of time.

An Urban Plant

A direct comparison with studies 52 and 53 is provided by studies 54 and 55. Here, too, sewing and pressing operations were studied, but on the production of military and civilian overcoats. The plant belonged to the same company, but was situated in an industrial city. As in the rural plant, working conditions were only fair and entirely functional, without much regard for the comforts of the workers.

The experiences of 32 skilled female operators of power sewing machines furnish the material for study 54. Pace, wage incentive, and nature of work were the same as in case study 52. There was, however, this important difference—neither the women in this study, nor the men in study 55, were concerned with such outside activities as gardening and farming. Earnings averaged about 90 cents an hour.

During the 20-month period surveyed, weekly hours ranged from 28 to 52. The nominal workweek, consisting of 5 days at 8 hours each, was revised constantly, depending on the volume of work at hand and the work flow.

Contrary to the experience of the rural group, efficiency increased as hours were raised from 28 to 40. At that level, efficiency was 6.3 percent better. However, when hours exceeded 40, this trend was reversed. In spite of overtime pay, efficiency at 44 hours was 1 percent poorer, and at 52 hours, 3 percent poorer than at 40.

Contrary again to the experience of the rural operators, absenteeism remained fairly stable, at about 5 percent, for the schedules from 28 to 40 hours. But, as in the other case, attendance improved as hours exceeded 40 —at 44 hours it was 2.3 percent, and at 52 hours, 0.6 percent. Here, too, the better attendance may be attributed to the desire to take full advantage of the overtime pay and to make up for the loss occasioned by short work schedules. It is likely, however, that the picture might have been considerably different had the longer schedules been worked regularly rather than intermittently. As it was, total output kept pace with the increased hours, with lower absenteeism offsetting lower efficiencies.

The 22 hand and machine pressers in case study 55 afford a direct comparison with the pressers in study 53. The work required skill, and working conditions were similar to those described in the earlier study. The nature of the work—pressing overcoats rather than trousers—made for a steady but somewhat slower pace.

Hours fluctuated between 28 and 52. As in the case of the sewers in this plant, and contrary to the experience of the pressers in the rural plant, efficiency increased as hours rose from 28 to 40. At that level it was 4.9 percent better than at 28 hours. But as hours exceeded 40, efficiency leveled off. However, it remained fairly constant at 40, 44, 48, and 52 hours. The obvious explanation for this is the slower pace.

Contrary to the experience of the three other groups discussed thus far, absenteeism varied little with changing schedules of hours. Again, however, it is questionable whether a sustained 48- or 52-hour week would have had the same result.

Output increased in almost direct proportion to increased hours, with both efficiency and absenteeism constant above 40 hours.

Quality Rather Than Quantity

A third comparison was provided by sewers and pressers in the urban plant, but engaged in the manufacture of military and civilian jackets. This work, however, was subjected to much stricter quality controls. In spite of the piece-rate system, the emphasis was on quality rather than quantity of work. As a consequence, the pace was steady and unhurried. Furthermore, working conditions were considerably more comfortable.

Study 56 provides the findings for the results of constantly changing work schedules for 123 female operators of power sewing machines and hand sewers. Hours varied between 28 and 52.

As the study indicates, hourly output improved slightly as hours moved up to 40 per week, at which efficiency was nearly 3 percent better than at 28 hours. Efficiencies at 44, 48, and 52 hours were about 1 percent better. Working at a slower pace, these workers could maintain a steady hourly output in spite of the longer hours. These hours, however, were worked intermittently rather than steadily.

The absenteeism rate reached its highest point, 6.8 percent, at 32 hours, and was 6.1 percent at 40 hours. As in the other studies, absenteeism dropped sharply after 40 hours, with 2.1 percent for the 44-hour week and 1.1 percent during the 52-hour week. But, again, these rates probably would have been considerably higher had the longer schedules been worked steadily.

Improved attendance at somewhat better efficiencies and the higher hours resulted in proportionately better output levels. Although the 44-hour week represented an increase of only 10 percent above the 40-hour level, output was 15 percent higher. When hours were increased by 30 percent to a level of 52, output was 39 percent higher.

The 29 male hand and machine pressers in case study 57 had much the same experience. Here, too, the emphasis was on quality, and the work pace consequently deliberate and steady, rather than fast.

Efficiency improved somewhat, 2.1 percent, as hours increased from 28 to 40. As in the case of the sewers, efficiency rose by about 1 percent above that at 40 hours when hours increased to 44, and remained at that level even though hours increased to 52.

Although the absenteeism rates were somewhat lower than for the female sewers, the trend was the same, with 3 percent at 40 hours. During the 44- to 52-hour weeks, absenteeism dropped to 1 percent or less.

Paralleling the output experience of the sewers, the output for the pressers was somewhat better during the 44- to 52-hour schedules than during the shorter workweeks. At 44 hours, output exceeded the proportional increase in hours by 3.1 percent, and at 52 hours, by 4.3 percent.

In conclusion, however, it must again be emphasized that the results observed apply to intermittent schedules. They show the drive of overtime pay during hours above 40—but for schedules worked irregularly and not sustained over a long period of time. Had these longer schedules been sustained, the results might well have been different.

CHAPTER VII.—Work Injuries

In general, the results of the survey indicate that work injuries increased disproportionately as hours increased.

In table 15 are shown the frequency rates of injuries—i. e., the average number of injuries per million employee-hours worked—at various levels of weekly hours. Most of the plants included in this table were not included in the basic survey on the effects of hours because the type of data needed for output computations was not available. The data covers the experiences of about 85,000 workers.

Where possible, frequency rates were computed for all work injuries—for those that were disabling as well as those that required only first aid.

A study of table 15 reveals some inconsistencies in the general upward trend of injuries. The reason for some of these can be explained because these studies were included in the more comprehensive survey. For example, plant S had a frequency rate of disabling injuries of 13.7 at 48 hours. At 54 hours, the rate was nearly the same, 13.1. The explanation is a very efficient system of accident prevention.

An entirely different reason explains the lower over-all frequency rate for plant T at 60 or more hours than had prevailed at 40 hours. These figures summarize the findings for case studies 20 and 21. Reference to these studies readily reveals that the operating pace had slowed down so much—by more than 20 percent—that injuries were somewhat fewer, in terms of the million-hour base. It is readily apparent, however, that the slight reduction, about 5 percent, stands in sharp contrast to the slowing down in the operating pace.

In five plants (D, H, L, M, and Q), the reasons for the better rates at higher levels of weekly hours could not be ascertained.

TABLE 15.—*Frequency rates of work injuries at various levels of weekly hours*

Plant	Frequency rates of injuries at weekly levels of —							
	40 hours		48 hours		54 hours		60 or more hours	
	Disabling	Total	Disabling	Total	Disabling	Total	Disabling	Total
A	....	3,852	....	5,839	....	....	....	....
B	....	....	....	....	....	225	....	328
C	....	....	....	175	....	275	....	....
D	6.6	....	4.9	....	....	....	....	....
E	....	444	....	596	....	....	....	....
F	....	1.245	....	1,363	....	2.120	....	....
G	....	1.391	....	2,759	....	....	....	....
H	....	155	....	96	....	....	....	....
I	....	595	....	680	....	....	....	....
J	....	....	....	1.008	....	....	....	2,727
K	....	2.558	....	3.682	....	2,975	....	....
L	15.4	....	....	....	8.6	....	....	....
M	46.4	....	....	....	41.5	....	....	....
N	60.0	....	62.4	....	....	....	....	....
O	26.5	....	....	....	....	....	30.2	....
P	8.1	....	....	....	19.2	....	....	....
Q	....	....	16.6	....	....	....	11.4	....
R	32.9	....	37.1	....	....	....	....	....
S	....	....	13.7	....	13.1	....	....	....
T	....	6.337	....	....	....	....	....	6.017

On the other hand, the evidence of the effect of longer hours on work injuries is rather striking. In plant A, with hours increased from 40 to 48, the frequency rate went up by more than 50 percent. Similar results were obtained in plant C, when hours went up from 48 to 54, and in plant B, when hours rose from 54 to 60. In plant G, an increase from 40 hours to 48 just about doubled the over-all frequency rate, and in plant J, an increase from 48 hours to about 60 nearly tripled the rate.

In plant N, the rate at 48 hours is only about 4 percent above that for 40 hours. It probably would have been higher had there not been a fairly sharp curtailment in average hourly output at 48 hours in this forge shop in which work was both hot and heavy.

In plant O, the increase in the frequency rate of disabling injuries reflects a rise of only about 14 percent. This considerably understates the situation because foremen "covered up" at the higher hours by not reporting the minor types of disabling injuries—i. e., those that disabled men for 1 or 2 days, but could be taken care of satisfactorily by the nurse.

An instance of the inability of an excellent safety program to cope with the disproportionate increase in injuries is supplied by plant P. Here the frequency rate for disabling injuries was 8.1 at 40 hours, but 19.2 at 54 hours.

Because of the difference in record keeping for minor injuries, the rates for the plants shown are comparable only for disabling injuries, but not for all work injuries. Basically, the findings reflect the effects of different work schedules and not plant differences.

The Hourly Injury Pattern

Regrettably, it was not possible in a single instance to match injuries by hour of occurrence with hourly output, particularly when hours per day were increased. In one plant, however, it was possible to develop the hourly pattern of injury occurrence for all injuries, most of them nondisabling. The distribution of these injuries during both an 8-hour day and a 10-hour day schedule are shown in table 16, and graphically on chart 2. The 8-hour day schedule covered a period of about 7 months, and that of the 10-hour schedule, about 9½ months. The group surveyed consisted of 100 workers. (See pp. 39 and 40.)

The hourly distribution of injuries under the two patterns of daily hours is very similar. In both cases, the first hour has the lowest number of injuries. During the 8-hour day, the curve rises slowly during the 2nd and 3rd hours, but reaches a peak with nearly 17 percent of all injuries during the fourth hour of a 5-hour stretch. During the fifth hour, the percentage drops to 12, reflecting the slowing down in pace as the lunch hour approached.

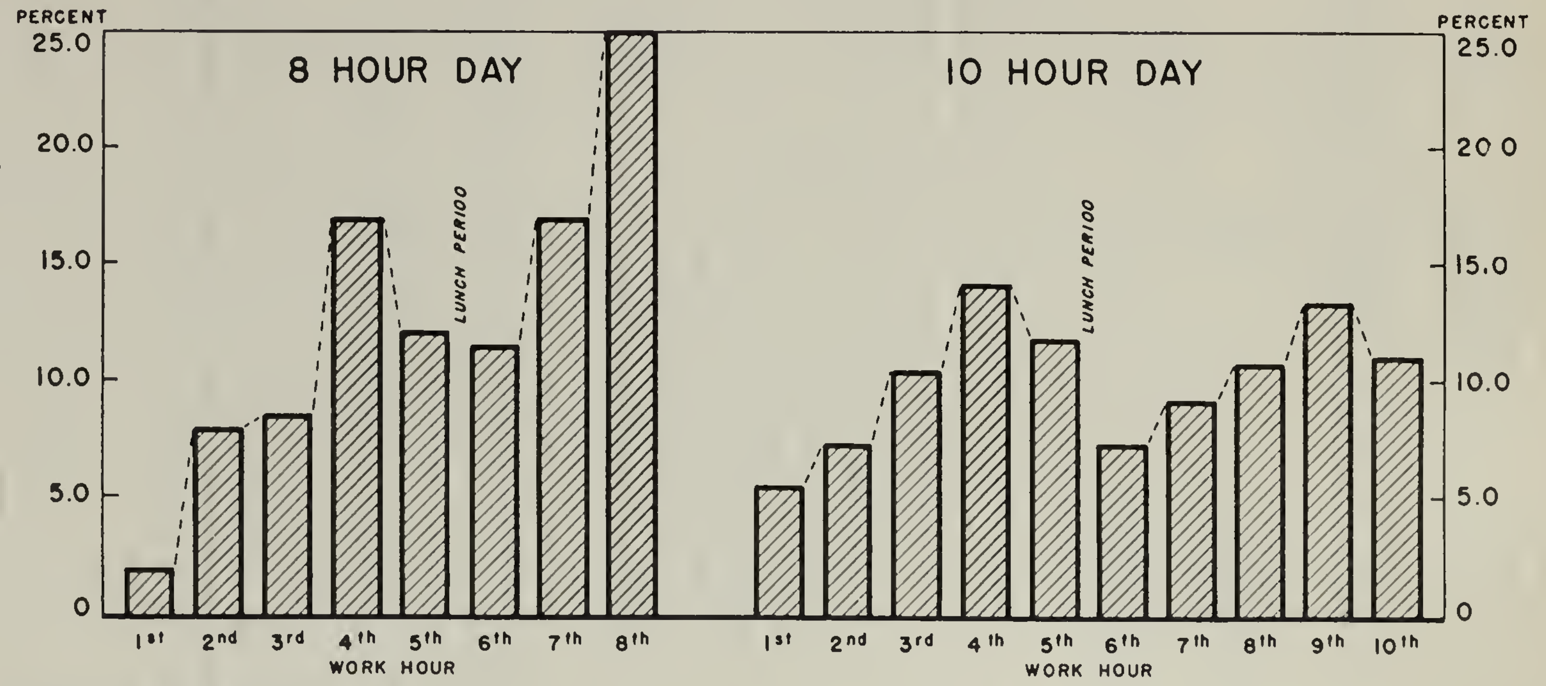
During the 3-hour stretch in the afternoon, however, injuries rise steadily and sharply. Beginning at 11.4 percent, the increase is to 16.8 percent, and finally, 25.0 percent in the last hour.

With hours unevenly divided for morning and afternoon work—5 and hours rather than 4 and 4—the 3 hours in the afternoon account for 53 per

CHART 2

DISTRIBUTION OF WORK INJURIES BY HOUR OF OCCURRENCE

DURING 8 AND 10 HOUR SCHEDULES



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cent of all the injuries. The high percentage of injuries falling into the last hour may reflect fatigue or a burst of speed, or both.

TABLE 16.—*Distribution of work injuries by hour of injury occurrence, for an 8- and a 10-hour day*

Hour of injury occurrence	8-hour day		10-hour day	
	Number of injuries	Percent of total	Number of injuries	Percent of total
Total	167	100.0	429	100.0
First hour — 7 o'clock	3	1.8	23	5.4
Second hour — 8 o'clock	13	7.8	31	7.2
Third hour — 9 o'clock	14	8.4	44	10.3
Fourth hour — 10 o'clock	28	16.8	61	14.1
Fifth hour — 11 o'clock	20	12.0	50	11.7
Sixth hour — 1 o'clock	19	11.4	31	7.2
Seventh hour — 2 o'clock	28	16.8	39	9.1
Eighth hour — 3 o'clock	42	25.0	46	10.7
Ninth hour — 4 o'clock	....	....	57	13.3
Tenth hour — 5 o'clock	....	....	47	11.0

Like the 8-hour day, the 10-hour day also reaches its morning peak during the fourth hour and then drops off during the hour immediately preceding the break for lunch. During the 5-hour afternoon, the distribution of injuries has not nearly the intensity displayed by the 8-hour day. The first and second afternoon hours are comparable to the second and third morning hours. In fact, the fourth hour morning peak is not reached at all in the afternoon. Like the fourth hour in the morning, the fourth hour in the afternoon stretch is the high point for the half day. The 5-hour afternoon accounts for exactly 50 percent of the injuries. The sharp upward surge during the last hour of the 8-hour day is entirely missing. Instead, there is a dropping off during the last hour, which is not much worse than the third morning or third afternoon hour.

In the absence of hourly production data, any attempted explanation for these differences can be no more than informed guesses. The explanation that suggests itself most readily is that the operating pace during the 10-hour day, with the day divided evenly by the lunch hour, is a more steady pace than that for the 8-hour day. There, too, the injury distribution might have been different had the day been divided into two stretches of 4 hours each. But with only 3 hours in the afternoon, with a pause for lunch to refresh them, it seems that the operators worked up to another production peak during the afternoon, as they had during the fourth hour in the morning, but to a higher level. In other words, the poorer injury experience during the short afternoon stretch may have been the direct result of a fast production pace.

CHAPTER VIII.—Daily Patterns of Efficiency and Absenteeism; Various Levels of Hours

It was hoped that the data on efficiency and absenteeism might reflect aily output and absenteeism patterns that might be characteristic for the arious levels of daily and weekly hours.

Efficiency

Owing to the scattered instances in which it was found possible to obtain ata in sufficient detail, the patterns for efficiency are not numerous enough o permit any definite conclusions. Some of them, however, reveal a definite rend when performances at various schedules are examined for the same roup of workers.

In table 17 are shown daily efficiencies on 8-, 9-, and 10-hour days with orkdays varying from 5 to 7.

TABLE 17.—*Daily efficiency patterns at various schedules of daily and weekly hours*

Case study and type of work	Sex of workers	Work schedules	Daily efficiencies						
			Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.
		8-hour day							
7 — Mod. heavy....	Male	5 days at 8 hours	99.0	98.3	99.8	102.2	100.6	..	..
8 — Light..........	....do	....do	98.8	100.6	100.0	100.6	99.7	..	..
9–63 — Light.......	Female	....do	100.0	99.1	100.1	100.7	100.2	..	..
8 — Light..........	Male	6 days at 8 hours	99.2	100.1	100.9	99.8	99.8	100.1	..
9-63 — Light.......	Female	....do	99.9	101.0	99.4	101.2	98.7	99.5	..
4 — Light..........	Male	7 days at 7.7 hr.	98.3	98.2	97.6	97.6	102.3	101.1	104.6
8 — Light..........	Female	7 days at 8 hours	98.6	101.2	100.4	100.8	102.2	99.1	97.8
		9-hour day							
5 — Heavy.........	Male	5 days at 9 hours 1 day at 7 hours	94.8	105.9	109.6	96.1	94.8	98.5	..
		10-hour day							
7 — Mod. heavy....	....do	5 days at 10 hr.	99.4	101.0	99.4	100.2	100.2	..	..
5 — Heavy.........	....do	5 days at 10 hr. 1 day at 8 hours	98.0	99.3	102.0	102.0	100.7	98.0	..
4 — Light..........	....do	....do	99.8	99.6	100.1	99.8	99.5	101.1	..
7 — Mod. heavy....	....do	....do	99.8	98.9	99.8	100.6	100.6	100.6	..

During the 40-hour week, with an 8-hour schedule for 5 days, case study 7, ith men engaged at moderately heavy work, suggests a gradual building-up o a peak on Thursday. In study 78, with men at light work, the pattern is omewhat similar, except that a high plateau prevails on Tuesday, Wednesday, and Thursday, with somewhat lower efficiencies on Monday and Friday, he first and last days of the week. The grouped results for the women operaors in case studies 59 to 63, however, suggest a fairly constant daily pattern, xcept for a slight drop on Tuesday.

Adding a sixth day at 8 hours does not appear to have altered the pattern uch for the male operators in case study 78. However, it definitely depressed the level of the daily performances of the women operators in case studies 59-63.

The 7-day patterns shown for studies 24 and 28 do not follow a similar distribution. In case study 24, the men performed better on the last 3 days of the week, with particular emphasis on Sunday, when the best performance was turned in. This is rather surprising because the work was not done at piecework or under any other direct incentive system. Although double time was paid for Sunday, the pay would have been the same even if a lower output level had been reached. The reason for this pattern is anything but clear.

The pattern supplied by the women operators in case study 28 shows Sunday performance to be poorer than that of any other day, but not substantially so—only about 2 percent below the average for the week. Here, moreover, workers were paid in full for all time saved from the standards allowed for each job.

Only case study 5 supplies a pattern for the 9-hour day. The schedule actually consisted of 5 days at 9 hours, with Saturday at 7 hours. The pattern, for men at heavy work, shows a surprisingly sharp rise from a low of 94.8 on Monday to a high of 109.6 on Wednesday—but with sharp decreases on Thursday and Friday, with Friday back to the Monday level. Performance recovered to an index of 98.5 for the shorter Saturday. The reason for the sharp spurt on Tuesday and Wednesday is not apparent.

During the 10-hour day, the men in case study 7, at moderately heavy work, performed almost uniformly well on each of the 5 days of the workweek. In comparison with the 8-hour day, however, it is quite clear that the midweek spurt disappeared. The addition of a sixth day at 8 hours, lengthening weekly hours to 58, also reveals the absence of the midweek spurt, and indicates that the level for the entire week was somewhat lower than that for the 50-hour week. In other words, as daily hours were raised from 8 per day to 10, but with the retention of the 2-day week end, the midweek spurt was lost. When a sixth day was added, the curves remained flat, but dropped to a still lower level. (See chart 3.)

The men at heavy work in case study 5 reveal the same experience under the 9- and 10-hour day patterns. A reference to table 17 shows the sharp spurt on Tuesday and Wednesday substantially reduced. Here, too, the effect of lengthening daily hours was to curtail the spurt, and to level out daily production. It is to be noted, however, that performance on Thursday and Friday was substantially better during the longer work schedule.

The performance of the men in case study 24 also indicates that for a 10-hour schedule, the performance on any one day was about as good as on any other day. Here again, efficiency was better during the shorter Saturday.

Although available details are insufficient to justify any definite conclusions, the available data suggest that the 6-day week at 8 hours a day is nearly as good in terms of efficiency as the 5-day week at 8 hours. But when hours are raised to 9 and 10, the midweek peak tends to disappear, and the curve becomes flat. As a sixth day is added, the curve remains flat, but drops to a still lower level.

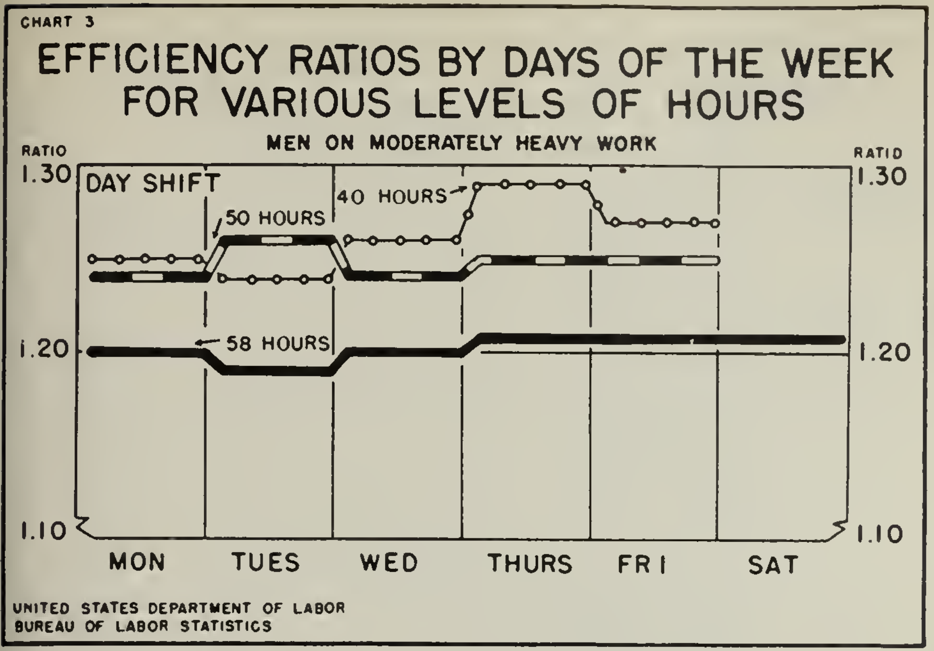

CHART 3

EFFICIENCY RATIOS BY DAYS OF THE WEEK FOR VARIOUS LEVELS OF HOURS

MEN ON MODERATELY HEAVY WORK

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This trend suggests one other conclusion: As efficiency drops at longer laily and weekly schedules, the performance of each day of the week is oorer under the longer schedule. Lower hourly production does not manifest tself merely during the additional hours worked—it pervades the entire work chedule. At longer hours, workers tend to slow down so as to be able to tretch their energies over the longer schedules.

Absenteeism

Attention has been called earlier to two important aspects of absenteeism: 1) the generally higher absence rates for women and (2) the general increase in scheduled worktime lost when hours were raised substantially above 8 per week.

Table 18 shows how the absenteeism pattern varies, by days of the week, nder various schedules of daily and weekly hours.

Although the levels of absenteeism rates vary considerably between plants, o definite daily pattern is discernible for any one plant during the 5-day veek with the 8-hour day, except, perhaps, a somewhat higher rate on Monlay, the first day of the week.

When the workweek was lengthened to 6 days by the addition of another -hour day, the pattern displays a markedly higher rate for Saturday.

In case study 69, the Saturday rate is twice that for any other day in he week, although the rate of 3.8 is low in comparison with the rates of most f the other worker groups shown. Case study 70 indicates not only the endency to take Saturday off, but also to take Monday off. One obvious xplanation for this is that the men who worked on Saturday found it necesary or desirable to take time out on Monday. There is little time for shoping or for attending to personal matters or needs when the workweek enompasses 6 full days.

TABLE 18.—*Daily absenteeism patterns at various levels of daily and weekly hours*

Case study	Sex of workers	Schedule	Percent of scheduled worktime lost through absences						
			Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.
		8-HOUR DAY							
78	Male	5 days at 8 hr.	9.7	9.2	7.7	6.1	10.5	..	..
		6 days at 8 hr.	5.2	6.0	5.1	5.5	5.4	7.6	..
7	....do	5 days at 8 hr.	4.0	4.0	6.8	6.5	5.0	..	..
77	....do	....do	2.0	1.8	1.1	.6	.7	..	..
69 (day shift)	....do	....do	2.0	.2	..	.9	.9	..	..
		6 days at 8 hr.	1.9	.8	1.4	1.2	1.8	3.8	..
70 (afternoon shift)	....do	5 days at 8 hr.	2.8	.9	..	..	..	..	..
		6 days at 8 hr.	5.6	2.8	3.0	3.4	4.5	6.6	..
71 (night shift)	....do	5 days at 8 hr.	..	8.3	5.0	1.7	..	3.8	..
		6 days at 8 hr.	13.7	4.1	2.9	3.6	1.4	2.0	..
59–63	Female	5 days at 8 hr.	10.7	12.3	12.7	9.4	8.7	..	..
		6 days at 8 hr.	11.2	10.2	10.5	9.6	8.8	20.8	..
77	... do	5 days at 8 hr.	1.3	.7	1.3	1.5	1.9	..	..
		6 days at 8 hr.	4.1	3.3	3.5	3.7	3.5	20.5	..
28	Female	6 days at 8 hr.	10.9	7.2	6.2	6.5	5.6	8.0	..
		7 days at 8 hr.	11.3	10.1	11.3	9.8	10.0	9.7	7.9
24	Male	7 days at 7.7 hr.	7.5	5.0	3.9	2.6	3.6	3.9	9.9
		WORKDAYS ABOVE 8 HOURS							
35	Male	6 days at 9 hr.	5.1	4.6	5.0	4.1	4.8	7.4	..
24	....do	5 days at 10 hr. 1 day at 8 hr.	2.4	4.4	3.3	4.3	5.5	8.2	..
35	....do	5 days at 10½ hr. 1 day at 9 hr.	6.2	5.4	4.6	3.5	5.3	9.8	..
7	....do	5 days at 10 hr.	5.8	3.5	1.3	1.3	1.8	..	..
7	....do	5 days at 10 hr. 1 day at 8 hr.	2.8	3.0	2.0	1.5	1.8	11.0	..
77	....do	5 days at 10 hr. 1 day at 9½ hr.	4.3	2.2	2.0	4.2	2.8	17.5	..
75	....do	5 days at 11½ hr.	7.2	6.1	6.0	5.1	5.6	..	..
		5 days at 10 hr. 1 day at 8 hr.	6.3	5.3	5.2	4.3	5.1	10.4	..
75	Female	5 days at 11½ hr.	10.9	9.4	9.4	8.1	10.1	..	..
		5 days at 10 hr. 1 day at 8 hr.	9.3	8.2	8.1	6.9	8.5	12.5	..

The situation was reversed for the night-shift crew of men in case study 71. There, work began on Sunday night—and, as one might expect, absenteeism was highest on this first night of the week rather than on the last. In fact, it averaged 13.7 percent of the hours scheduled for work on that shift. Here the explanation is based on social grounds. After spending the day with his family and friends, the worker is not apt to feel fresh enough to report for work at night. The alternative is to sleep away a considerable portion of the day—but that means foregoing the social intercourse which is such an important part of life.

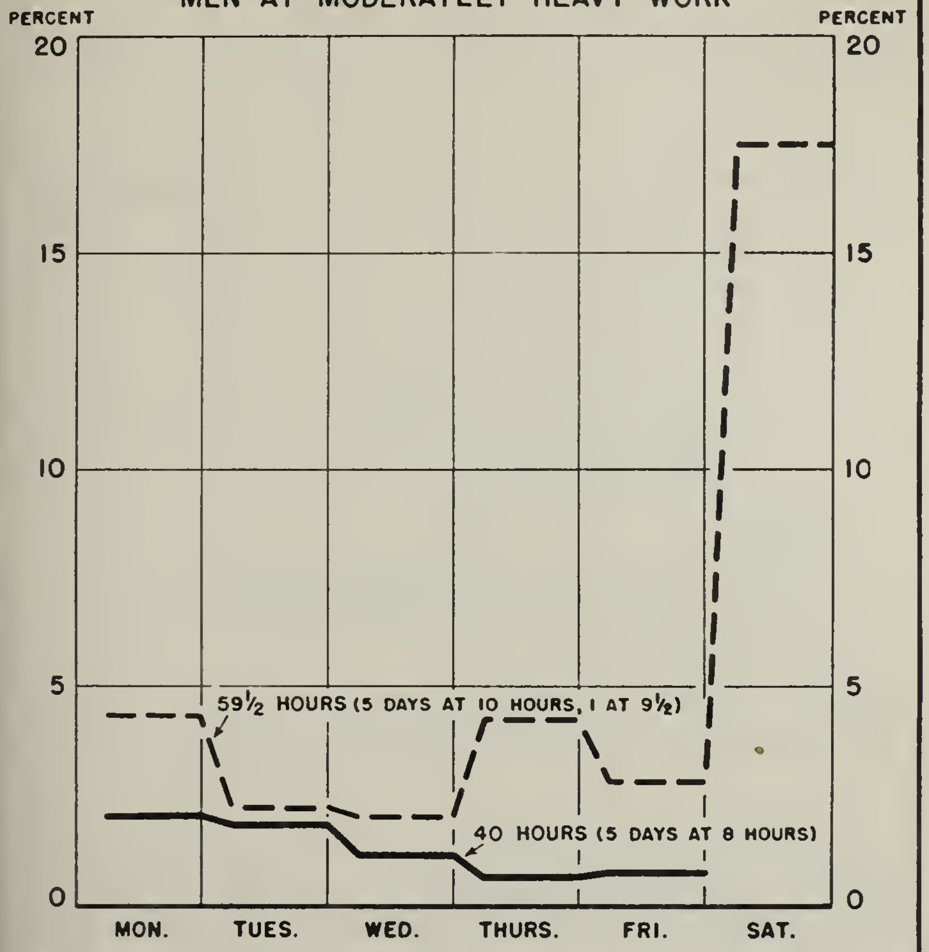
The absenteeism rates for the combined group of female operators in case studies 59 to 63 illustrate the generally higher absenteeism pattern for women. The same is true of case study 28. On the other hand, this pattern is not true of all women, as shown by the operators in case study 77. But here, as in studies 59 to 63, the significance of Saturday work is unmistakable: absenteeism rose to above 20 percent. In other words, on an average, fully one-fifth of the total work force consisting of women stayed away from work. This, it will be observed, represents an absenteeism loss about three times as high as that observed for men.

The explanation suggested for the men applies with even greater force to the women. To it must be added the fact that many women workers have home responsibilities and, often, the responsibility of taking care of children.

CHART 4

DAILY PATTERN OF ABSENTEEISM DURING 5 AND 6 DAY WEEKS

MEN AT MODERATELY HEAVY WORK



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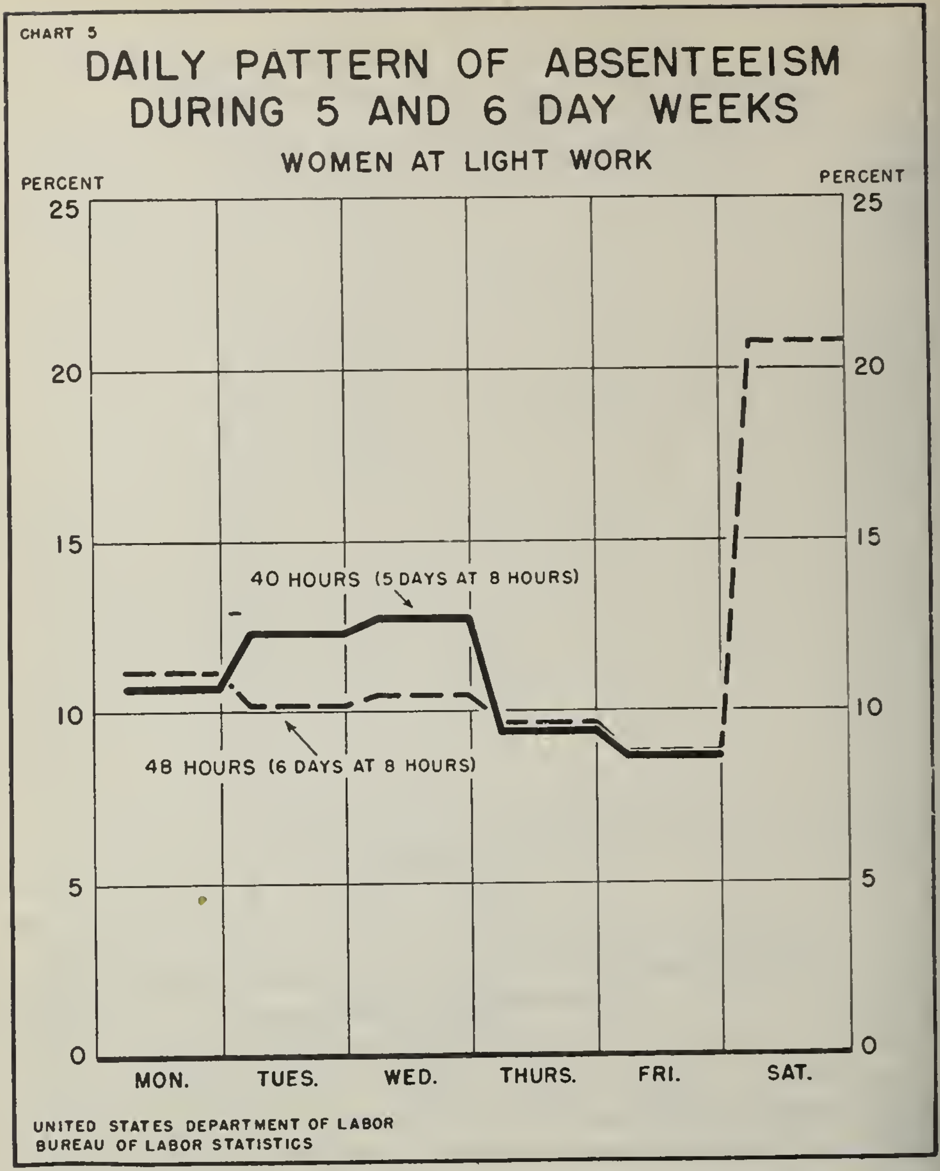
When a 7-day week was worked, absences were more frequent during each of the 6 days of the week than during the corresponding days of the 6-day week—but lowest on Sunday for the women in case study 28. Quite understandably, the operators worked Sunday at double pay, and took time out on some other day of the week, preferably Monday.

The men in study 24, however, were absent more frequently on Sunday during the 7-day week, with the second-highest absence rate on Monday.

The patterns for the 9-hour and 10-hour days are about the same as for the 8-hour days, except that absenteeism on Saturday, the sixth day, reached much higher levels for men than during the 8-hour day. Except for case study 75, all of the studies shown concern men.

The men in case study 7 had the highest rate, 5.8, on Monday during the 5-day week, with daily hours at 10. But when a sixth day was added, at 8 hours, for a 58-hour week, the high point shifted to Saturday—with 11.0

CHART 5



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percent. For the rest of the week, the absence rates under the two schedules are very similar. The difference comes on Saturday.

Similarly, absenteeism for the men in case study 77 reached 17.5 percent on Saturday, and 10.4 percent in case study 75.

Because women were limited by State laws from working long hours, and because management quickly discovered that long hours were not advisable even when possible, few women operators were found at the higher levels of daily and weekly hours. The daily pattern for one group at 10 and 11½ hours is shown for case study 75. It will be noted that the time lost because of absenteeism was lower during the 10-hour-day schedule than during any corresponding day under the 11½-hour schedule, even though the latter involved a 5-day week and provided a 2-day week end. During the 6-day week, as in other cases listed, absenteeism was highest on Saturday.

CHAPTER IX.—Effects of Introduction of Wage Incentives

During the war there was considerable agitation for a more widespread use of wage incentives as a means of increasing output. Such schemes could effect such results only when the pace of operations was controlled by the worker either in whole or in part. As pointed out in connection with individual case studies, when the pace was controlled entirely or primarily by the machine, then output tended to increase proportionately with increases in hours, because nonproductive time—getting ready, cleaning up, etc.—was spread over a longer workday, and offset the lower efficiencies of workers.

To increase output by inducing workers to speed up requires two basic conditions: (1) that the original pace, without the use of the incentive, is moderate or slow and can be speeded up, and (2) that the work is such that a faster pace can be maintained over the schedule of hours to be worked, so that it will not be vitiated by a gradual or sharp dropping off in efficiency or a sharp rise in absenteeism.

The most graphic demonstration of the effect of the introduction of a wage incentive system is provided by case studies 1 to 4. These four groups of men worked in a nonferrous-metal foundry in which work was both hot and heavy. Working conditions were noisy, smoky, and quite hazardous. All of the workers studied were males, and about 60 percent of them were Negroes, many of whom had developed into highly skilled operators through years of service with the company.

The records of about 200 men were studied. These men were classed into 3 groups, which differed in wage incentives and weekly hours. Group 1 included about 45 men on the floor-mold-department day shift. Although weekly hours were reduced by the dropping of Saturday work, the men did not go on piecework, but continued at day rates. Group 2 included two subordinate groups consisting of (a) about 80-90 selected men in 13 crews on the day shift of the floor-mold department, who worked at time rates until November 1942, when they went on piecework simultaneously with shortening the workweek, and (b) a group of about 15 men on the night shift of the squeezer department, whose changes in weekly hours and methods of wage payment were the same as those for the selected men on the floor-mold day shift. Group 3 included about 35 selected men on the day shift in the squeezer department who went on piecework in November 1942, but whose scheduled weekly hours remained essentially unchanged—about 58 per week.

Group 1 therefore illustrates the performance of a group of men who remained on day work throughout, without any wage incentive, but experienced a reduction in weekly hours. Group 2 illustrates the performance of men who experienced both a change in method of wage payment and a change in weekly hours. Group 3 illustrates the performance of men who had a change to a wage incentive but no change in scheduled weekly hours.

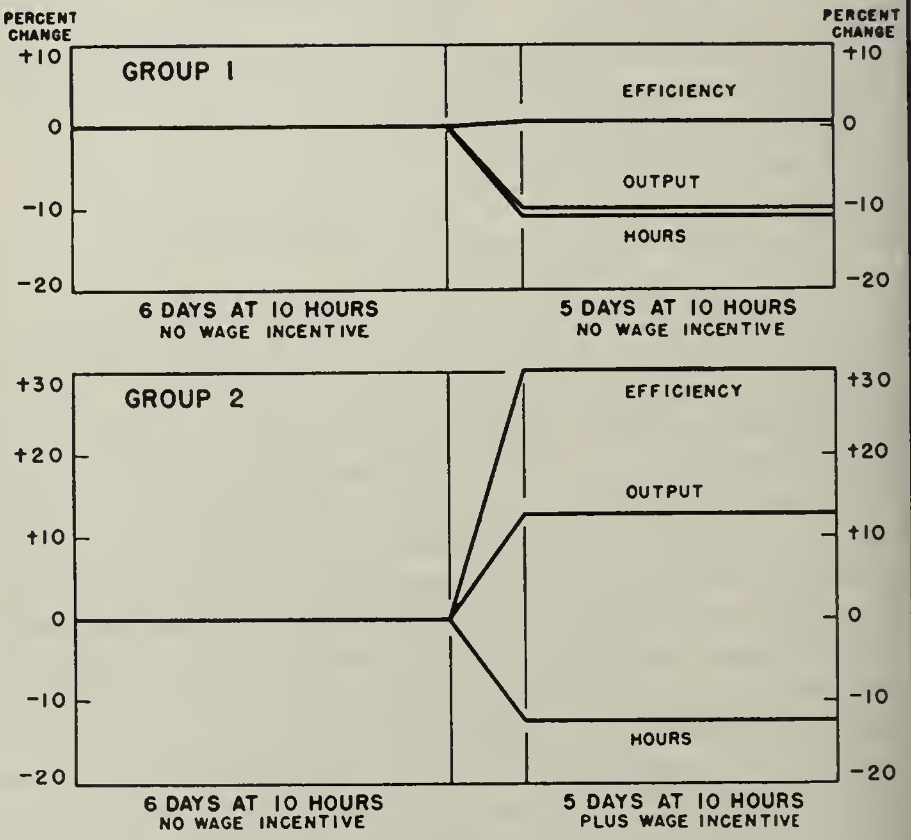
1. Without the stimulus of an incentive wage, a reduction in average weekly hours from about 60 to about 53 resulted in no appreciable change in hourly efficiency and, consequently, brought about a proportionate reduction in total output.

As already indicated, this finding results from an analysis of the performance of a group of about 45 men in the floor-mold department. For a number of reasons, principally because records were not so adequate as for the men on piecework, it was not possible to develop for this group the same production yardstick as for the selected group. A fairly reliable though rougher method of comparison was obtained by computing an average number of man-hours per casting, even though the types of castings varied throughout the entire period studied. The assumption that the differences in castings

CHART 6

EFFECTS OF INTRODUCTION OF WAGE INCENTIVE AND SHORTENING OF WEEKLY HOURS

DAY SHIFT FLOOR MOLD DEPARTMENT OF A FOUNDRY



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would average out during the two levels of hours used for comparison was justified by the fact that the plant remained at essentially the same type of production throughout the period.

As is apparent from table 19, a reduction in weekly hours of nearly 11 percent resulted in a reduction in output of 10 percent. The difference of nearly 1 percent is attributable to the fact that efficiency increased slightly, by about 0.7 percent. This increase may have been the result of the elimination of Saturday work, or the contagious effect of the faster pace set by the men on piecework, or both. In any case, it was practically negligible in its effect on total output.

TABLE 19.—*Comparative performances on foundry work at various weekly hours*

Period	Average weekly hours	Scheduled days per week	Efficiency rate	Indexes of —			Incentives
				Average weekly hours	Efficiency (output per man-hour)	Total output	
Floor-mold department							
Nonselected men:							
2/42–10/42 (exclusive of July-September)	59.7	6	100.2	100.0	100.0	100.0	None
11/42–1/43 (transition period)	53.7	5+	94.3	90.0	94.1	83.5	Do.
2/43–5/43	53.3	5+	100.9	89.2	100.7	90.1	Do.
Selected men:							
1/42–10/42 (exclusive of July-September)	59.7	6	89.8	100.0	100.0	100.0	Do.
11/42–1/43 (transition period)	57.1	5+	100.1	95.6	111.5	110.4	Piecework
2/43–5/43	52.4	5	117.0	87.8	130.3	112.7	Do.
Squeezer department							
Selected men, day:							
1/42–11/42 (exclusive of July-September)	58.4	6	96.3	100.0	100.0	100.0	None
12/42–5/43	55.3	6—	101.9	94.7	105.8	102.7	Piecework
Selected men, night:							
1/42–11/42 (exclusive of July and August)	58.2	6	97.0	100.0	100.0	100.0	None
12/42–1/43 (transition period)	55.9	5+	100.3	96.2	103.3	110.5	Piecework
2/43–5/43	50.4	5	108.0	86.8	111.2	103.3	Do.

The fact that average weekly hours fell only to about 53 (instead of about 50), after the dropping of Saturday work, was due to the fact that the men remained at the end of each day to complete the molds already started.

2. A sizable reduction in weekly hours because of the elimination of Saturday work, coupled with the introduction of the incentive wage, resulted (a) in a sharp increase in hourly efficiency and (b) in a total-output level higher than that experienced at the longer weekly hours.

Both the day shift in the floor-mold department and the night shift in the squeezer department illustrate this point.

The floor-mold group consisted of 80 to 90 men. Because these men were on piecework, it was possible to compute an adequate measure of efficiency for them, both for the period during which they worked at piece rates as well as for the preceding period at day work. In judging the performance of this group, it is pertinent to bear in mind that these men represented the more experienced group on the day shift, and that they were put on piece rates for precisely that reason.

If the performance level during the 60-hour week is taken as a base, the reduction of weekly hours of about 12 percent finally resulted in an increase of efficiency of 30 percent and in total output of nearly 13 percent. In other words, even though the men did not work on Saturday, they produced 13 percent more during the shorter week.

The performance of the 15 men on the night shift in the squeezer shop was less spectacular, but still in the same direction. By dropping Saturday work, average weekly hours were reduced from 58 to about 50, or about 13 percent. Efficiency went up 11 percent, however, with the result that total output increased by more than 3 percent. As in the case of the floor-mold day-shift men at piecework, the total output of the squeezer-shop night-shift men was higher during the shorter workweek than it had been during the longer workweek.

The difference in the relative performances of the day-shift and night-shift men discussed here may be explained by the fact that the men on the day shift had longer seniority and consequently represented the "older hands" or better-skill group. The day shift also had the advantage of more supervision and more "long-run jobs." The night shift cleaned up orders started by the day shift and consequently could not maintain so steady a production stride.

It is also likely that the night men were not able to put forth as much sustained effort because of their habit of sleeping upon their return from work and of being up and around for several hours before going to work. The day-shift men, on the other hand, had their leisure hours after the day's work was over.

3. The introduction of incentive wages, but with the longer workweek essentially maintained, resulted in a slight increase in efficiency and a small increase in total output.

As chart 7 indicates, average weekly hours for the approximately 35 men studied on the squeezer department's day shift actually were reduced from about 58 to 55. The reasons for the apparent 5-percent reduction were that some of the men did not work on Saturday, and that occasionally the entire group worked only 6 or 6½ hours on Saturday instead of the customary 8. As the crews which did not work the sixth day kept changing—apparently because of some system of rotation—the group had to be studied as a whole.

For all practical purposes, however, scheduled hours may be considered as having remained essentially unchanged. The changes in efficiency and output, although influenced to some extent by periodic stoppages on Saturday for a small part of the group, were due primarily to the introduction of the incentive wage. Efficiency went up by nearly 6 percent, and total output by nearly 3 percent.

The introduction of piecework caused the men to speed up, but the increase in pace was not nearly so great as when the incentive system was coupled with a shorter workweek.

4. With the introduction of an incentive system, the reduction in weekly hours caused by the dropping of Saturday work is estimated to have resulted

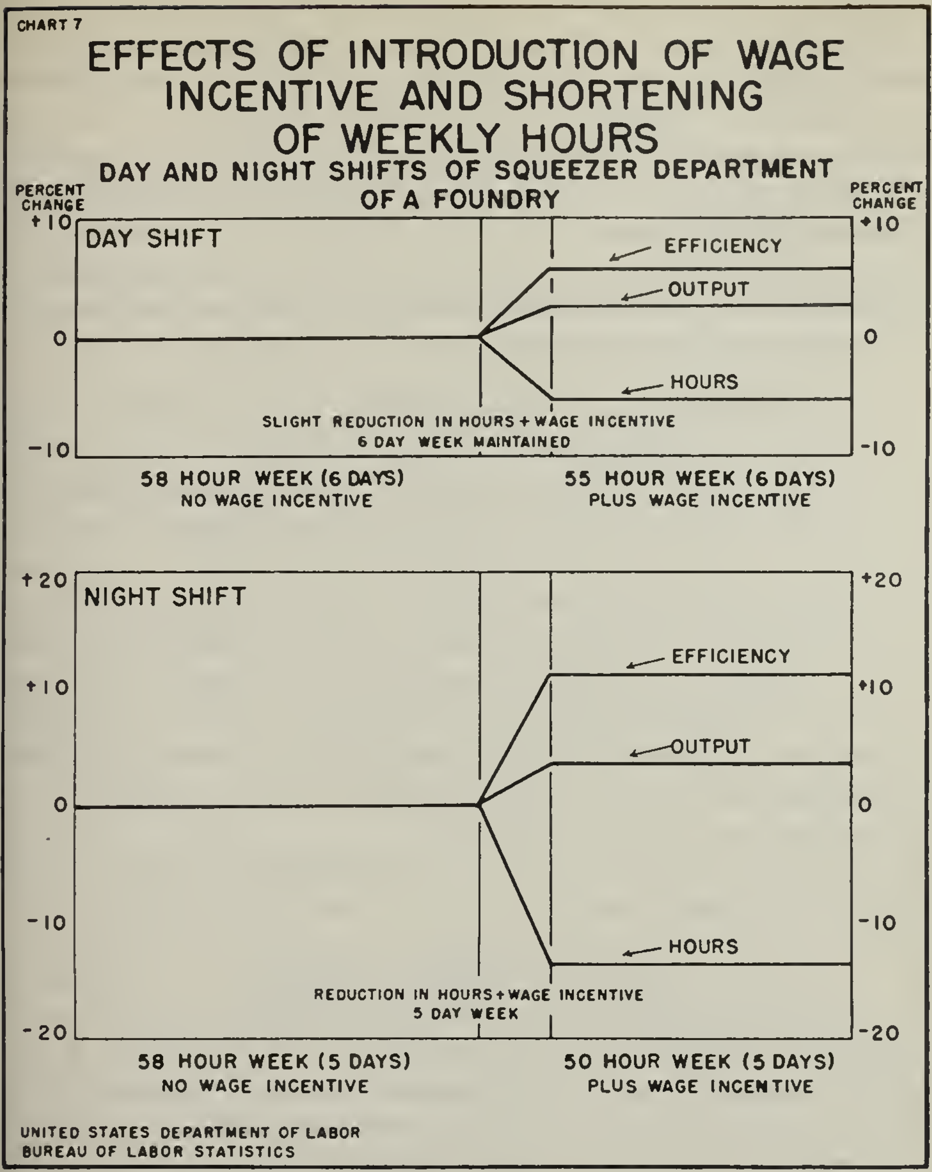

CHART 7

EFFECTS OF INTRODUCTION OF WAGE INCENTIVE AND SHORTENING OF WEEKLY HOURS

DAY AND NIGHT SHIFTS OF SQUEEZER DEPARTMENT OF A FOUNDRY

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in an increase in efficiency of 24 percent and in output of 10 percent above the levels which prevailed at the longer hours.

This conclusion follows from the comparison of the day shifts of the floor-mold and squeezer-shop departments. Both groups went on piecework at the same time. Both were composed of experienced men who had been with the company for some years. The principal difference between them was that the men in the floor-mold department stopped working on Saturday, while the men in the squeezer shop continued. Although the methods of preparing the molds differed, working conditions for the two groups were identical. Had Saturday work been stopped for the squeezer-department men, there was no reason why their efficiency could not have spurted like that of the floor-mold men.

The net effect of the reduction in hours is found by obtaining the differences between the performances of the two groups. The introduction of piecework resulted in an increase in efficiency of the squeezer-department men of about 6 percent. Assuming that this is a fair measure of the effect of the incentive wage in itself, the difference between this rate of increase and the 30-percent rate for the floor-mold men leaves an increase of 24 percent as the net result of the reduction in hours. Similarly, the difference between the increases in output of about 13 percent and 3 percent (i. e., 10 percent) measures the increase in output which may be attributed primarily to the effect of the shortened hours.

Although the shorter hours appear to have been the more decisive of the two factors involved, it is clear that there would have been no increase at all in the absence of the incentive-wage system.

Absenteeism as Related to Hours and Earnings

The records of the foundry did not permit a detailed, or even a comprehensive, analysis of the absenteeism problem. It was possible, however, to gauge for each of the three shifts studied the relative performance under the different patterns of working hours and wage determination.

By assuming that the maximum number of workers on the pay roll during any one day of a week represented the total crew supposed to be at work on each working day of the week, it was possible to obtain a measure of absenteeism by deducting from this figure the number of men who actually worked each day. Although this is not a highly accurate measure of absenteeism, it appeared to be the best possible and did reveal significant results for the periods analyzed.

The day shift in the floor-mold department experienced a sharp drop in absenteeism when hours were reduced by eliminating Saturday work. Absences decreased by more than a third from an index of 100 during the period of long hours to about 61. During the remainder of the period at shorter hours, but with more than half of the department on piecework, absenteeism increased to an index of about 79.

The same general trend, but with greater differences, appeared in the averages for the night shift in the squeezer department. There, as was the case for a part of the day shift in the floor-mold department, hours were reduced and the entire crew went on piecework. The first result of the change was a drop in absenteeism to half of what it had been at the level of longer hours. Thereafter, however, the index rose to 110, or 10 percent above the level for the longer workweek.

The day shift of the squeezer shop, it will be recalled, stayed at essentially the same hours, but went on piecework. After the introduction of piecework, absenteeism was higher by 25 percent.

The data suggest some interesting conclusions. The first result of the shortened workweek was a decided drop in absenteeism. The subsequent rise in absenteeism appears to be connected with increased earnings. This conclusion gains credence from the fact that the absenteeism level during the last period studied was highest for the day shift of the squeezer shop (which underwent no change in hours) and was higher for the squeezer-shop night shift (with all men on piecework) than for the entire day shift of the floor-mold department, with only about two-thirds of the crew on piecework. (Unfortunately it was not possible to obtain a separate measure of absenteeism for the two groups on the day shift of this last department.) The data indicate that—

(1) Absenteeism increased very appreciably with the introduction of piecework and the retention of a long workweek.

(2) The effect of increased earnings was to increase absenteeism even after hours had been shortened.

The fact that increased earnings were a material inducement toward absenteeism was freely admitted by the workers. In one instance, for example, a worker commented that he had had several "very good weeks," and he thought he and his "old lady" would take a "little trip for most of next week."

Absenteeism was very high on Saturday during the 6-day week, and it was also high on Monday.

The main reason for the high absenteeism on Saturday appears to have been the fact that pay day was on Friday. Attempts by management to shift pay day to Saturday were resisted by the union, which insisted that the men be given an opportunity to cash their checks, which was difficult to do after working hours. To meet this objection, management invited into the plant a check-cashing service on Friday. This service cost 10 cents per check, but made it possible for the workers to cash their checks without leaving the plant. The experiment met with so little response from the workers that it was given up after a few weeks.

Effects of Changes in Hours on Plants With and Without Wage-Incentive Systems

The preceding study was told in considerable detail because it represented an instance in which it was possible to gauge the difference caused by the introduction of the incentive system itself. It is also pertinent to note differences in the relative performances of worker groups under various types of incentive systems, or under straight day work.

The experiences of 18 worker groups are shown in table 19. These cases were selected because they involved no extraneous factors that might leave the measures of performance open to question. For example, the comparisons shown are, for each study, either entirely within or entirely without the war period. They involve no problems of Sunday work, reductions in force, managerial changes to improve the flow of production, etc.

In the first three of these studies, the men worked at straight day rates, and without any kind of wage incentive. In each case, output changed directly in proportion to the change in hours, indicating that the same pace was maintained regardless of hours. As output for men at piecework or other forms of direct incentives usually increased proportionately less than hours when they were raised substantially, the conclusion seems warranted that the slower pace which characterized the longer schedule for the men at straight day rates also prevailed during the shorter schedule. In short, operators who stood to gain nothing by working fast would not do so. Consequently, it was possible to increase hours—within reasonable limits—without impairing output. An hour's output resulted for each additional hour worked.

All of the cases shown under group incentive systems involved moderately heavy work. In only one case (9) was the level of efficiency—which reflects average hourly output per hour worked—as good at the higher level of hours as it had been at the lower level. The fast pace maintained during the shorter work schedule could not be maintained during the longer hours. In some instances, the drop in efficiency was drastic in spite of the fact that the workers were concerned with the production of shells (studies 20 and 21). Under group incentive systems, however, the pace of the less efficient workers becomes the limiting factor.

Ten case studies in table 20 reflect experience under individual incentive systems, either piecework or bonus systems. As a rule, all output in excess of a set standard was paid for in full.

TABLE 20.—*Relation of performance at various schedules of hours and incentive systems*

Case study and type of operations	Incentive system	Change in scheduled weekly hours —		Percent change in —		
		From	To	Hours	Efficiency	Output
1 — Heavy foundry work	None	60	50	—16.7	+0.7	—17.0
22 — Mod. heavy finishing of steel castings	....do	48	55½	+15.6	+.2	+13.2
23 — Mod. heavy molding of steel castings	....do	48	54	+12.5	+1.1	+13.5
9 — Moderately heavy welding	Group	45	58	+28.9		+25.9
18 — Mod. heavy machining & assembling	....do	58	48	—17.2	+15.1	—7.9
20 — Mod. heavy machining of shells	.....do	40	60	+50.0	—22.3	+5.5
21 — Mod. heavy machining of shells	....do	40	66	+65.0	—20.6	+9.0
39 — Mod. heavy shipping operations	... do	48	54	+12.5	—3.7	+9.9
7 — Moderately heavy metal machining	Individual	40	50	+25.0	—4.0	+23.5
35 — Light metal machining	. do	54	61½	+10.2	—4.3	+4.2
45 — Light shipping of tobacco leaves	....do	48	40	—16.7	+19.3	— .6
58 — Light hot finishing operations	.. do	48	40	—16.7	+3.7	—11.4
67 — Moderately heavy metal machining	... do	40	55	+37.5	+5.6	+43.6
69 — Moderately heavy — rubber industry	. . .do	40	48	+20.0	+3.5	+22.8
70 — Moderately heavy — rubber industry	. do	40	48	+20.0	+1.6	+21.4
71 — Moderately heavy — rubber industry	.. do	40	48	+20.0	+1.9	+20.8
72 — Light operations — rubber industry	... do	40	48	+20.0	+.8	+20.2
74 — Moderately heavy — rubber industry	....do	40	48	+20.0	+3.9	+22.8

In case study 7 in which the operating pace was controlled primarily by machines, the change in hours was matched by a nearly equal increase in total output. Where the speed of machining and assembling operations rested primarily with the operators, as in case study 35, efficiency could not be maintained during the longer hours. The pace slackened.

The strippers of tobacco leaves (study 45) tried to earn as much in 40 hours as they formerly had in 48, and just about succeeded. To do it, however, they had to speed up their pace during the shorter schedule by nearly 20 percent.

The women in case study 58 could not do it. Even though they worked faster during the 40-hour schedule, they could make up only about one-third of the earnings they had lost through the reduction of 8 hours in the workweek.

Studies 67, 69, 70, 71, 72, and 74 show an opposite result: in each case the lengthening of the workweek, usually from 40 to 48 hours, resulted in a slightly better efficiency during the longer hours. Observations of the workers during the longer schedules, however, indicated that the pace of these operators was moderate, and was considerably slower than the pace observed in other operations in which the physical demands of the job upon the workers were similar. It follows that the pace under the shorter schedule could have been faster. Regardless of the reason for the speed of the work pace, it is obvious that individual incentive systems do not ipso facto mean that operators work at their optimum efficiency. Where the pace is moderate, therefore, output can be increased in direct proportion to the increase in hours, even though these are raised to 55, and perhaps to 60. This appears to be particularly true of operations which allow the operator considerable initiative and are not strictly routinized and monotonous. Although it was not possible to study such situations, instances were found in which the production of tool makers held up well under 60- and 70-hour weeks.

Limitations on initiative—Some of the studies cited seem to suggest deliberate production pacing by operators; management at times reached the same result by limiting the amounts workers could earn. In case study 8, workers definitely held their earnings to less than $1 an hour under several of the schedules studied because they knew that their piece rates would be cut if they exceeded this amount.

Similarly, the workers in study 19 held down their earnings—and output—because of a 30-percent ceiling. In another survey of men producing shells—not included here for various reasons—a 25-percent ceiling held production in each of a great variety of operations to a fixed level. The records showed exactly the same number of units produced, day after day, month after month.

Just what induced management to impose such ceilings, it was sometimes hard to see. With quality inspection to guard against defective production, it would seem that the higher the output, the lower the over-all unit cost. There is, of course, the danger that haste may increase spoilage which cannot be reclaimed. But that fact, one may presume, ought to be established through actual experience rather than by managerial fiat—as it was in the three cases cited.

CHAPTER X.—Prewar and Postwar Performances

The charge has frequently been made that workers performed less efficiently after the war than before or during the war. One might expect that the fact that we were in the war would have a perceptible influence on the will to work. A reading of the case histories will reveal case after case in which—for the same or even higher hours—worker performance improved during the war. In many of these cases, management explained this as the direct result of our participation in the war. Millions of workers had sons or other relatives in the war and were determined to do their part.

A let-down after the end of the war might well have been expected. The shot-in-the-arm which the war supplied was gone. Furthermore, many plants cut back on their operations and reduced not only hours, but the number of workers as well. Being human, workers could not be expected to continue to work at high speeds if that meant working themselves or others out of jobs.

Table 21 presents comparisons between efficiencies at similar prewar, war, and postwar schedules. The last two cases shown on the table, 78 and 29, illustrate the point just made about the effects of reductions in force. In both cases, the cut-back in hours was accompanied by decreases in efficiency because of the simultaneous sharp reduction in force.

TABLE 21.—*Comparison of efficiences during comparable prewar, war, and postwar schedules*

Case study	Weekly hours —			Efficiency index —			Percent gain in efficiency —		
							War over prewar	Postwar over —	
	Prewar	War	Postwar	Prewar	War	Postwar		War	Prewar
6	50	50	....	100.0	108.0	....	8.0	....	....
8	48	55½	....	101.0	105.0	....	4.0	....	....
26	37½	54	....	100.0	116.9	....	16.9	....	....
27	51½	54	....	100.0	116.3	....	16.3	....	....
45	....	48	45	....	100.0	112.9	....	12.9	....
46	....	45	40	....	100.0	104.9	....	4.9	....
47	....	44½	40	....	100.0	105.5	....	5.5	....
48	....	44	40	....	100.0	103.6	....	3.6	....
49	40	47½	40	100.0	117.8	119.3	17.8	1.3	19.3
51	40	48	....	100.0	112.4	....	12.4	....	....
59	....	48	40	....	100.0	112.0	....	12.0	
60	....	48	40	....	100.0	106.9	....	6.9	....
61	....	48	40	....	100.0	105.1	....	5.1	
62	....	48	40	....	100.0	101.5	....	1.5	....
63	....	48	40	....	100.0	107.9	....	7.9	....
64	40	50	45	100.0	113.0	114.8	13.0	1.6	14.8
65	....	50	48	....	118.6	122.4	....	3.2	....
66	....	45	45	....	100.0	101.3	....	1.3	....
67	40	55	40–48	100.0	111.1	110.1	11.1	—.9	10.1
68	54	60	....	98.3	99.0	....	.7	....	....
69	40	48	40	100.0	121.1	116.3	21.1	—4.0	16.3
70	40	48	40	100.0	123.0	118.0	23.0	—4.1	18.0
71	40	48	40	100.0	129.0	117.6	29.0	—8.8	17.6
72	40	54	40	100.0	110.5	113.5	10.5	2.7	13.5
73	40	48	40–48	100.0	107.3	106.9	7.3	—.4	6.9
74	48	57	48	103.9	117.1	118.6	12.7	1.3	14.1
78	....	48	35	....	100.0	96.7	....	—3.3	
29	....	58	50	....	100.0	94.6	....	—5.4	....

The other studies listed on the table demonstrate two points: (1) that wartime efficiencies were generally higher than prewar efficiencies in spite of longer hours; and (2) that, where comparison was possible, the efficiency during the postwar week (after an adjustment period) was substantially better than it had been during the same work schedules during the prewar period studied.

Frequently the higher efficiency during the war was offset in part, and sometimes entirely, by increased absenteeism during the longer work schedules. The data indicate very definitely, however, that men and women worked harder, particularly when stimulated by wage incentives. The efficiency indices during the war period were superior to those of the prewar period in every instance in which comparison was possible.

In some cases, the better wartime performance failed to hold up after the war ended. In spite of reductions in hours, the efficiency indices in cases 67, 69, 70, and 73 decreased from the wartime levels. In most instances, however, the reverse was true. In 15 cases out of 20—if the two reduction-in-force examples are excluded (78 and 29)—postwar performance was superior to war performance. The reasons for this, undoubtedly, were (1) that it was possible to maintain a faster pace because of the shorter hours, and (2) that workers wanted to work harder so as to make up some of the pay they lost when hours were curtailed.

Of still greater interest, however, are the postwar—prewar comparisons. In nine case studies it was possible to compare the efficiency during a postwar schedule with an identical prewar schedule. The postwar performance was always better, and the improvement in efficiency was 10 percent or better in every instance but one (study 73), for which it was 6.9 percent. Generally, the increase in average hourly output was about 15 or 16 percent, and went as high as 19.3 percent (study 49).

No data are available to indicate the extent to which these results reflect general industry experience. They are presented here as findings based on careful analyses of industry records. They were not selected to prove any particular point. It is significant, however, that they all point in the same direction.

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CHAPTER XI.—Methods

A.—Collection of Data

As indicated at the outset, one of the most difficult features of this survey was to find plants with the changes in hourly schedules and type of operations and records that would lend themselves to the basic purpose of the study.

Having located a cooperative plant in which at least two substantially different levels of hours had been worked over a period of not less than 6 months each, and having determined that the available records could be used, the next step was to select the group of workers to be studied. That frequently proved to be a stumbling block because of the great turn-over during the war.

Care was taken to select for study a group of workers as homogeneous as possible. New and inexperienced workers were excluded. Where the workers in the plant or department—depending on which was being studied—did not have the same daily and weekly hourly schedules, only those workers were selected for study who could be grouped into similar patterns of hours. Similarly, data were obtained separately for shifts, and differentiated by sex.

The period to be covered under any one schedule was another problem. Obviously, it had to be long enough to permit the effect of the schedules being studied to emerge clearly. It was apparent after the first two or three studies—for which, fortunately, continuous data were available over a period of years—that a shift to a new schedule did not result in an immediate change to readily ascertainable new patterns of efficiency, absenteeism, and output. It was found, for example, in case study 1, that it took about 4 months for the patterns of the 50-hour week to emerge clearly after a change from a 60-hour schedule. Similarly, in case study 7, the efficiency of the 40-hour week was maintained for 3 months after weekly hours had been raised to 50, and then decreased sharply to a lower level. Then, as hours were increased still further to 58, coincident with our entry into the war, efficiency not only was maintained, but actually increased. This new level held for nearly 6 months. At that point, however, fatigue finally forced a drop in efficiency to a level below that which had characterized the 50-hour week.

In this case, the work was primarily machine-paced and workers were afforded some rest—at least a partial relaxation of effort—while the machines performed. It was expected that in operator-paced work done at considerable speed, the transitional periods would not be nearly as long. But it was clearly recognized that the selection of any 1-, 2-, or 3-month period, subject to the possible vagaries of transition, would not be satisfactory. The effort, therefore, was to cover a year's period under each schedule. The wisdom of this decision was apparent in the analysis of the data obtained in subsequent studies, when considerable deviation from the nominal work schedules was found for considerable numbers of workers.

It was believed, furthermore, that it was essential to cover longer periods where the groups of workers were small so as to eliminate the effect of erratic individual experiences. Where the group of workers was large, it was believed safe to cover shorter periods of time.

In nearly every study, the group of workers studied consisted of selected individuals. As already indicated, these were selected for comparability of operations under the schedules to be compared, consistency in adhering to these schedules, work experience, and similar factors. The findings for the group actually represent the composite experiences of individuals for whom data were obtained. In the few instances in which only group data were available, the data were used only after it had been ascertained that the composition of the group had either been constant, or that turn-over had been small and that operators who had left had been replaced by others of approximately the same degree of experience. (For example, case study 8.)

Minor changes in hours were excluded from the survey except as they were incidental to more substantial changes. For example, a plant was not studied if hours changed from 52 to 54 per week. It was studied if the change involved shifting from an 8-hour day to a 9- or 10-hour day, or if weekly hours were increased by at least 5 or 6. This might be accomplished either by increasing daily hours, or adding an additional workday, or both.

The periods selected represented either increases in hours or, late in the war or after it had ended, decreases in hours. In a number of plants it was possible to trace the data back so as to obtain comparable data for prewar, war, and postwar schedules, thus spanning a period of 4 or 5 years.

As far as possible, periods were selected to cover a year or more under each schedule. Where the various schedules were in effect for a shorter period, care was taken to select the same months in the year so as to rule out the effects of temperature, holidays, and of such outside attractions as hunting and fishing seasons.

Data were obtained for each selected worker on hours worked, volume produced, time lost, and injuries. Turn-over could not be taken into account in most cases except as it applied to the entire staff of the plant or department. For the relatively small group of men or women that satisfactorily met the rather stringent requirements of the methods used for selection, turn-over data would have been rather meaningless.

After the statistical processing and analysis of the data, which was done by the Washington staff, a copy of the report and findings was sent to the management of each plant studied, in part to invite criticism or comments, and in part to appraise management of the results of the survey. In that way, the cooperation and assistance by management were at least partially repaid. (It may be added, parenthetically, that some of these findings were at complete variance with the opinions expressed by management during preliminary discussions.)

It should be added also that, in every instance, the data were selected and transcribed by members of the Bureau's staff and that the data are substantially comparable throughout the survey.

B.—Statistical Methods

Hourly schedules.—The data concerning scheduled hours consisted either of actual schedules, or data on hours or days worked, and hours or days absent for each worker. Where possible, data were gathered on a daily basis. Where this was not possible, weekly data were used.

In the analysis, the schedule for each workweek was determined by dividing the total of all days worked and lost by the number of workers so as to obtain a measure of the average hours actually scheduled. Weeks in which this average fell substantially below or substantially exceeded the nominal schedule were excluded. In checking back with the plant, it was found frequently that the variation was caused by a shortage of material or an attempt to break a temporary bottleneck in production. In any case, if the variation was more than about 2 hours, the data for the week were excluded from the analysis. Sometimes it was possible to rule out the data for individual workers if the analysis clearly indicated that their schedules for the particular week were considerably in excess or below the basic schedule for the group. Thus, for example, the performance of a man who worked 60 hours was excluded when the rest of the group worked 48 or 50 hours. If his performance during the next week fell markedly below his usual performance either in output or work attendance (reflecting the effects of the preceding week), the data for him for this next week were also excluded. In short, every attempt was made to make the findings as accurate as possible and to remove distorting factors.

The total hours worked by any one survey group was obtained by adding up the hours worked by the individuals of the group.

Absenteeism.—Absenteeism is defined as worktime lost because workers did not show up or stay on the job when they were scheduled to work. The absence could have been caused by illness of the worker or of some member of his family, by accident, or by any other personal reason. Scheduled vacations or time lost because of lay-offs, however, were not included because workers involved were not scheduled to be at work. Periods containing strikes were excluded.

The percentage of scheduled worktime lost was computed by the formula:

$$\text{Absenteeism rate} = \frac{\text{total employee-hours lost}}{\text{total employee-hours scheduled}}$$

Where absenteeism was reported in days, the days lost were converted to scheduled hours lost.

Obviously, the hours actually worked and the hours lost through absenteeism added up to 100 percent of total employee-hours scheduled to be worked.

Efficiency.—Efficiency is the average hourly output per hour actually worked. Hours lost through absenteeism were excluded in this computation. What was wanted was a measure of average performance under any one schedule of hours while operators were actually on the job.

The basic formula for efficiency was:

$$\text{Efficiency} = \frac{\text{total weekly output}}{\text{total hours actually worked}}$$

The methods to obtain this result varied considerably, however, because of the types of records available in the plants studied.

(a) Where no records of output was kept, but where piecework earnings were recorded by the plant, efficiency was measured by average hourly earnings. The base-period earnings were used as an index of 100, and variations in earnings were computed from this base.

Involved in this problem was the complication of overtime pay. This was resolved by increasing hours actually worked to the total hours which were paid. For example, if a man worked 48 hours and received 1½ pay for hours above 40, he actually was paid for 52 hours. In the computation of hours earned, his time was figured at 52 rather than 48 hours.

In a few instances, notably case study 8, the situation was complicated further by periodic increases in the basic hourly rates which were used to establish piece rates, and by a deliberate loosening of time standards, so as to increase the take-home pay of workers when wage increases were forbidden. The first of these adjustments was simple to make because the percentages of increase and the times they went into effect were definitely known. The second could be made only where the loosening of standards came at one time, or during a short interval during which all rates were restudied. But where the data indicated a gradual loosening of standards over a long period of time, the data could not be used.

This applied, incidentally, not only to piece rates but to all other measures of performance based on time standards rather than on actual number of units produced.

(b) When the actual number of units produced was reported, the problem was simple. The formula used was:

$$\text{Efficiency} = \frac{\text{total units produced}}{\text{total employee-hours worked}}$$

(c) Where time standards had been established, the basic data recorded both the hours actually worked by each individual and the total number of standard hours or minutes of production. A variety of systems were encountered, but basically the data were the same regardless of the degree to which workers were compensated for the time they saved from the standard time. In these cases, the formula used was:

$$\text{Efficiency} = \frac{\text{standard hours produced}}{\text{actual hours worked}}$$

(d) A variation of this formula was used when the number of unit hours produced were reported in relation to the number of hours of output called for by the standard. In this case the formula was:

$$\text{Efficiency} = \frac{\text{number of units produced}}{\text{standard number of units required for hours worked}}$$

(e) In a few instances, the company computed efficiencies by one of these methods (except (a)) for purposes of its own. Where such efficiencies were available, the computation of efficiency consisted simply of averaging these efficiencies for the selected workers over each schedule period.

Output.—Because of the variety of methods used to compute efficiency, a formula was developed for the output computation which could utilize the rates already computed for efficiency and absenteeism. Obviously, output is the composite result of average hourly output and the number of hours actually worked. The difference between hours scheduled to be worked and hours actually worked is the number of hours lost because of absenteeism. Following this line of reasoning, the output formula used was:

Output = Scheduled hours × (100 percent — percent of time lost through absenteeism) × efficiency.

A brief example will indicate the practical application of the formula. Suppose efficiency, in relation to the selected base, was 95 percent, time lost through absenteeism was 10 percent, and scheduled hours were 54 per week. According to the formula, the index of output was:

$$\text{Output} = 54 \times .90 \times .95 = 46.17$$

Suppose that during the 40-hour week period used as a base for both changes in hours and efficiency, the efficiency index was 100 and absenteeism was 6 percent. Then, by formula—

$$\text{Output} = 40 \times .94 \times 1.00 = 37.60$$

Comparing the two schedules, we find that the increase in scheduled hours was $\frac{54 - 40}{40}$ or 35 percent. Similarly, the increase in

$$\text{output was } \frac{46.17 - 37.60}{37.60} \text{ or } 22.8 \text{ percent.}$$

The obvious conclusion is that an increase of 35 percent in scheduled hours (from 40 to 54) resulted in an output increase of 22.8 percent. Roughly, 2 hours of output—at the performance level at 40 hours—were gained for each 3 hours worked between 40 and 54.

Injuries.—In computing the frequency rate of work injuries, the standard formula was used:

$$\text{Frequency rate} = \frac{\text{number of injuries} \times 1{,}000{,}000}{\text{total number of exposure hours}}$$

This formula yields the average number of injuries per million employee-hours of exposure.

CASE STUDIES

1: Workweek of 60 hours vs. one of 50 hours, no wage incentives; hot and heavy, man-paced floor-mold operations in a nonferrous metal foundry; men.

Work was devoted entirely to the production of castings for airplane motors, superchargers, and similar materials essential to the war effort. After the hand-made molds were dried and hardened through a baking process, they were sent to the floor-mold department, which produced the heavy castings. Work was generally done in crews consisting of six men each.

The crew was led and the pace set by a finisher or molder who assembled the cores or supervised the assembly of the larger molds, inspected and repaired completed molds, and generally was responsible for the operation of his crew. The metal was then poured. The "shake-out" and "knock-out" men moved the cooled castings (still in the molds) by crane to the shake-out section where the air vibrator loosened the sand sufficiently to allow each casting to be freed. The knock-out man's particular task was to guard the casting against damage during this process.

The work was heavy, hot, smoky, and entirely man-paced.

Working conditions.—The noise in the foundry was so great that frequently the warning signals of cranes or trucks could not be heard by the workers. the volume of fumes emitted from the baking ovens and from the exhaust of plant trucks was considerable. The chemically treated sand, when baked into molds, gave off a searing smoke which made the eyes smart and parched the throat. A large amount of dust was created by sand. The temperature was always high in the vicinity of some operations, particularly so during the summer months. Air vents were insufficient to cope with the amount of dust, fumes, and heat existing in the foundry. Lighting was exceptionally good. The shop lacked showers and lunchroom facilities. Washroom facilities met only minimum requirements. On the whole, working conditions were noisy, smoky, and quite hazardous.

An average of 45 minutes a day was spent by the men in waiting for the metal to be poured.

Industrial relations.—During the nearly 1½ years covered by the survey, the relations between labor and management were bad. This resulted largely from the company's policy of paying wage rates somewhat lower than prevailed in the area. Contemplated raises were prevented by the wage freeze in 1942. A majority of the operators in the plant were Negroes.

Wage incentives.—Workers received straight hourly pay during the period studied. There were no wage incentives. The survey covered the performance of a group of about 45 men on wartime schedules of 60 hours per week (6 days at 10 hours) and subsequently one of 50 hours (with some overtime) during which Saturday work was eliminated. Under each schedule daily hours remained at 10. The workers studied belonged to a nonrotating day shift.

The period covered by the survey extended from February 1942 through May 1943.

Safety.—Working conditions were hazardous, and not much attention was paid to safety. Housekeeping was bad, and there was a great deal of congestion and crowding. Many of the operators did not wear adequate protective clothing and goggles, and there was little attempt to make them comply with basic safety regulations.

FINDINGS OF STUDY

Efficiency remained practically unchanged when workdays were reduced from 6 a week to 5, but with the retention of the 10-hour day. The change in weekly hours brought about an increase in average hourly output of only 0.7 percent.

The pace of the workers—on straight day work and without a wage incentive—remained essentially the same under both weekly schedules.

Absenteeism could not be measured for the group of workers represented in this case study. The data did not permit a factual determination of who was scheduled to work on specific days. By making some assumptions, however, it was possible to arrive at approximations of time loss for the entire department, of which the group represented here composed about one-third. The rates are undoubtedly understatements in view of the nature of the work, the type of workers involved, and the difficulty of getting good work attendance on Saturday and Monday.

The relative estimates indicate that the decrease in workdays from 6 to 5 decreased time lost from work slightly, from a level of about 3.8 percent to one of 3 percent.

Output varied almost directly with the change in hours.

2: *Workweek of 60 hours with no wage incentives* vs. *one of 50 hours with individual wage incentives; floor-mold operations in a nonferrous metal foundry; men.*

The men belonged to the same shift of floor-mold workers as those discussed in the preceding case study. Working conditions were the same as those already discussed.

The group studied consisted of about 80–90 men in 13 crews on the day shift of the floor-mold department. During the scheduled 60-hour workweek (6 days at 10 hours) these men were on straight hourly rates. But when hours were reduced to 50 per week by dropping Saturday work, a piecework system was introduced simultaneously.

FINDINGS OF STUDY

Efficiency.—Elimination of Saturday work, coupled with the introduction of the incentive wage, resulted in a sharp increase of 30 percent in hourly efficiency. Total output was 13 percent higher than it had been during the longer workweek. Inasmuch as the remainder of the day shift continued to work without a wage incentive, the marked difference in performance between the men covered in this and the preceding case studies may be attributed largely to the introduction of the wage incentive. It is questionable, however, whether the change would have been as marked had the hourly schedule remained at 60 per week. (See case study 4.)

Absenteeism, as indicated in case study 1, was difficult to measure. The data indicate, however, that the immediate effect of the curtailing of the workweek was a sharp drop in unauthorized absences from work. This was an expected result, as attendance on Saturday had been poor at the longer work schedule.

After a transitional period of several months, however, absences increased again, although remaining below the level that had prevailed during the 6-day schedule. Management believed that this rise in absenteeism was directly related to the greater take-home pay of the men on piecework. The explanation advanced was that many of the men had recently moved up from southern states and were earning far in excess of what their customary standard of living required.

3: *Workweek of 58 hours, night shift, with no wage incentives* vs. *one of 50 hours, with individual wage incentives; hot and medium-heavy, man-paced, squeezer-mold operations in a nonferrous metal foundry; men.*

This is the third group of men studied in the foundry described in case study 1. This department differed from the floor-mold department discussed in the two preceding cases in two important respects: (1) The castings were not as heavy; (2) the smaller molds in the squeezer department were hardened through compression ("squeezed") and were not baked. Working conditions were essentially the same as those described in case study 1.

As the moldings were smaller, a crew of two men usually performed all the necessary operations.

The group of 15 men studied were on the night shift during the entire period surveyed, from January 1942 through May 1943. During the 58-hour workweek, consisting of 5 days at 10 hours and Saturdays at 8, these men worked on straight hourly rates. With the elimination of Saturday work and a consequent reduction in weekly hours to 50, they went on piecework.

INDINGS OF STUDY

Efficiency.—The reduction in weekly hours from 58 to 50, by the elimination of the 8-hour Saturday, together with the introduction of the wage incentive, resulted in an increase of 11 percent in average hourly output. The total output level during the shorter workweek was about 3.3 percent higher than that experienced at the longer weekly hours. These findings parallel those of the preceding case study, although the increases were not as marked.

Absenteeism.—As in case studies 1 and 2, the measure of absenteeism indicates only relative work attendance during the periods surveyed, and not an actual measure of time lost. The available data indicate, however, that immediately after the shortening of the workweek and the introduction of piecework, absenteeism was cut to half. After several months at the shorter schedule, but with higher earnings, absenteeism increased steadily and finally stabilized at a level somewhat higher than the one which had prevailed during the 6-day week. The explanation advanced by management has been stated in case study 2.

4: *Workweek of 58 hours, day shift, with no wage incentives* vs. *one of 55 hours, with individual wage incentives; squeezer-mold operations in a nonferrous metal foundry; men.*

This is the last group of men studied in the foundry described in case study 1. The 35 studied were on the day shift and belonged to the same squeezer department discussed in case study 3, which was concerned with night-shift workers.

Although these men shifted to a wage-incentive system, their working hours remained nearly unchanged. The change was from 58 hours per week to 55, and was accomplished by shortening Saturday from 8 hours to 5.

FINDINGS OF STUDY

Efficiency.—The introduction of the wage incentive, but with the longer workweek essentially maintained, resulted in a slight increase in efficiency and a small increase in total output. Average hourly output rose by about 6 percent and total output by nearly 3 percent.

Because the reduction in weekly hours had been slight, this change appears to be attributable primarily to the introduction of the wage incentive.

Absenteeism.—With the introduction of piecework, the rate of absenteeism increased from 4.8 percent at 58 hours to 6 percent at 55 hours.

5: *Prewar workweek of 52 hours* vs. *war workweeks of 58 and 52 hours, day shift, individual wage incentives; hot and heavy, man-paced upset-forge operations; men.*

The shop produced axles, shafts, gear blanks, small forgings, and during the war, shells. The operation consisted of heating one end of a steel bar and forging it by means of dies. The hot steel was virtually squeezed into shape by the horizontal motion of one half of the die, set in the forge, against the stationary half of the die. The heater kept the heating oven loaded while the hooker held the bar and the operator guided and turned the bar in the several slots of dies set in the forge. The process was completed by sawing off the forging from the bar, striking a stencil number on it, and putting it into a bin.

Working conditions.—Completed forgings weighed up to 250 pounds. The bar stock, 10 to 18 feet long, from which the forgings were made, was, of course, much heavier. The furnace, the forge, and the bins of finished forgings formed a semicircle, and together they radiated a great deal of heat. Temperatures frequently exceeded 100 degrees and reached 120 degrees in the summer. There was considerable dust and smoke, and the constant hazard from flying sparks. Lighting was fair, and there was adequate work space for the operations involved. Washing facilities were excellent.

Waiting time (i. e., heating cold bars or reheating hot bars until they were nearly white in color) between heats was considerable and ranged from 10 to 25 minutes. When not busy changing dies, the men used the waiting time to rest or to eat. There was no set lunch period. The average amount of waiting time in a 10-hour day came to about 1½ hours.

The work force.—The selected group of operating crews on the day shift represented 48 men. The shift did not rotate. The average crew was composed of operator, heater, hooker, and helper. Turn-over was small, as most workers were old-timers in the company, and wage rates and earnings were relatively high.

Wage incentives.—The forge crews were on a piecework system with a guaranteed hourly minimum rate. Set-up and down-time was paid for at rates 5 and 10 cents less per hour respectively than the base rate.

The plant's safety record was very good. The wearing of goggles and safety shoes was compulsory. First-aid room facilties included special equipment to treat eye injuries caused by flying sparks, excessive light, steel particles, and dust.

Hourly schedules.—Up to December 1941, the nominal workweek consisted of 52 hours, with 5 days at 9 hours and Saturday at 7. With the beginning of the war, the workweek was increased to 58 hours by raising daily hours to 10 and Saturday hours to 8. In September 1942, the department returned to the 52-hour schedule worked before the war.

FINDINGS OF STUDY

Efficiency.—When weekly hours were raised from 52 to 58 at the beginning of the war, a period of 5 months elapsed before performance stabilized under the longer hours. During the early months of the war, efficiencies actually rose above the prewar level, even though weekly hours had been lengthened. After the transitional period, efficiency leveled off at a point 3 percent below that of the former 52-hour week, while absenteeism dropped 0.5 percent below the 52-hour rate of 3.3 percent. The percentage of unproductive time, however, increased markedly under the longer hours, rising from 22 percent at 52 hours to 27 percent at 58. As a result, total output during the 58-hour week increased by only 3.7 percent above that for the 52-hour schedule. When it became apparent that over-all production during the 58-hour week was only slightly above that formerly obtained during the 52-hour week, management reverted to the earlier schedule.

After this cut-back, efficiency increased steadily for 5 months, to the end of the period surveyed. It was higher at this point than during any other month of the entire period covered. It was not possible to tell from the data whether this point represented the level at which efficiency would stabilize during the 52-hour war week, and it is possible that the level ultimately reached may have been higher.

Output.—In any case, output during the 52-hour war week was as high as it had been during the 58-hour war week. The addition of 6 hours had not helped to increase output. In fact, the data suggested that the total output during the 58-hour schedule, if continued for any length of time, might have been only 95 percent of that obtained during the shorter workweek.

The data also indicated that the output level of the 52-hour war week was about 8 percent higher than that of the 52-hour prewar week. At the same time, however, the proportion of unproductive time remained at about the same level (25 percent) as that which had prevailed during the 58-hour week (27 percent). Although the men worked harder, they had to take just about as much time out from actual production.

Absenteeism.—Absenteeism was not an important problem when hours were increased. It exceeded 2.5 percent in only 3 out of the 9 months during which the longer schedule was in effect. During the subsequent 52-hour week, however, the absenteeism loss never fell below 4.2 percent and went as high as 7.8 percent. The posting of absences had only a temporary effect. A visiting nurse, who investigated absences of more than 2 days, found that workers frequently were "just resting." Frequently, however, she found it possible to persuade the men to return to work by appealing to their patriotism.

These facts—the high unproductive time and the higher absenteeism rate—during the final 52-hour week strongly suggest that the effects of fatigue made themselves felt at this time. It should be added also that there was no indication that the 52-hour week was the optimum workweek, and that a shorter schedule might not have proved as productive. It shows only that, in this operation, a 52-hour schedule was as good as a 58-hour schedule.

Work injuries.—There was no appreciable difference in the work-injury experience under the various levels of hours. The plant had an excellent safety program and a consistently good safety record.

Daily output pattern.—The effect of increasing daily hours from 9 to 10 and Saturday hours from 7 to 8 was to eliminate the midweek spurt of output which had been characteristic of the shorter week prior to the war. During the shorter schedule, output rose from Monday through Wednesday, the peak day. The output levels for Thursday and Friday were somewhat lower, but on a par with that of Monday. Saturday's level was higher, probably because it was a shorter day.

During the longer workweek, this peak disappeared. The output level throughout the week remained fairly constant—at the Monday level. In addition, there was a sharp drop on Saturday—the output level was nearly 25 percent lower than for the Saturday under the shorter workweek, probably reflecting accumulated fatigue.

6: Prewar workweek of 50 hours vs. *war workweeks of 58 and 50 hours, night shift, individual wage incentives; hot and heavy, man-paced upset-forge operations; men.*

The men selected for this study worked on the nonrotating night shift of the same department described in the preceding case study. This survey will present only those points in which the night-shift workers differed from the day-shift workers.

The performance of four crews, accounting for a total of 16 men, was traced through the 21-month period studied, from June 1941 through February 1943. Changes in the weekly schedules coincided with those of the day shift. The prewar schedule was 50 hours per week (5 days at 10 hours). By the introduction of Saturday work, usually of 8 hours, the weekly schedule was raised to 58 during the early part of the war. When the day-shift hours were reduced to 52 per week, those of the night shift were put back to 50.

INDINGS OF STUDY

Efficiency.—When hours were reduced from 58 to 50 a week, efficiency increased by 5 percent. The efficiency trend of the night shift generally followed that of the day shift, except that it reached very much higher levels. This trend may be due to the fact that nights are cooler and that fewer forges were operated at night, thus creating less heat in the shop.

As in the case of the day shift, the efficiency of the night shift increased up to 6 percent upon our entry into the war, in spite of the addition of the extra day. After 5 months at longer hours, however, efficiency dropped to about the level maintained during the prewar schedule of 50 hours. When hours were cut back to 50 a week, efficiency rose steadily up to 17 percent above the prewar level for the same schedule, then dropped back to 5 percent. The average efficiency level during the wartime week of 50 hours can fairly be set at about 8 percent above the level for the same hours before he war, and at about 5 percent above the average performance level for productive hours during the 58-hour week.

The percentage of productive time was slightly lower during the 50-hour week than during the 58-hour week, and in general, was lower than that of he day shift. Stated conversely, there was more unproductive time on the night shift.

Output.—When the 8-hour Saturday was added to the workweek, the average increase in output was directly proportional to that of weekly hours. When the workweek was reduced to 50 hours by the elimination of Saturday work, an increase in efficiency and a slight reduction in unproductive time esulted in keeping the volume of output at the same level as under the longer hours. In other words, the 50-hour week was as productive as the 58-hour week.

Absenteeism.—The prewar schedule of 50 hours per week had the lowest ate of absenteeism, 2.3 percent.

When Saturday work was added, the absenteeism loss increased to 4.7 percent of scheduled man-hours. The war period of 50 hours resulted in a slight drop in the absence rate to 4.2 percent—which was still above the prewar rate for the same weekly schedule.

Daily output pattern.—The effect of extending the workweek by the addition of 8 hours on Saturday was to eliminate the midweek spurt of daily output which resulted in a peak on Thursday. As in the case of the shorter workweek, the output level remained lowest on Monday—but at a much lower level. This was followed by a rise on Tuesday; but after that, nearly every day was at a lower output level than the one preceding it. Production on Satday was about as low as on Monday. In general, the average output level for the 58-hour week was considerably lower than that for the 50-hour week on every day of the week from Monday through Friday.

Absenteeism—Injuries.—The comments made in case study 5 on absenteeism and work injuries apply to this group of workers as well.

7: Workweek of 40 hours vs. *workweeks of 50 and 58 hours, individual wage incentives; medium-heavy, machine-paced operations; men.*

The operations studied consisted almost entirely of machining processes, such as those on lathe, shaping, drilling, grinding, and polishing machines, for the production of gear couplings. The work may be characterized essentially as medium, machine-paced operations, affording some rest to the operators on most of the processes. The materials handled varied in weight from 5 pounds to 1 ton, but averaged about 25 to 50 pounds.

Working conditions.—Working conditions may be characterized as fairly good. Ventilation and lighting were good. There were no fumes or dust, no congestion, and the department was quite clean, except for some cutting oil and shavings on the floors. There were no organized rest periods.

The work force.—A control group of about 39 productive workers on day and night shifts, who had been in the department for at least 2½ to 3 years prior to the end point of the survey, were studied. Findings were also obtained for all productive workers in the department. The number of these ranged from 38 to 62, averaging about 50.

Wage incentives.—The department operated on an individual incentive system, which consisted of a guaranteed hourly wage plus a premium based on production in excess of standard.

FINDINGS OF STUDY

Findings cover three distinct hourly levels. From March 1939, through February 1941, the workweek consisted of 5 days at 8 hours, or 40 hours. The following period, March to December 1941, comprised a 50-hour workweek of 5 days at 10 hours. At the beginning of the war an 8-hour Saturday was added for a workweek of 58 hours. This schedule was surveyed for the period January 1942 to March 1943.

Efficiency.—When hours were raised from 40 to 50 a week, efficiency declined by 4 percent, after a lag of 3 months during which efficiency level of the shorter workweek was fairly well maintained.

When an 8-hour Saturday was added at the beginning of the war, the level of efficiency rose somewhat at first, apparently as a result of war morale. But after 6 months at the new schedule, efficiency decreased to a level about 6 percent below that of the original 40-hour workweek. This it will be noted, was only 2 percent below that of the 50-hour week.

Efficiency of the night shift was consistently about 5 percent below that of the day shift and reacted more quickly to changes in hours, but in the same direction.

The efficiency level of the uncontrolled group was consistently below that of the control group, but the experiences of the 2 groups were parallel at the different hourly schedules. This uncontrolled group represented a less experienced group of workers.

It must be remembered that these operations were essentially machine-paced, and that operators could not speed up or slow down operations except for the short period of time necessary to put new work on the machines and remove processed work from the machines. Consequently output varied fairly closely with the number of hours worked.

Daily Efficiency Pattern

During the 5-day week and 8-hour day, efficiency on the day shift built up almost steadily from Monday to a peak on Thursday, with a slight drop on Friday. The effect of the addition of two daily hours was to level out the daily pattern, so that, except for a slight rise on Tuesday, one day was as good as another, but each day's level was lower than that under the 40-hour schedule. When Saturday work was added, the pattern was similar to that of the 50-hour week, but the entire level was still lower.

For the night shift, the 40-hour week pattern of efficiency showed a spurt on Thursday, but this was preceded by a drop from Monday through Wednesday. Friday showed a slight falling off from the Thursday peak. During the 50-hour week, there was a sharp drop on Wednesday with a generally stable level for the other days of the week, all daily averages being below those of the previous schedule. When Saturday was added to the workweek, the pattern was one of a steady downward trend from Monday through Friday, with a slight spurt on Thursday. There was a somewhat higher level on Saturday, which was an 8-hour day.

Absenteeism.—During the 40-hour workweek the average time lost through absenteeism was 2.7 percent.

When the workweek was lengthened to 50 hours, absenteeism, after a period of 3 months reflecting the transition from one schedule to the other, reached an average level of 7 percent.

During the 58-hour workweek, the stabilized level of absenteeism was held to about 4.5 percent, owing to the efforts of a labor-management committee. The data indicate that in the absence of this effort, a level of 10 percent or more might have prevailed.

During the 40-hour workweek, the rates of absenteeism for both shifts were about the same (nearly 3 percent). When hours were lengthened to 50, the average for the day shift rose to 5.5 percent, and for the night shift to 11 percent. During the 58-hour schedule, the rates were 4.4 percent for the day shift and 4.9 percent for the night shift.

The uncontrolled group's rate of absenteeism rose from 5.4 to 7 percent when hours were changed from 40 to 50. It increased to 8.1 percent under the 58-hour schedule. The efforts of the labor-management committee were not nearly as effective with this group as with the older workers.

Daily Absenteeism Pattern

During the 40-hour week, absenteeism for the day shift was highest on Wednesday and Thursday. On the whole, it was higher during the latter half of the week. When daily hours were changed from 8 to 10, the peak of absenteeism shifted to Monday, with successive declines on Tuesday and Wednesday, followed by a stabilized level the rest of the week. The pattern reflects the desire for a longer weekend. During the 58-hour workweek, there was a fairly steady decline in absenteeism from Monday through Friday, and a sharp increase on Saturday. Saturday absenteeism represented nearly half of the time lost during the week.

For the night shift, absenteeism during the 40-hour schedule was highest on the first day, which in this case was Sunday night. Except for Thursday, the remaining days were nearly free of absenteeism. When daily hours were lengthened from 8 to 10, the first day had the lowest rate of absenteeism, with a slight rise on the second day, and a very sharp rise the third day, followed by a stabilized level at this high rate. During the 58-hour schedule, absenteeism was low the first 5 days of the week, with a moderate peak on Saturday. In this case, Saturday work was actually performed Friday night, giving the workers all of the next day to attend to personal affairs. Consequently the rate was not nearly as high as for day-shift workers.

Output.—For the men in the control group, the 25-percent increase in weekly hours from 40 to 50 brought about an increase of 23.5 percent in output. The failure of output to rise by the same percentages as did hours was due to the slight decrease in efficiency and the rise in absenteeism. The rate of increase in output kept pace with that of hours primarily because workers had relatively little control over the speed of operations and because unproductive time (getting ready, cleaning up, etc.) was spread over a longer workday, permitting a proportionately higher utilization of the time for actual machine operations. In terms of hours, 1.9 output hours were gained for each 2 hours added to the schedule.

The 45-percent increase in hours from 40 to 58 per week was matched by an increase of 36 percent in output, a gain of little more than 1½ hours for each 2 hours added to the schedule.

For the newer group of workers, the 25-percent increase in the schedule from 40 to 50 hours brought about a rise of 18 percent in output, or less than 1½ output hours for each additional 2 hours scheduled. The 45-percent increase in hours from 40 to 58 resulted in a 30-percent increase in output, or 1⅓ output hours for each 2 hours added to the schedule.

8: *Workweeks of 40 hours* vs. *48 (6 days)* vs. *48 (5 days)* vs. *55 (6 days), individual wage incentives; medium-heavy, mostly operator-paced machining operations on small gasoline engines; ceilings on earnings; men.*

The majority of operations included such metalworking processes as cutting, drilling, boring, grinding, and polishing. The plant produced gasoline engines ranging from 3 to 9 horsepower.

Operations were well-planned and efficiently organized. Work appeared to be done at a fast pace with little evidence of idle time. The weight of parts manually handled ranged up to 75 pounds and averaged between 25 and 50 pounds. The pace of production was controlled by the operator on the majority of operations. Work was medium-heavy.

Working conditions.—Plant conditions were fairly good. The limit of space-utilization seemed to have been reached without crowding. Lighting was only fair, noise was considerable, especially around a few machines. Washroom facilities were inadequate. There was no plant cafeteria. The first-aid room was well-equipped.

The work force.—During the period selected for study, from October 1940 to September 1942, the work force increased from 261 to 700 men. All of these operators, however, were selected for skill and experience, and consequently the data used cover the entire plant. Subsequent to the period covered by this survey, the labor market had tightened sufficiently to induce management to resort to less experienced operators.

It was not possible to obtain data separately for the day and night shifts. Shifts were not rotated. The day shift started at 7 a.m. and was allowed a half hour for lunch. The night shift began at 5 p.m. with no time out for lunch. The men ate when they wanted to eat.

Wage incentives.—Contrary to a frequently found practice, the night shift received no shift bonus. Pay for Saturday was at time and a half, for occasional Sunday work at double time, even though weekly hours for the first 5 days of the week might have totaled less than 40. This policy was adopted to make work over the weekend more attractive. All work was done under a piece-rate system.

As a form of rest period, workers were allowed a specified 5-minute period, both morning and afternoon, to buy refreshments from a lunch cart.

Hourly schedules.—The survey covers the 24-month period from October 1940 through September 1942. Thereafter shortages of materials and a dilution of the average skill of the work force precluded any valid conclusions based on changes in hours.

During the 2-year period, hours went from 40 to 48, from 5 days at 8 hours to 6 days at 8 hours. Then operations dropped to 5 days a week, but with 9½ hours per day for a weekly total of 47½ hours. Finally, a sixth day at 8 hours was added for a weekly schedule of 55½ hours.

FINDINGS OF STUDY

Efficiency and output.—Average hourly output was as good at each of the schedules of longer hours as during the 40-hour week, output increasing in direct proportion to the increase in hours. Thus, the output rate was about equally good at 40, 48, 47½, and at 55½ hours a week.

These findings, however, are subject to the important qualification that output at 40 hours undoubtedly would have been better had the workers not feared to earn more than $1 per hour. When, later, management lifted the hourly base rates above $1, and repeatedly assured the men that rates would not be cut, the men really tried to earn all they could.

The facts obtained, therefore, merely prove that workers can work as efficiently at 55½ hours a week as they did at 40—provided they did not extend themselves fully at the shorter schedule because of a managerial policy of limiting hourly earnings.

Absenteeism.—Time lost because of absenteeism was three times as high during the 55½-hour week as it was during the 40-hour week. The respective rates were 5.8 percent and 1.8 percent.

At 55½ hours absenteeism losses rose up to 10 and 11 percent during the summer months. During the 6-day week, absenteeism was highest on Saturday. More time was also taken off around holidays as evidenced by a December rate of absenteeism of 11.9 percent during the 55½-hour, 6-day week, as against one of 2.3 percent for the same month under the 40-hour, 5-day week.

During the 5-day week, the absenteeism loss was fairly well distributed throughout the workweek. When a sixth day was added, absenteeism was marked on Saturday. Furthermore, it was considerably higher for the 55½-hour week than for the 48-hour week, both consisting of 6 work days.

Injuries.—Work injuries were considerably more frequent as weekly hours increased beyond 40. The average rate of 44 injuries per 100 workers per month during the 40-hour week involved almost entirely first-aid cases only. At 48 hours, there were 76 such injuries per 100 workers per month. With the dropping of the sixth day for a 47½-hour week, the rate decreased to nearly 70, but increased again slightly to 71 under the 55½-hour, 6-day week. In the experience of this plant, the workweeks of 55½, 48, and 47½ hours were about equally hazardous—but each level was decidedly more hazardous than the 40-hour week.

9: Workweek of 45 hours vs. *one of 58 hours, group wage incentives; fairly hot and heavy, operator-paced welding operations; men.*

The work consisted of assembling, clamping into place, and welding large metal parts, many of them used on battleships. The process usually involved climbing up and around the framework and required considerable agility. All of the work was operator-paced. It was fairly hot and heavy. Because of the danger of flying sparks, welders were required to wear heavy protective clothing even during hot summer weather.

Working conditions.—Conditions were good, considering the type of work performed. As the shop was completely open on one side and well-ventilated.

there was little danger of discomfort from welding fumes. There was plenty of room. Although there were no organized rest periods, workers took time out when they thought it desirable. Smoking was permitted in the shop. The men carried their lunches and ate in the shop during the half-hour lunch period. Although the first-aid room was well-equipped, workers in this shop usually did not bother to report there and saved time by receiving first-aid treatments from the foreman.

Wage incentives.—The welders worked on a premium wage-incentive system under which each man was paid as premium his proportionate share of the hours saved from the established time standards, many of which stretched over days and weeks until the specific piece of work had been completed. The welders were paid on a straight hourly basis. Premium was paid when a task was completed. Time standards had remained unchanged during the few years preceding the survey period, so that the performance of the 275 welders in this shop was a good indication of their efficiencies under various patterns of daily and weekly hours.

In addition to time-and-a-half pay for all overtime, a 2½ to 5 percent bonus was issued every 3 months based on the over-all plant output. The bonus was paid on each man's total earnings, including overtime and premium pay. A shift bonus of 7 cents per hour was paid to the second shift and 11 cents to the third shift.

Hourly schedules and shifts.—Shifts were rotated every 3 weeks. Workers, however, often interchanged shifts to suit themselves. Prior to November 1942, the welding shop was on a 45-hour schedule, with 6 days of 7½ hours each. The shop worked around the clock, having three shifts. When male welders became scarce, the shop went to two shifts, working 5 days at 10 hours and Saturday at 8 hours for a weekly total of 58 hours.

FINDINGS OF STUDY

Efficiency.—During the 45-hour week, the welders produced on the average 21 percent above what the standard called for. The same rate of efficiency was maintained when weekly hours were increased to 58.

Absenteeism.—Department-wide absence data were not available. A check of the percentage of scheduled time lost due to absenteeism among 70 individual welders revealed that an average of 4.2 percent of working days were ost during the 45-hour week and 6.9 percent during the 58-hour week. This ncrease resulted from the lengthening of daily hours, as 6 days per week were worked during both schedules.

During the longer workweek, absences because of alleged illness more than doubled—the rate was 0.7 percent during the 45-hour week and 3.1 percent at 58. The absence rate for "personal reasons" was 2.7 percent at 45 hours per week and 3.6 percent at 58. Time lost because of work injuries was 0.7 percent at 45 hours and about the same at 58 hours. If the losses from injures and illness are combined, the comparative rates for short and long hours are 1.4 and 3.1 percent, respectively.

Output.—The increase in output lagged only about 3 percent behind the increase in hours, due almost entirely to the higher absenteeism loss at 58 hours. The workers were 97 percent as effective per hour during the 58-hour weeks as they formerly had been at the 45-hour week.

10: Comparisons of efficiencies by shift and by sex of workers; light, operator-paced, and automatic-machine operations at hourly schedules varying between 45 and 66 hours per week; indirect wage incentives.

This plant was engaged in the processing of a large variety of metal parts for war purposes, most of them small and light. About 70 percent of the workers were women. All employees were paid at hourly rates. Individual efficiency records were kept, however, to serve as bases for promotions. Fairly 'tight" time-study production standards were used to measure efficiencies. Erratic working schedules and insufficient absence records limited the study to comparisons of efficiencies of men and women by shifts in several departments.

Working condition.—Floors were kept clean and equipment was modern and well-maintained. Washroom facilities and lockers were insufficient in number because of lack of space, were poorly lighted, and not very clean. The size of the cafeteria was entirely inadequate for the 9,500 workers of this plant. Lighting and ventilation were fairly good.

Hourly schedules and shifts.—Women generally worked 45 hours a week, 6 days at 7½ hours each, on three nonrotating shifts. Hours for men varied greatly, as indicated in the selected departments. Most departments had a half-hour lunch period, frequently paid for by the company. Women usually were allowed 15 minutes and men 10 minutes for rest in the middle of each half of the workday. Working schedules were staggered and 22 different starting times during the day were used to ease problems of transportation. The survey extended from the middle of 1942 to the middle of 1943.

A 10-percent premium was paid to both of the second and third shifts.

Turn-over.—According to company officials, turn-over rates of 30 to 40 percent were not uncommon, and occasionally levels of 60 to 70 percent were reached in individual departments. Many of the women workers were new to plant operations and apparently did not like them, and many others found better pay elsewhere.

Although most of the turn-over was due to "quits," a considerable number of the separations were regarded by the company as "discharges." An absence of 1 week without notice to the company was cause for a "discharge." Obviously, many of the discharges more properly could be labeled as "quits."

Absenteeism.—Absences, although claimed to be frequent, were not followed up. During the time of the survey, no effective method had been found to reduce losses due to absenteeism, or even to halt the upward trend. Because of the nature of plant records and practices, it was not possible to obtain satisfactory measurements of absenteeism.

Safety.—The first-aid room was well-equipped. Trained nurses and physicians were in attendance. Information on injuries was limited to the data compiled by the safety department, which showed a very low frequency rate of 4.3 for 1942. Safety conditions were generally good.

Departments A, B, and C

The three departments were doing similar work on operator-paced, light machine operations. The weight of pieces handled ranged up to 1 pound. Most operations consisted of picking up a part, fitting it into the machine, operating a hand lever or foot pedal, and removing the processed part. Many of these operations moved very quickly and involved the maintenance of a steady work rhythm.

The following statement presents the findings for these departments:

Workweek	Efficiencies, by shift			
	All shifts	First	Second	Third
Department A				
Men: 45–60-hour week	96.5	97.1	....	95.3
Women: 45-hour week	97.9	98.8	98.0	94.0
Department B				
Men: 45-hour week	95.4	96.9	95.1	93.9
Women: 45-hour week	97.8	105.3	95.7	89.2
Department C				
Men: 45-hour week	99.1	99.1	....	....
45–66-hour week	97.6	97.6	....	....
Women: 45-hour week	102.8	100.4	104.6	103.5
60-hour week	104.7	102.9	106.3	105.5

These data may be summarized as follows:

Women were more efficient than men at light machine operations which involve rhythmic and fast handling of light parts.

The first shift was usually the most efficient and the third shift the least efficient for both men and women. The difference in efficiency between the first and third shifts was more marked for women than for men. The data for women workers in department C ran counter to the findings for departments A and B, but the reason for this could not be ascertained. Working conditions and supervision for departments A and C were identical.

At this type of work a 60-hour week and 10-hour day for women was as efficient as the 45-hour week and 8-hour day (included ½ hour for lunch). In fact, the efficiencies at the higher hourly levels were slightly better. This was ascribed by the supervisors to the fact that a steady rhythm was reached after a warming-up period at the beginning of the day, and that this rhythm could be maintained satisfactorily for the remainder of a 10-hour day. In department C, each of the three shifts at the longer hourly schedule had a higher average efficiency than during the shorter schedule.

For men, working up to 11 hours per day, this did not seem to be the case. Data were available only for the 19 men studied on the day shift in department C. Here the efficiency level during the 45- to 66-hour week (97.6) was slightly lower than that for the 45-hour week (99.1).

Department D

This department processed small parts for aircraft engines, such as bolts, studs, nipples, screw bushings, set screws, plugs, nuts, and adaptor bolts. As a high degree of precision was required, emphasis was on accuracy rather than speed. As a consequence, time standards were very liberal. Work consisted mostly of operator-paced machine operations, such as drilling, grinding, tapping, threading, cutting out slots, polishing, burring, counterboring, and countersinking.

Efficiencies for men were recorded for workweeks of 45, 55 to 66, and 60 hours. For the same periods, the weekly schedule for women remained constant at 45 hours. The groups studied consisted of 24 men on the first shift, 14 on the second, and 20 on the third during the 45-hour week. During the longer workweek, consisting first of alternating 5 and 6 days at 11 hours, and later 6 days at 10 hours, only two shifts were operated, with 30 men on the first shift and 28 on the second.

The 29 women were evenly divided among three shifts, with 10 on each of the first and second shifts and 9 on the third.

The findings are as follows:

Workweek	Efficiencies, by shift			
	All shifts	First	Second	Third
Men:				
45-hour week	101.3	101.5	101.2	100.9
55–66-hour week	101.6	101.8	101.3	....
60-hour week	102.3	103.3	100.9	...
Women:				
45-hour week	103.3	103.6	102.9	103.0

At light and simple machine work requiring great accuracy, women were more efficient than men. This was true from the groups as well as for each shift.

For men, efficiency was as high during an 11-hour day as during a 10-hour day, although there was some indication that—for the day shift at least—a 10-hour day was slightly better. The data for the 60-hour week, however, did not cover a long enough period to justify a definite conclusion. As in the case of the three departments already discussed, the work involved a warming-up period and the maintenance of a rhythm. In department D, however, the rhythm was slower because of the greater accuracy required.

There was relatively little difference between the shift averages of men or women during the 45-hour week. The slight differences tended to reenforce the point made in connection with departments A and B, to the effect that the first shift had the highest and the third shift the lowest efficiency level. The fact that there was so little difference probably was due to the nature and tempo of the work.

Department E

In sharp contrast with the work in the preceding four departments, that in department E was entirely machine-paced. All work was done on automatic screw machines. Raw stock bars, up to 500 pounds in weight, were fed into a battery of machines from trolleys. Most of the "first operation machines," performing up to six operations, were run by men. Women did "second operation" work on smaller stock, using screw machines that performed only up to three operations. Work was fully automatic. The operator's task was to keep the machines fed, gauge the finished pieces, adjust the die sets, regulate the flow of the cutting oil, and generally watch the performance of the machines.

Men worked 46 to 69 hours a week, two shifts of 11½ hours each. Off days were staggered so that a man could work from 4 to 6 days a week. Women worked three shifts of 8 hours each. No time was set aside for rest or lunch periods, as considerable idle time was involved during machine operations. The equipment was modern. There was relatively little noise, and lighting was good. Of 28 male operators, 14 were on each of the two shifts. The 39 women operators were almost evenly divided, with 12 on the first shift, 13 on the second, and 14 on the third.

The findings for this department are as follows:

Workweek	Efficiencies, by shift			
	All shifts	First	Second	Third
Men: 46–69-hour week	101.9	100.1	104.2	....
Women: 45-hour week	98.9	96.4	99.6	100.3

The findings for this department were in direct contrast with those of the other departments already discussed.

1. As operators of automatic multiple screw machines, men were more efficient than women. The average efficiency level for all men was 101.9, while that for all women was 98.9. The general finding held for the individual shifts as well.

For men, working 11½ hours a day, the second shift's performance level was superior to that of the first shift. For women, working 8 hours a day, the third shift had the best and the first shift the lowest efficiency level. The second shift's average, however, was not much below that of the third.

Without additional study of similar operations, the relative performance of the various shifts cannot be held to be typical of this kind of work. The possible explanation that seasonal heat during the day might have influenced the lesser performances of the first and second shifts does not hold here because the period surveyed did not cover the summer months.

11: *Workweek of 45 hours* vs. *55 hours for women, day shift, indirect wage incentives; light, operator-paced machining operations.*

Operations consisted of machining processes on lathes, grinders, broachers, and similar metal working equipment involved in the production of bearings and washers for motors and other operating parts of airplanes. The pace followed was quite fast and permitted the operators very little idle time.

Working conditions.—Working conditions were exceptionally good. The department was air-cooled and sound-proofed. Noise was moderate except around the punch presses. There were no fumes or dust. Lighting was excellent. Aisles were well-defined and kept clear. All equipment was well-guarded and well-spaced. There was an intensive safety effort, which included lectures, use of special safety equipment, and constant inspection by safety engineers. The success of this program was reflected in the fact that injuries as measured by the standard injury frequency rate did not rise when the workweek was lengthened from 45 to 55 and 57 hours in the department.

Wage incentives.—There was no wage-incentive system of the usual type in this department. Measures of efficiency were maintained to determine workers' promotions and wage increases. Wage rates were stratified, depending on the average hourly output of the employee.

FINDINGS OF STUDY

The experience of a selected group of 66 women on a day shift was studied.

Efficiency.—When daily hours were increased from 7½ to 9½ hours for 5 days of the week with the retention of a 7½-hour Saturday, efficiency showed no change.

Absenteeism.—Absenteeism rose from 3.3 to 4.5 percent when the workday was lengthened. In any case, the rates in either period were not excessive. Company officials attributed this to an intensive campaign to keep absenteeism down.

Output.—Output rose 20.9 percent as a result of the 22.2 percent increase in hours with a stable level of efficiency and a slight increase in absenteeism. Thus, the change from a 7½- to 9½-hour schedule for 5 of the 6 work days had the effect of furnishing almost 1.9 additional output hours for each 2 hours added to the schedule.

12: *Workweek of 45 hours* vs. *57 hours for women, evening (second) shift, indirect wage incentives; light, operator-paced machining operations.*

Operations and working conditions, except for the working hours of the day, for this group are similar to those in case study 11, as these women were in the same department.

FINDINGS OF STUDY

Findings are for a selected group of 61 women who experienced a change in scheduled hours from 45 to 57 per week by the addition of 2 hours to the original 7½ hours for 6 days of the week.

Efficiency.—The change from the 7½- to the 9½-hour day resulted in a decrease of 7 percent in efficiency for women on this shift.

Absenteeism was 2.7 percent during the shorter workweek. The rate rose to 4.8 percent when the hours were lengthened.

Output increased by 15.3 percent with the increase of 26.7 percent in the workweek. The disparity resulted from the drop in efficiency and higher absenteeism during the longer schedule. As a result, for every 2 hours added to the schedule, only about 1 hour's additional output was obtained.

13: Workweek of 45 hours vs. *one of 55 hours for women who changed from an evening (second) to a day shift, indirect wage incentives; light, operator-paced, machining operations.*

These women were in the same department as those in case study 11. Operations and working conditions were identical. These workers moved up to the day shift when the workweek was lengthened. The change resulted in the loss of a shift bonus of 5 cents an hour, and a new orientation to transportation requirements, home duties, eating and sleeping habits, shopping practices, etc.

FINDINGS OF STUDY

The experience of a selected group of 26 women was studied. The change from a 45- to a 55-hour workweek was effected by changing daily hours from 7½ to 9½ for 5 days in the week, with the retention of a 7½-hour Saturday.

Efficiency declined 8 percent during the longer workweek, and with the changed shift.

Absenteeism rose from 2.2 percent to 5.8 percent under the longer schedule.

Output rose only 8.4 percent when the workweek was increased by 22.2 percent. In effect, only about three-fourths of an hour of additional output was achieved for each 2 hours added to the schedule.

14: Workweek of 45 hours vs. *one of 55 hours for women who changed from a night (third) to a day shift, indirect wage incentives; light, operator-paced machining operations.*

These women worked in the same department as those in case study 11. Operations and working conditions were identical, except that the change in shift meant for these workers the loss of a shift bonus of 10 cents an hour, and the necessity of acclimating themselves to new transportation schedules, a revised program of home duties, eating and sleeping habits, etc.

FINDINGS OF STUDY

Findings are based on the experience of a selected group of 22 women who changed from a night shift to a day shift when the workweek was lengthened from 45 to 55 hours. The change in daily hours consisted in the addition of 2 hours to the previous 7½-hour day for 5 days of the week, with the retention of a 7½-hour Saturday.

Efficiency.—The lengthening of the workweek and the change in shift brought about a 7.1 percent decrease in efficiency.

Absenteeism averaged 3.3 percent during the shorter hours. The rate rose to 4.1 percent after the change.

Output rose 12.6 percent when the workweek was lengthened 22.2 percent. Thus a little more than 1 output hour was added for each 2 scheduled hours added.

15: *Workweek of 45 hours* vs. *one of 57 hours for women who changed from a night (third) to an evening (second) shift, indirect wage incentives; light, operator-paced machining operations.*

Operations and working conditions were identical with those in case study 11. These women worked in the same department as those in the previous study. The change in shift meant for these women revisions in transportation facilities, home duty schedules, eating and sleeping habits, etc.

FINDINGS OF STUDY

The findings are for a selected group of 59 women who experienced a simultaneous change in working hours and work schedules. The workweek was lengthened from one of 6 days at 7½ hours, or 45 hours a week, to one of 6 days at 9½ hours, or 57 hours a week.

Efficiency.—The change in shift and the increased hours brought about a decline of 3.4 percent in efficiency.

Absenteeism before the change averaged 3 percent. The rate under the longer hours rose to 4.7 percent.

Output rose 20.1 percent during the second period when the workweek was extended by 26.7 percent. Thus, a little better than 1½ hours of output were added for each 2 hours added to the schedule.

16: *Workweek of 45 hours* vs. *one of 55 hours, day shift; indirect wage incentives; light, operator-paced machining operations; men and women.*

The plant studied was engaged in the production of metal bearings. It belonged to the same company involved in case studies 11 to 15, but was located in an older, less modern building. Operations consisted almost entirely of machining processes on lathes, drill presses, grinders, millers, broachers, and similar metalworking equipment. The weights handled varied from 1 to 70 pounds, the heavier parts being lifted by hand cranes. Women worked on the lighter materials. The work may be characterized as light, operator-paced machining operations.

Working conditions.—Working conditions were good. Ventilation and lighting were adequate, and noise was moderate, although there was no air-conditioning or sound-proofing. There were no fumes or smoke. Aisles were defined and kept clear. There were no organized rest periods.

Wage incentives.—Wage rates were based on a detailed placement and advancement program. There was no wage-incentive system of the usual type. Efficiency measures were maintained as a basis for workers' promotions and wage increases. The method used was the same as described in case study 11.

FINDINGS OF STUDY

Findings are for all workers on the shift. During the period surveyed there were about 100 workers in the group. About 75 percent were men and the remainder, women.

Efficiency.—Efficiency declined by 3.6 percent when hours were lengthened from 45 to 55 per week. (This was accomplished by increasing daily hours from 7½ to 9½, but retaining 7½ hours on Saturday.) The pattern of daily efficiency shows that the fourth day, Thursday, was the best day during the period of the short workday. There was a considerably lower level of efficiency on Friday, with some improvement on the sixth day. During the 9½-hour day, the level of efficiency was lower for each day than in the preceding period. Except for a slight drop on Tuesday, there was little difference between the levels for the first 4 days. Again, there was a drop on the fifth day, with a slight improvement on the sixth, this last being related perhaps to the fact that only 7½ hours were worked on that day.

Absenteeism.—Absenteeism rose when the workweek was lengthened. The rate was 1.7 percent during the shorter workweek and 3.6 percent under the longer schedule. In both periods, the rate was not excessive. Under the shorter hours, absenteeism was highest on the first workday of the week, dropping successively to a low on Friday, with a fairly sharp rise on Saturday. The lengthening of 5 of the workdays by 2 hours each raised the level of absenteeism for each day but did not cause any significant change in the relation of the daily levels, except to raise the Saturday level to the highest of the week, slightly above that of Monday.

Output.—Output showed a 15.9 percent rise when the workweek was lengthened by 22.2 percent. In other words, slightly less than 1¾ hours of output were gained for each 2 hours added to the schedule.

17: *Workweek of 45 hours* vs. *one of 57 hours, night shift, indirect wage incentives; light, operator-paced machining operations; men and women.*

This study covers the experience of all workers on the night shift in the same department and on the same operations as those in case study 16. During the period studied there were about 50 workers in this group, approximately 75 percent of whom were men. During the period of the shorter workweek these workers were divided into an afternoon and a night shift. When hours were lengthened the two shifts were combined into one night shift.

Working conditions were similar for both groups.

FINDINGS OF STUDY

Efficiency.—Efficiency dropped 6.7 percent when the workweek was lengthened from 45 to 57 hours by increasing daily hours from 7½ to 9½. Daily efficiency patterns indicate that during the period of the 7½-hour day, the third day, Wednesday, was the peak day, but was closely matched by Friday. During the longer workweek, the week began on Sunday night. During this period the midweek peak was lost and the levels for the first three days, Sunday through Tuesday were constant. The level for Wednesday was lower, with levels for Thursday and Friday still lower.

Absenteeism.—Absenteeism rose from a level of 3.6 percent during the 45-hour workweek to 6.1 percent during the 57-hour workweek. Under the shorter schedule, daily absenteeism was low during the first 4 days of the week, the lowest point being reached on the fourth day, Thursday. Friday showed a much higher rate, and Saturday had the highest daily level of the week. During the longer hours the pattern showed a sharp peak on Sunday, the first workday, a marked drop on Monday, a lower but fairly even level for Tuesday through Thursday, and a very sharp rise on Friday.

Output.—Output rose by 14.8 percent with the 26.7 percent increased in the schedule, a gain of about 1 hour of output for each 2 scheduled hours added to the week.

18: Workweek of 58 hours vs. *one of 48 hours, group wage incentives; medium-heavy, operator-paced machining and assembling operations; men and women.*

The operations consisted of processing steel sheets, which weighed about 90 pounds initially, into airfield landing mats. The processes used were evenly divided between machining and hand operations. The steel sheets, about 2½ feet wide and 10 feet long, were trimmed to size, embossed, holes were punched, bayonet fasteners and slots for interlocking the mats were punched and interlocked, and the resulting mats—now weighing about 65 pounds—were degreased, painted, baked, bundled, and loaded into freight cars.

The mats were moved along the production lines by means of conveyors or overhead tracks. In terms of physical exertion, the work was medium. The speeds of individual operations were entirely within the control of the operators.

Working conditions.—On the whole, working conditions were good. Illumination and ventilation were adequate. Except for the immediate vicinity of the spray-painting booths, the air was clean. Housekeeping was good and there was little congestion or crowding.

There were no showers and no eating facilities of any kind—not even a place to eat.

During the 8-hour day, there were no organized rest periods. Estimates of time voluntarily taken out from work at the production lines, with utility men stepping in as replacements, ranged between 20 and 30 minutes per day. During the 10-hour day, a rest period was called at the end of 8 hours.

The work force.—During the first period surveyed (the 58-hour week), the number of workers studied numbered 80. Only one shift was operated. During the second period (the 48-hour week), the number of workers had grown to 140, and two shifts were used. None of these operators had any prior experience in the production of landing mats, and most of them were new to the plant. Only about half of them had some industrial experience before coming into this department.

The work force during the 58-hour week period surveyed—May through August 1943—consisted entirely of men. During the 48-hour period—January through April 1944—about 15 percent were colored women, selected for size and strength. In view of the kind of operations performed, it is believed that the change in the size and composition of the group should not have influenced the results of the survey.

Wage incentives.—A bonus was paid for all production in excess of a fixed quota, and averaged about 25 percent of the base pay. A penalty was assessed for spoilage above a set limit. Average hourly earnings came to about $1.10.

FINDINGS OF STUDY

Efficiency.—When daily hours were decreased from 10 to 8 for 5 days of the week, with the retention of the 8-hour Saturday, hourly efficiency increased by 15 percent.

Absenteeism.—Absenteeism remained at about the same high level during each of the two periods—10.7 percent during the 10-hour day schedule and 10.4 percent during the 8-hour day schedule. (It should be noted that 6 days were worked under either schedule, so that Saturday absenteeism was a problem in each case.)

Output.—The net effect of the decrease in daily hours from 10 to 8 was a lowering of the total output level by about 8 percent. Against this, the decrease in scheduled hours amounted to 17 percent. Consequently, 1 hour's output was lost for each 2 hours dropped from the schedule. Stating this finding in reverse, the plant had gained only 1 hour's output for every 2 hours worked above 48 per week. Half of the added hours were wasted.

Injuries.—Furthermore, work injuries were about three times as frequent during the longer hours. Although most injuries consisted of minor cuts and bruises, the department averaged 208 such injuries per 100 workers during the 48-hour week, as against 680 during the 58-hour week.

The time lost because of disabling injuries showed much the same picture: For each 100 workers, 23 days were lost during the shorter work schedule, as against 128 during the longer schedule.

19: The effectiveness of Sunday work for workers on light, operator-paced machining operations; individual wage incentives; men.

The plant studied manufactured drills and reamers. Operations consisted of cutting steel rods to proper lengths and grinding, fluting, and tempering these lengths into drills and reamers. This work may be described as light, operator-paced machining operations.

Working conditions.—Working conditions were good. Light was adequate as was ventilation. There were no fumes, and noise was moderate. Aisles were narrow but were kept unobstructed.

Wage incentives.—The wage incentive system consisted of a bonus based on each worker's individual efficiency, with fixed increases for specified percentages above the production standard. There was a ceiling of 30 percent above base pay beyond which the workers were not paid for additional output.

Safety.—A safety program was carried out by a labor-management safety committee.

Hourly schedules.—The performances of a selected group of 30 male operators on three shifts were studied under 4 different levels of scheduled hours. These schedules were: (1) A straight 56-hour workweek of 7 days of 8 hours each; (2) 2 weeks of 56 hours, and one of 48, or every third Sunday off; (3) alternating weeks of 56 and 48 hours, or every second Sunday off; and (4) a straight 48-hour workweek of 6 days of 8 hours each.

FINDINGS OF STUDY

Efficiency.—Efficiency increased 17 percent when the schedule was changed from a straight 7-day week to one with every third Sunday off. It rose another 11 percent when the men worked only every other Sunday. It rose only 1 percent more when Sunday work was eliminated entirely. It is believed, however, that it would have risen still further—by about 6 to 8 percent—had it not been for the 30 percent ceiling on bonus. This ultimate level would be one-third again as high as it was under the 7-day workweek. In any case, the 6-day schedule is clearly indicated as having been the most efficient of those studied.

Absenteeism.—Absenteeism averaged 4.1 percent during the straight 56-hour workweek, and 7.8 percent during the period of 2 weeks at 56 hours and 1 at 48 hours. At this time the company paid an attendance bonus of increasing amounts for every month of perfect attendance during a 3-month period. This bonus was discontinued when the schedule was changed to one of alternating 56- and 48-hour workweeks. During this period the rate of absenteeism was 8.2 percent. When Sunday was eliminated from the workweek entirely, the rate was slightly less—7.3 percent. When Sunday was scheduled, it had the highest daily rate of absenteeism. Next in order came Saturday; and third, Monday. Attendance was best on Friday, which was pay day.

For the plant as a whole, the first shift, with the highest proportion of old-time workers, had the lowest absenteeism rate. It was not much higher on the second shift. The third shift, with about one-fifth of the labor force, and with the lowest proportion of old-time workers, was said to account for 50 percent of the absenteeism. This shift also had the highest proportion of women, whose absenteeism rate was reported to be twice that of men.

Among the reasons advanced by management for the high rates of absenteeism were: (1) The 7-day week was too long; (2) earnings were high and the men had no time to spend their money.

Output.—Output increased 6.8 percent when the average workweek was decreased by eliminating one out of every three Sundays as a work day. It was increased by a total of 13.8 percent when the workweek was further shortened, making only alternating Sundays workdays. During the 48-hour workweek period, output showed a net gain of 6.8 percent. Output was highest during the schedule calling for work every other Sunday. If the assumption as to the true efficiency level in the absence of bonus limitations is sound, however, it appears that the output level during the straight 6-day week would have been equally as high. In effect, this means that the workers were capable of producing as much on a straight 6-day week as during a straight 7-day workweek or under schedules requiring work on every second or third Sunday.

Injuries.—The incidence of work injuries, as expressed in the average number of disabling and nondisabling injuries per 100 workers per month, showed no appreciable variation during the different work schedules, as shown by the following averages:

Work schedule	*Number of injuries*
7-day week	3.6
Every third Sunday off	3.8
Every second Sunday off	3.1
Every Sunday off	3.7

20: *Workweek of 40 hours* vs. *one of 60 hours, day shift, group wage incentives; medium-heavy, operator-paced machining operations; men and women.*

This department produced 105 mm. shells. The work consisted primarily of the operation of metalworking machines such as grinders, millers, lathes, drill presses, and similar equipment. About 14 types of machines performed about 30 operations on the shell. The rough casting, weighing about 30 pounds, passed from machine to machine by means of gravity conveyors. In general, the work may be classified as medium in physical effort required, essentially machining, primarily operator-paced, and affording very little idle time to the operators.

Working conditions.—Working conditions were fairly good. Work areas were adequate in size and unobstructed. Lighting and ventilation were good. Noise, however, was shrill and of considerable volume. Two 10-minute rest pauses were permitted during each shift.

The work force.—During the period studied, approximately 50 men and 15 women were employed on the day shift. Employee morale appeared to be excellent. This was attributed to the immediate and obvious relation of the product to the war effort.

Wage incentives.—A daily and weekly incentive bonus were paid for all shells produced in excess of a fixed departmental quota.

Hourly schedules.—A 40-hour workweek (5 days at 8 hours) was scheduled through May 1943. Responding to the need for increased production, management increased the scheduled workweek to 55 hours (5½ days at 10 hours and finally to 60 hours (6 days at 10 hours). The data permit a comparison of labor performance during the 40- and 60-hour workweeks.

FINDINGS OF STUDY

Efficiency averaged a drop of 22.3 percent during the longer workweek.

Absenteeism losses increased sharply during the longer work schedule. The absenteeism rate rose from an average of 5.7 percent during the 40-hour week to 10.8 percent during the 60-hour schedule.

In terms of total output, the increase of 50 percent in scheduled hours resulted in an increase in output of only 5.5 percent. Thus, given the same hourly efficiency and absence rate which prevailed during the shorter workweek, the additional output gained during the longer workweek could have been obtained by increasing scheduled weekly hours from 40 to about 43.

Injuries (nearly all minor and requiring only first aid) increased in rough proportion to the increase in hours. During the shorter workweek, approximately 109 injuries were sustained by 100 workers per month. The corresponding average rose to 163 during the longer workweek.

Another apparent result of the long work schedule was a sharply increased rate of voluntary quits. During the 40-hour workweek, an average of 3.5 workers voluntarily left the company each month for every 100 workers on the pay roll. The corresponding average during the 60-hour schedule was 7.1. It is impossible to determine to what extent this higher figure reflected experience with different types of workers, and to what extent it was due to longer hours. It is very likely that both of these factors were involved in the sharp increase in the quit rate.

After 7 months at the longer hours, the work schedule was cut back to a 48-hour week, with 6 days at 8 hours each.

21: Workweek of 40 hours vs. *one of 66 hours, night shift, group wage incentives; medium-heavy, operator-paced machining operations; men and women.*

This study deals with the performance of a group of night-shift workers in the plant described in case study 20. The operation, working conditions, and pay incentives were the same for this group as those indicated in the previous case study.

The company employed about 45 men and 10 women on this shift. The workweek was increased from 40 hours, 5 days at 8 hours, to 66 hours, 6 days at 11 hours.

FINDINGS OF STUDY

Efficiency.—A comparison of the levels of efficiency achieved during both schedules reveals that the group was 20.6 percent less efficient during the longer hours.

Absenteeism.—The absence rate rose from 3.7 percent during the 40-hour workweek to 13.3 percent during the longer workweek.

Output.—The composite effect of a 65-percent increase in scheduled hours, reduced efficiency, and higher absenteeism was an increase in output of only 9 percent. In terms of hours, the addition of 26 hours to the workweek resulted in an increase of only 3½ hours of output. The same result could have been achieved by extending the original 40-hour week to 44 hours. The additional 22 hours worked up to the 66-hour level were completely wasted.

After 7 months at the longer hours, the shift was cut back to 6 days at 8 hours each, or 48 hours per week.

22: *Workweek of 48 hours* vs. *one of 55½ hours, no wage incentives; medium-heavy and heavy operator-paced chipping, grinding, and welding operations; men.*

This study was conducted in the finishing department of a small steel casting foundry. The operations consisted of cleaning, grinding, chipping, and welding of castings delivered to this department after having been poured in the molding department. All of the operations were entirely operator-paced. The work ranged from medium-heavy to heavy, depending on the size and weight of the castings (which varied between 20 and several hundred pounds) and afforded the workers very little idle time.

Working conditions.—Foundry work usually is dirty and frequently hot. This foundry conformed to the usual pattern. Illumination in the department was good. Powerful fans removed fumes and smoke and, during the summer, helped in keeping the average temperature from rising above 90°F. Aisles, generally, were clear of obstructions. While there were no organized rest periods, voluntary rest periods consumed from 30 to 45 minutes per day. All work was done at straight hourly rates. There was no wage-incentive system of any kind.

Hourly schedules.—During 1942, the company scheduled a 48-hour workweek, 6 days at 8 hours for the average work force of 80 men in the department. In 1943, the labor force declined to 65 men and weekly hours were raised to 55½, 5 days at 9½ hours and Saturday at 8 hours.

FINDINGS OF STUDY

Efficiency.—A comparison of departmental performance during both levels of hours reveals that efficiency remained essentially unchanged when weekly hours were raised from 48 to 55½. It actually increased slightly by 0.2 percent.

Apparently, the operators were able to maintain the same pace during the 8- and 9-hour days. The finding that the efficiency of men on day work and without any wage incentive remains about the same at levels of long and short hours parallels a similar finding in an earlier study.[3]

In the light of other findings for men working under wage incentives, the conclusion appears warranted that, in this department at least, men on day work—and apparently operating at a slower tempo than if on piecework—can be as efficient during a 9½-hour day and 55½-hour week as they can during an 8-hour day and 48-hour week. In other words, the work pace during the shorter workweek was not so fast as to be impaired when the workday and workweek were lengthened.

It is also likely that the high morale of the workers during 1943—a wartime morale—had an important bearing on the maintenance of an efficiency level which might have dropped had the longer hours been in force under peacetime conditions.

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[3] See case study 1.

Absenteeism.—Scheduled workdays lost because of absence from work increased from 6.6 percent to 8.9 percent during the longer workweek.

Output.—Against an increase of weekly hours of 15.6 percent, output increased 13.2 percent. For every 3 hours of additional worktime, output increased by the equivalent of 2½ hours' production under the shorter work schedule.

23: *Workweek of 48 hours* vs. *one of 54 hours, no wage incentives; medium-heavy and heavy operator-paced foundry operations; men.*

This department performed molding and metal-pouring operations in the same foundry which furnished the material for case study 22. The weights handled by workers varied with the size of the castings and ranged from 20 pounds to several hundred pounds. As a rule, all weights above 75 pounds were lifted by means of manually or power operated cranes. Work was usually done in crews of three: a molder, a helper, and a core setter. The molds were assembled from oven-dried cores and backed with sand. When the molds were large—and consequently heavy—the molten metal was poured from crucibles which were transported by crane to the assembly floor. Small molds were moved by crane to the pouring floor where the metal was poured. When the castings had cooled, they were moved to the shake-out floor where a crew of shake-out men removed them from the flasks. The physical demands of the operations may be characterized as medium-heavy to heavy. The work pace was entirely controlled by the operator.

Working conditions and hourly schedules.—Plant conditions were essentially the same in this department as those described in case study 22. Employees were paid on a straight hourly basis. There was no wage-incentive system of any kind.

The schedule in effect through March 1943 was 48 hours a week, or 6 days at 8 hours. In the spring of that year, the scheduled workweek was increased to 54 hours by adding 1 hour to each workday. The average work force decreased from 88 men to 68 men during the longer workweek.

FINDINGS OF STUDY

Efficiency was about 4.1 percent better during the 9-hour day as compared with the 8-hour day. As was found in case study 22, the absence of a wage-incentive system apparently resulted in a pace under the shorter hourly schedule which could be maintained and, in fact, improved even though hours were increased.

Absenteeism increased from 6.9 percent to 8.5 percent when the workweek was lengthened.

The net effect of the increase of 12.5 percent in working hours was an increase of 13.5 percent in over-all output. The increase in efficiency more than offset the increase in the time lost because of increased absenteeism. In terms of hours, the addition of 6 hours to the workweek resulted in an increase of 6½ hours of output.

This study again illustrates that the pace of workers at straight hourly rates was not so fast under a 48-hour schedule but that it could be maintained, and even improved, when hours were increased to 54 per week.

24: *The effectiveness of Sunday work during a 54-hour week* vs. *a 58-hour week without Sunday work, indirect wage incentives; light, operator-paced machining operations; men.*

The operations in this department consisted almost entirely of machining small metal parts for war materials: machine-gun tripods, aircraft parts, and similar equipment. The operations, primarily drilling, grinding, and machining of small aluminum and steel parts, may be characterized as light and operator-paced.

Working conditions.—Working conditions were good. Ventilation was adequate, noise was moderate and lighting varied from adequate to good. There were no fumes or smoke. The wood block floors were kept clean and aisles were usually free of obstructions. Considerable attention was given to safety by management. There was no cafeteria. Lunch tables were provided, and a private caterer brought in hot dishes, sandwiches, etc.

Wage incentives.—The department operated on a measured day-work system. Employees attained specified rates provided they maintained certain prescribed levels of output. Although there was no incentive system in the sense of earnings which fluctuated with the volume of output, the wage system required employees to maintain at least average efficiency in order to qualify for certain wage brackets.

Hourly schedules and shifts.—In 1942, the selected group of 31 experienced male operators were scheduled to work 7 days a week. The schedule called for three nonrotating shifts of 8 hours each, which included a paid lunch period of 15 minutes.

A year later, in 1943, Sunday was eliminated from the schedule, but daily hours were lengthened to 10½ per day, including a paid ½-hour lunch period, with 8 hours on Saturday. The resulting workweek, excluding the lunch period, was 58 hours, as against the earlier 54-hour week. The longer schedule was operated on a two-nonrotating-shift basis.

FINDINGS OF STUDY

Efficiency was higher during the 6-day week than during the 7-day week, although daily hours had been increased from 8 to 10. Average hourly output was 14.3 percent better when there was no Sunday work.

Absenteeism was about the same during both schedules, with an average of about 5 percent. The absence peak during the 6-day week came on Saturday and reflects a desire for a longer weekend.

During the 7-day week, attendance was worst on Sunday, with Monday only slightly better. Operators, working on Sunday, at double pay, frequently took Monday off.

Output.—The longer workweek, with Sunday work eliminated, was more productive than the 7 days at an 8-hour schedule. Although weekly hours had increased by 7.4 percent, output increased by 22.5 percent. With very little change in the absence rate, this increase was due entirely to the improved efficiency during the 6-day week.

By eliminating Sunday work, the plant not only saved the cost of double pay for work on that day but actually gained about 15 percent of output beyond the 7.4 percent of additional hours worked.

25: *Workweek of 37½ hours* vs. *one of 58 hours for men, individual wage incentives; light, operator-paced machining operations.*

This study was conducted in a plant which produced small precision parts for guns and a variety of control devices for lubricating systems. Most of the work involved the operation of metalworking machines such as grinders, millers, drill presses, riveting machines, lathes, and similar equipment. The weight of the parts handled rarely exceeded 5 pounds. The work required a high degree of precision because of the small tolerances allowed on most jobs. The operations surveyed were light and, except for the work at a few automatic machines, were entirely operator-paced.

Working conditions.—Conditions in the plant were good. Lighting ranged from fairly adequate to good. There were no fumes, smoke, or dust. Noise was moderate. Working space was somewhat crowded. A well-equipped first-aid room was staffed with three registered nurses. Rest periods were voluntary and were taken when the work flow permitted.

The work force.—Forty-three experienced male operators were selected for study. Most of them had been employed by the company for many years. A spirit of friendly cooperation between foremen and workers, and among the workers themselves was clearly apparent. Industrial relations were very good.

Wage incentives.—Workers were paid on an individual piece-rate basis. All rates, set by means of time studies, required the approval of the labor organization representing the employees.

Hourly schedules.—The periods compared were January to August 1942, and a comparable period in 1943. During the first period, 3 shifts of 7½ hours each were worked for a workweek of 37½ hours. During the second period, when the plant was entirely on war work, daily hours were increased to 10, with a sixth day of 8 hours added, for a weekly total of 58 hours.

FINDINGS OF STUDY

Efficiency.—In spite of the 54.7 percent increase in hours, the efficiency level during the longer workweek actually increased by 15.3 percent.

Two reasons were advanced by management to explain this experience: (1) The participation of employees in the war effort acted as a powerful stimulus to greater efficiency; and (2) the longer runs on each job during the longer workday spread unproductive time over a longer period of productive effort. Apparently, the work during the longer workweek was not so hard as to induce fatigue serious enough to bring about a slowing down on the part of the workers.

Absenteeism.—The absence rate rose from 2.1 percent to 3.3 percent during the longer workweek. In both periods, the rates were low and were indicative of the effectiveness of a labor-management committee's effort to curb absenteeism.

Output.—The extension of the hourly schedule by 54.7 percent and improved efficiency were responsible for an 81.2-percent rise in total output. In terms of hours, for every hour added to the workweek, approximately 1½ hours of output were achieved.

26: *Workweek of 37½ hours* vs. *one of 54 hours for women, individual wage incentives; light, operator-paced assembling and machining operations.*

The performance of 25 experienced female operators was surveyed in the same plant which furnished the data for case study 25. The group was engaged in assembling, with the aid of light hand tools, the small parts described in the previous case study. A small percentage of the women performed light machining operations.

Working conditions, pay incentives, and worker-management relations were identical with those described in case study 25.

Hourly schedules.—The scheduled workweek was lengthened in 1943 from 37½ hours (5 days at 7½ hours), to 54 hours (3 days at 10 hours and 3 days at 8 hours).

FINDINGS OF STUDY

Efficiency.—A comparison of labor performance during both schedules reveals an experience similar to that found in the previous case study. The change in hours represented an increase of 44 percent. The workers, however, were 16.9 percent more efficient during the longer workweek. The reasons advanced for the comparable reaction in the analysis of case study 25 also apply here.

Absenteeism rose slightly from 3 percent during the 37½-hour schedule to 3.3 percent during the longer workweek.

The combined effect of an increase of 44 percent in scheduled working hours, stable attendance, and improved efficiency was an increase of 67.6 percent in output. Stated differently, for every hour added to the workweek about 1½ hours of output were gained.

27: *Irregular overtime* vs. *a fixed 8-hour daily schedule with occasional Sunday work for men, individual wage incentives; light to medium-heavy, operator-paced machining operations.*

The operations studied in this plant consisted of machining processes on lathes, mills, grinders, and similar metalworking machines. The material handled varied in weight from one pound to over 100 pounds. Heavier pieces were lifted with the aid of mechanical hoisting equipment. The operations were largely operator-paced and afforded very little idle time to the workers.

Working conditions.—Working conditions in the plant were good. Work space and aisles were adequate. Noise was moderate. There were no fumes or dust. The fluorescent installation provided adequate light. Rest rooms including shower facilities were clean and ample in number. Well-prepared lunches were served at nominal prices in the plant cafeteria. Industrial relations were good.

Wage incentives.—An incentive system based on standards established through time studies, provided for additional pay for work done in less than standard time. Operators were paid at their hourly rate for all minutes "saved."

Hourly schedules.—The performance of 29 experienced male operators who worked in the department under both schedules were studied. The working schedules compared were those existing during the first 6 months of 1941, and the same period in 1943. During the first period, the nominal workweek was 6 days at 8 hours. Actually, however, daily hours usually varied between 8 and 10 and occasionally went as high as 15. During the second period, the irregular overtime had been replaced by Sunday work, with the requirement that each operator work two Sundays a month. The purpose of the survey, therefore, was to determine the desirability of working a fixed 8-hour daily schedule which included two Sundays a month as against sporadic overtime which, on occasion, stretched the day to 15 hours.

FINDINGS OF STUDY

In evaluating the changes in efficiency and output it must be borne in mind that the first period preceded our entry into the war and that the second period involved direct participation in the war effort. Unquestionably, the results reflect the effect of war morale, although the extent of this cannot be measured.

Efficiency.—Even though weekly hours increased slightly by 4.7 percent from an average of 51.5 hours during the prewar period to 53.9 hours during the war period, labor efficiency increased by 16.3 percent.

Absenteeism.—Time lost from work because of unauthorized absence amounted to only 3 percent during the first period. With the change to Sunday work, the rate more than doubled to 7.2 percent.

Output.—The net effect of greater efficiency, a higher absence rate and a slightly longer workweek was an increase of 16.6 percent in total output. The primary reasons for the better output record appear to be: (1) The regular work schedule, although it meant work on two Sundays during each month: and (2) the psychological impetus of participation in the war effort.

28: The effectiveness of Sunday work for women, individual wage incentives; light, operator-paced machining operations.

The department surveyed in this study is in the same plant discussed in case study 27. All of the 22 employees were engaged in light metal-machining operations and were women. The material handled varied in weight from one ounce to several pounds. The work may be characterized as light operations at operator-paced metalworking machines.

Working conditions and wage incentives were the same as those described in case study 27.

Hourly schedules.—In 1943, the nominal workweek consisted of 6 days at 8 hours each, which included a paid ½-hour lunch period, and, in addition, work on two Sundays a month. The average workweek consisted of 52.5 hours. In 1944, Sunday work had been discontinued and the workweek consisted of 6 days of 8 hours each for a total of 45 actual hours of work.

FINDINGS OF STUDY

The purpose of the survey was to measure the effect of the discontinuance of Sunday work on two Sundays a month, with the reduction of total weekly hours from 52.5 to 48, each period including a paid ½-hour lunch period.

When Sunday work was dropped from the schedule, the hourly rate of output increased by 22.9 percent. It is significant that the change in nominal weekly hours consisted of a reduction of only 4½ hours, from 52½ to 48, or only 9 percent. Apparently, the important point is that the change involved the complete elimination of Sunday work for the women operators.

Efficiency.—Another factor, but of unmeasurable effect, was that the reduction in schedule followed D-day (June 1944). This may have stimulated efficiency beyond the effect of the dropping of Sunday work. The data indicate, however, that the effect of this shot in the arm—if it was one—continued unabated, for hourly efficiency was as good in December as it had been in July, the month immediately after D-day.

Absenteeism.—Unauthorized time lost from work decreased from 10.9 percent to 7.4 percent.

Output.—The combined effect of increased efficiency and improved attendance was an increase in total output of 16.7 percent. Thus, although the workweek was reduced 4½ hours by the elimination of Sunday work, total weekly output was increased by the equivalent of almost 9 hours.

Daily Pattern of Efficiency and Absenteeism

The data permitted the determination of daily patterns of efficiency and absenteeism. During the longer workweek, efficiency was lowest on Sunday, slightly better on Monday, and then rose to a better level which was fairly well maintained through Friday. On Saturday, however, it dropped again to about the Monday level.

During the shorter workweek, hourly efficiency was best on Monday and was maintained at a slightly lower level for the rest of the week. The efficiency level for every day in the week was substantially higher during the shorter week than during the period with Sunday work.

Absenteeism was markedly lower during the shorter workweek on each day except Monday; and even on that day it was slightly lower.

The outstanding feature of the absenteeism pattern for the period with Sunday work is the low absence rate on Sunday—when work was paid at double rates because it was the seventh day in the week. But workers tended to make up for this by taking time out on other days of the week, notably on Monday and Wednesday.

The pattern for the 48-hour, 6-day week reveals a tendency to stretch the week end by taking off either Monday, or, to a lesser extent, Saturday. Many of the operators studied, however, were married women with home duties, a fact which may explain this pattern even under the 48-hour week.

29: *Workweek of 58 hours* vs. *one of 50 hours, and the effects of reductions in the work force, for men, individual wage incentives; medium-heavy, operator-paced machining operations.*

This plant produced textile manufacturing machinery. Operations involved work on metalworking machines, such as lathes, drills, and milling machines. A high degree of precision was required, as tolerance allowances were very small. The work may be characterized as medium-heavy, operator-paced machining operations.

Working conditions.—Plant conditions generally were good. Ventilation and lighting were adequate. There were no fumes or dust. Noise was moderate. Aisles were wide and clearly defined. Housekeeping in general was good.

The work force.—The period surveyed involved a reduction in the work force as well as in work hours. Average employment in the plant dropped from about 500 to about 325. A high percentage of the operators were highly skilled on a number of operations.

Wage incentives.—The wage-incentive system consisted of an individual premium for time saved from standard time allowed, in addition to the standard hourly rate.

Hourly schedules.—Findings are for a selected group of 33 male operators who changed from a 58-hour workweek of 5 days at 10 hours and Saturday at 8, to a 50-hour week with Saturday work eliminated.

FINDINGS OF STUDY

Efficiency.—Efficiency was 5.4 percent poorer under the 50-hour week than it had been under the 58-hour week. Apparently this drop was the result of fear concerning the cut-back in the work force which was occasioned by the reduced volume of work available. The change in efficiency appears to be attributable to a stretching of available work rather than to the change in hours.

Absenteeism.—Elimination of Saturday work had only a slight effect on absenteeism. The change was from 3.6 to 3.2 percent, which points up a successful effort by the company to keep absenteeism down during the longer workweek.

Output.—The combined effect of the 15.3-percent decrease in hours, the lower efficiency, and the nearly constant absenteeism rate, was a reduction in output of 19.2 percent. Thus, the 8 scheduled hours saved by eliminating Saturday work resulted in a loss of the equivalent of 11 hours of output.

30: *The effects of changes in hours and improvements in working methods for women, day shift, individual wage incentives; light, operator-paced machining operations.*

This plant manufactured air brakes. The women in the department studied were on machining operations, such as broaching, boring, grinding, and drilling on small stock. The work may be characterized as light, operator-paced machining operations.

Working conditions.—The plant was air-conditioned. There were no fumes, smoke, or dust. Fluorescent lighting was good. Noise was moderate. Equipment was in excellent condition, and was well-guarded. Aisles were narrow but adequate.

Wage incentives.—Workers in this department worked under a wage-incentive system. Earnings were based on the percentage which actual production was of standard output, as determined by time studies. However, workers were not paid for additional output beyond 125 percent of the standard. Few workers reached the upper limit.

Hourly schedules.—The experience of a selected group of 10 women on the day shift was studied at three distinct hourly levels. In the first period the workweek consisted of 6 days at 7⅔ hours, or 46 hours. This was followed by a workweek of 50 hours comprising 5 days at 10 hours. In the succeeding period a sixth day of 8 hours was added for a total workweek of 58 hours.

FINDINGS OF STUDY

Efficiency.—When the workweek was raised from 48 to 50 hours, but with Saturday work eliminated, the efficiency rate went up 9.5 percent. When the workweek was lengthened by the addition of a sixth day of 8 hours, efficiency rose another 10.9 percent. The net increase over the original 46-hour week was 21.4 percent. The better efficiency of these workers during the longer hours, however, was not due to better performance, but to the fact that management introduced changes which enabled workers to spend nearly all their time at their equipment. These changes consisted of the addition of separate groups of workers to perform such tasks as getting or removing materials, work previously performed by the operators. Consequently all of the operators' time was productive time.

Absenteeism.—The elimination of the sixth day of 7⅔ hours with the increase from 7⅔ to 10 hours for the other 5 days of the week, was accompanied by an increase in the rate of absenteeism from 4.9 to 8.3 percent. But when Saturday was again added to the schedule with the maintenance of the longer workday, absenteeism rose still further, to 15.4 percent.

Output.—The 8.7-percent increase in the workweek from 46 to 50 hours, brought about an increase in total weekly output of 14.9 percent, an increase of about 1¾ output hours for each hour added to the schedule. When an

8-hour Saturday was re-introduced, the increase of 26.1 percent over the 46-hour schedule was accompanied by a rise of 36.4 percent in output, adding almost 1½ output hours for each hour added to the workweek. Thus, in spite of considerable increases in the absenteeism rate, output increased markedly during the longer workweek. As indicated, however, the increase was due to managerial changes in the method of operation. This study demonstrates that it is possible, by means of such changes, to overcome the usually adverse effect of substantially higher work hours.

31: The effects of changes in hours and improvements in working methods for women, night shift, individual wage incentives; light, operator-paced machining operations.

The workers in this study were employed in the same department and on the same operations as those in case study 30. Working conditions and wage incentives were similar.

Hourly schedules.—The findings are for a selected group of 10 women. During a workweek of 6 days at 7⅔ hours, or 46 hours, they worked on an afternoon and a night shift. When Saturday was eliminated and daily hours increased to 10, lengthening the workweek to 50 hours, the two shifts were combined into one night shift. In a third period, an 8-hour Saturday was re-introduced, making a 58-hour workweek.

FINDINGS OF STUDY

Efficiency.—When the workweek was changed from 46 to 50 hours, efficiency increased by 19.9 percent. When the 8-hour Saturday was added, there was practically no change in efficiency, the level being 0.2 percent higher. Compared with the original 46-hour workweek, efficiency during the last period was 20.1 percent higher. The increase was not due to better performance under the longer schedules, but was brought about by the introduction of more workers to take care of indirect labor tasks, allowing the operators to spend nearly all their time on actual production.

Absenteeism.—During the 46-hour workweek absenteeism was 5.7 percent. With the workweek reduced to 5 days, but with daily hours lengthened from 7⅔ to 10, the rate rose somewhat, to 6.8 percent. When the 8-hour Saturday was added, it again rose, to 7.7 percent.

Output.—The 8.7 percent increase in hours, from 46 to 50 per week, brought about a rise of 28.8 percent in output. In terms of hours, the 4 hours added to the workweek resulted in 13¼ additional hours of output. The increase in the schedule of 26.1 percent, by the change from 46 to 58 hours per week, was accompanied by a 48.2-percent rise in output, or an increase of 22 hours of output for the 12 additional scheduled hours. The greater increases in output in comparison to hours were the result of the changed work-flow methods which made for better utilization of productive time.

32: *The effects of changes in hours and improvements in working methods for men, day shift, individual wage incentives; light, operator-paced machining operations.*

The men in this study worked in the same department, and on the same operations as the women in case study 30. Working conditions and wage incentives were similar.

Hourly schedules.—The experience of a selected group of 15 men on the day shift was studied under two levels of scheduled hours. In the first period the workweek consisted of 6 days at 7⅔ hours, or 46 hours. In the second period daily hours were lengthened to 10 for 5 days, and Saturday was maintained as an 8-hour day. There was also frequent work on an 8-hour Sunday. The average workweek during this period was 61 hours.

FINDINGS OF STUDY

Efficiency rose 8 percent during the longer workweek, as the result of the addition of indirect labor workers, allowing the operators to spend almost all of their time on actual production.

Absenteeism rose from 3.5 to 5.7 percent when the workweek was lengthened.

Output.—The increase in the workweek from 46 hours to an average of 61 hours, a rise of 32.6 percent, brought about a 39.9-percent increase in output. Thus the improvement in working methods served to add 18⅓ output hours when an average of 15 hours was added to the workweek.

33: *The effects of changes in hours and improvements in working methods for men, night shift, individual wage incentives; light, operator-paced machining operations.*

This study covers the experience of men on a night shift in the same department and on the same operations as the women in case study 30. Working conditions and wage incentives were similar.

Hourly schedules.—The findings are for a selected group of 15 men under two levels of hours. During the first period, when the workers were divided between an afternoon and a night shift, the schedule consisted of a 46-hour workweek of 6 days at 7⅔ hours. In the second period the two shifts were combined into one night shift, and the schedule was lengthened by increasing daily hours to 10 for 5 days, maintaining Saturday as an 8-hour workday, and by scheduling a frequent 8-hour Sunday. The average workweek during this period was 61 hours.

FINDINGS OF STUDY

Efficiency.—There was an increase in efficiency of 13.3 percent during the period of the longer workweek, resulting from the elimination of unproductive labor by the operators.

Absenteeism was 3.9 percent during the 46-hour workweek. The rate rose to 6.7 percent under the longer schedule.

Output.—The 32.6 percent increase in hours from 46 to an average of 61 per week was accompanied by a 45.9-percent increase in output. The addition of an average of 15 scheduled hours per week thus effected an increase of about 21 hours of output.

34: *The effects of changes in hours and improvements in working methods for men, group wage incentives; light, operator-paced assembling and testing operations.*

The men in this study worked in the same plant, but in different departments from the women in case study 30.

Operations consisted of assembling and testing the parts machined in the previous department. The work may be described generally as light, operator-paced assembling and testing operations.

Working conditions.—Working conditions were similar to those in the other department.

Wage incentives.—The wage-incentive system worked on the same principle as in the previous department, except that the workers were paid on the basis of group efficiency. This was done because operations were interdependent.

Hourly schedules.—The experience of a selected group of men in four assembling and testing departments, on day and night shifts, was studied under two levels of hours. During the first period the schedule consisted of 6 days at 7⅔ hours, or 46 hours. In the second period daily hours were increased to 10, for 5 days, and Saturday was maintained as an 8-hour day, making a 58-hour workweek.

FINDINGS OF STUDY

Efficiency increased 7 percent during the longer workweek. The better efficiency level, despite the longer hours, was the result of improvement in working methods, allowing productive workers to spend almost all their time on actual productive operations.

Absenteeism rose from 2 percent to 4.2 percent when the workweek was extended from 46 to 58 hours. During both periods the level was low.

Output.—The 26.1-percent increase in scheduled hours was accompanied by a 31.9-percent rise in output, or an addition of 14⅔ output hours for the 12 hours added to the schedule.

35: *Workweek of 54 hours* vs. *one of 61½ hours, individual wage incentives; light, operator-paced machine and bench operations in the manufacture of dental equipment; men and women.*

The operations studied were partly performed on machines—such as lathes, grinders, and polishers—and partly consisted of bench assembling. The weights of pieces handled varied from less than an ounce to one pound. All the work was light, and essentially operator-paced, with very little waiting during machine processing. The work required very close tolerances. The product was dental equipment throughout the entire war period.

Working conditions.—Plant conditions were good, work space was adequate and aisles were wide and unobstructed. There were no fumes or dusts, and ventilation was good. Lighting was only fair. Noise was of moderate volume. Washroom facilities were good. The cafeteria was adequate in size. Workers took voluntary rest periods amounting to about 25 minutes per day.

Machinery was well guarded. Safety conditions were good, as was the plant's accident record.

The work force.—The shop employed about 150 workers. About one-quarter of the work force was composed of women who were mostly engaged in packing and shipping operations. The majority of the workers had long service records with the company and were highly skilled in their work.

Wage incentives.—Workers were paid under a piece-rate system with a guaranteed hourly rate. Rates were determined by means of time studies.

Hourly schedules and shifts.—In 1942, the company shifted from a 40-hour, 5-day week, to a 54-hour week of 6 days at 9 hours. In the following two years, hours were again increased to a 61½-hour week by lengthening daily hours to 10½ for 5 days and retaining Saturday at 9 hours. This schedule proved to be too strenuous for many workers and management permitted a choice between working 54 or 61½ hours a week. Only 16 workers could be found who had consistently worked the 54-hour schedule and the subsequent 61½-hour schedule. The resultant findings consequently are biased in the direction of understatement, as the sample consisted only of those workers who found the 61½-hour schedule not too fatiguing. Only one shift was operated throughout the entire period surveyed.

FINDINGS OF STUDY

Efficiency.—When the 6-day schedule was increased from 54 to 61½ hours a week, the average hourly efficiency was reduced by 4.3 percent. It is entirely probable that the longer schedule would have resulted in a considerably larger drop in efficiency had the entire shop been required to work the 61½-hour schedule.

Although no data were available for performance under the 40-hour week, it was noted that the efficiencies of the 16 selected men dropped sharply during the first 2 months under the 54-hour schedule. As the level at which efficiency stabilized under the 54-hour week was lower than the efficiencies during the two transitional months following the 40-hour week, there is good reason to believe that the efficiency level during the short workweek had been considerably better than that which prevailed during the 54-hour schedule. The data for the first 2 months under the 54 hours suggest that the drop in efficiency from that which had prevailed during the 40-hour week was at least 5 percent. When hours were raised to 61½, efficiency decreased again by 4.3 percent. There also was some evidence that time standards had been loosened under the 61½-hour schedule, as an additional incentive to the operators to work this schedule. This again indicates that the measured decrease of 4.3 percent in hourly efficiency understates the actual decrease. Indications are that the efficiency level for the observed operators was at least 10 percent poorer at the 61½-hour level than at the 40-hour level, and that this decrease would have been greater if the entire work force had been required to work the longer schedule.

Absenteeism.—Absenteeism increased gradually during the 54-hour week and stabilized at an average rate of 5.1 percent. The percentage of scheduled time lost increased still further when weekly hours were raised to 61½, the average absence rate stabilizing at 6.3 percent. Absenteeism, like efficiency, probably would have been higher had the sample included those men who found this schedule too strenuous and therefore confined themselves generally to a workweek of only 54 hours.

Output.—Lowered efficiency and increased absenteeism were reflected in the rise in output by only 4.2 percent when hours were increased by 13.9 percent for the 61½-hour week. Thus, it took slightly more than 2 hours to bring about the addition of 1 hour's production. The additional output gained under the 61½-hour schedule could have been produced in 56 hours, had the efficiency and absenteeism remained as under the 54-hour schedule.

Daily Pattern of Efficiency and Absenteeism

The daily efficiency levels were about the same for each of the first 5 days under the 9-hour schedule. Only the sixth day, Saturday, showed a poorer performance.

The daily efficiency levels under the 10½-hour day were decidedly lower than those under the 54-hour schedule. However, it is difficult to explain the constant rise for almost every successive day under the longer schedule. The better performance on Saturday, on the other hand, may be due to the fact that it was 1½ hours shorter than the schedule on the other workdays.

The daily absenteeism patterns under the two sets of hours were very much alike, except that the absenteeism rates under the long hours were at higher levels during the first two and last two days of the week. The difference was particularly marked on Saturdays. Under both levels of hours, the absenteeism rate dropped fairly steadily from Monday through Thursday, and then rose again on Friday, with a high peak on Saturday.

36: 6-day week vs. *5-day week for night work of biweekly rotating shifts; individual wage incentives; medium-heavy, operator-paced machining operations; men.*

The department was engaged in the production of 105 mm. shells and 60 mm. mortars, which involved metalworking processes on lathes, millers, thread millers, and automatic screw machines. The work was medium-heavy. It was operator-paced and afforded little or no resting time for the operators during processing operations. The weight of materials handled varied from less than 1 pound to 47 pounds for the completed shell.

Working conditions.—The workshop was free from fumes and dust. It was clean and well-ventilated. Lighting was good, and noise moderate. With the exception of a few crowded places, working areas were adequate and aisles wide and unobstructed. Clean-up facilities and lockers also were adequate and well-kept. Lunches were served in a cafeteria. The plant appeared to maintain very good safety conditions.

The work force.—All of the 17 operators studied in this survey were white males in the middle age groups.

Wage incentives.—The wage incentive consisted of payment for all standard minutes earned in excess of minutes worked. Standards were developed on the basis of time studies.

Hourly schedules and shifts.—Operators worked alternately two weeks on the day shift and two weeks on the night shift. Throughout the selected period, the day-shift schedule remained at 58 hours per week, with 10-hour days for 5 days and 8 hours on Saturday. During the first half of this period, the night shift worked 63 hours per week, consisting of 5 days at 11 hours and 8 hours on Saturday. During the second half, the night shift went on a 60-hour schedule by working 5 days at 12 hours and eliminating Saturday work.

There were no organized rest periods, though an estimated average of ¼ to ½ hour of voluntary rest was taken each day. There was a ½-hour lunch period.

FINDINGS OF STUDY

Efficiency.—During the period of a 5-day night schedule and a 2-day weekend, the efficiency of the 17 men studied increased by 6.1 percent. This result was achieved by lengthening the hours for the night shift from 11 per night to 12 and by eliminating Saturday work, even though the shortened workweek came only in 2 weeks out of 4. As already indicated, the men worked 6 days during the 2 weeks on the day shift.

Absenteeism.—The 2-day weekend for the night shift also resulted in decreasing time lost due to absenteeism from 7.9 percent of the scheduled work hours to 6.1 percent.

Output.—Increased efficiency and decreased absenteeism resulted in an over-all output increase of 4.3 percent, even though the average weekly schedule for both the day and night shift combined decreased by 3.4 percent. The survey indicates that it was possible to increase output, in spite of long weekly and daily hours, by introducing a 2-day weekend in 2 weeks out of every 4.

37: Workweeks of 40 hours vs. *48 (6 days)* vs. *48 (5½ days)* vs. *54 (6 days), group wage incentives; light, operator-paced hand composition of printing type; men.*

The work in this plant consisted of hand composition of type for printing office supplies. The work was light and entirely operator-paced, each man working on an individual assignment. The general pace of work in this plant was moderate. The operations required exacting workmanship.

Working conditions.—Physical working conditions in the plant appeared to have changed very little during the last 20 years and were far from modern. Lighting ranged from poor to adequate and a general atmosphere of gloom prevailed. Ventilation was adequate because of the large amount of wall space devoted to windows. The plant was relatively free from heat, dusts, fumes, or gases. Temperatures were moderate even during the summer. There was little noise. The operations, generally, were clean and necessitated only limited washroom facilities. There were no organized rest periods and no eating facilities of any kind. In spite of the crowded shop conditions, housekeeping was good enough to prevent injury hazards from this source. The operations themselves were not hazardous.

The work force.—Although the size of the department was small, the composition of the work force had remained practically unchanged throughout the entire 3-year period surveyed. Most operators, including the 9 men selected for this survey, had been with the company for many years. Turnover was very low.

Wage incentives.—The department operated on a group wage-incentive system. The efficiency rate was developed from a comparison of total hours earned during each week with the total hours required under the time standards for the work performed during the week. The excess hours were paid at regular or at overtime rates for regular or overtime hours respectively. There were no artificial ceilings to incentive earnings.

Hourly schedules.—The department worked only one shift. The selected period extended from January 1942 to February 1945. During all of this time the plant was engaged in war work.

The work schedule was changed from 40 hours a week (5 days at 8 hours each) to 48 hours by the addition of an 8-hour Saturday. Then, the sixth day was shortened to 4 hours, but the 48-hour week was maintained by increasing hours on the other 5 days to 8.8 per day. Finally, daily hours were raised to 9 on every day for a total of 54 per week.

FINDINGS OF STUDY

The 48-hour week—6 days.—For the 9 men studied in this department, the change from 5 days at 8 hours to 6 days at 8 hours resulted in a slightly better efficiency (1.4 percent) as well as an absenteeism rate slightly lower (0.5 percent) than the very low rate which had prevailed during the 40-hour week (1.4 percent). As a consequence, the 20-percent increase in hours was more than matched by a 22.8-percent increase in total weekly output.

The 48-hour week—5½ days.—When the 48-hour week was worked in 5½ days, efficiency increased still more, and averaged 4.7 percent above that for the 40-hour level. Concurrently, however, there appeared to have been a greater tendency to prolong the week end by taking off the half day, for absenteeism rose to 4.4 percent. Increased absenteeism offset the rising efficiency enough to reduce weekly output slightly, but still leaving it at 21.6 percent above that for the 40-hour level. In comparison, hours had been increased 20 percent.

The 54-hour week—6 days.—The change to a 6-day week at 9 hours, how-ver, resulted in an average efficiency level lower than that of any of the horter schedules, and 3.2 percent below that for the 40-hour level. Although he absenteeism loss dropped slightly, to 3.8 percent, the total output was nly 27.6 percent better under the 54-hour week as against the 35-percent ncrease in hours above the 40-hour week.

In terms of the 8-hour day and 6-day week, the additional hours worked uring the 9-hour-day schedule of the same number of days per week netted nly 2 more hours of output.

8: *Workweeks of 40 hours* vs. *48 (6 days)* vs. *48 (5½ days)* vs. *54 (6 days), group wage incentives; light, operator-paced packing operations; women.*

This is another department of the same plant described in the preceding ase study, 37. Except for the points cited below, the data presented in he preceding case study also apply to this department.

The work involved counting, assembling, and preparing cardboard fold-rs for shipment. Work was light and entirely operator-paced, and was done n a day shift. The group consisted of 8 women. The changes in weekly hours heduled were the same as in the preceding study.

NDINGS OF STUDY

The 48-hour week—6 days.—The change from 5 to 6 days at 8 hours from 40 to 48 per week) resulted in a slight decrease in efficiency, 0.4 per-ent. Time lost because of absenteeism, however, more than doubled, rising om 3 percent to 6.8 percent. As a result, weekly output rose by 14.9 per-ent against an increase in hours of 20 percent.

The 48-hour week—5½ days.—When daily hours were lengthened to 8.8 er day so as to provide for a 4-hour Saturday while still maintaining the 8-hour week, efficiency improved and was 2.3 percent better than it had een at 40 hours. But the shortened Saturday seemed to invite taking that ay off. Absenteeism rose to 11.8 percent, nearly 4 times what it had been at 0 hours. The higher absenteeism offset the improved efficiency to the extent hat total output dropped 2.8 percent below the level obtained during six -hour days for the same total weekly hours. As against the 40-hour week, he 20-percent increase in hours brought about 11.7 percent more output.

The 54-hour week—6 days.—When hours were raised to 9 per day for a otal of 54 per week, efficiency went up again, to a level of 3.1 percent better han that of the 40-hour week and about 3.5 percent better than during the 8-hour week, with 6 days at 8 hours. But absenteeism went up still further, o 14.4 percent—nearly 5 times what it had been during the 40-hour week. s a consequence, the 35-percent increase in scheduled hours, from 40 hours o 54, resulted in only 22.6 percent more output. In other words, it took 3 ours to produce 2 more hours of output.

39: *Workweeks of 48 hours (6 days)* vs. *48 (5½ days)* vs. *54 (6 days), group wage incentives; medium-heavy, operator-paced shipping operations; men and women.*

This department belonged to the same plant described in case study 37. Cartons and boxes were received by means of conveyor chutes or elevator and were prepared for shipping. Light trucks were used to handle the heavier boxes. The weight of materials handled varied from light to medium. All work was paced entirely by the operators. The group studied consisted of 4 men and 4 women.

No data were available for the 40-hour week. The rest of the schedules worked in this department were the same as those cited in case study 37. All work was done on a day shift.

FINDINGS OF STUDY

The 48-hour week—6 days.—The change in the daily pattern of the 48-hour week, from 6 days at 8 hours to 5 at 8.8 and 1 at 4, resulted in a spurt of 9.4 percent in efficiency, while the rate of absenteeism remained unchanged, at about 7.5 percent. Consequently, there was a net gain in output of 9.6 percent even though weekly hours remained unchanged.

The 54-hour week.—When hours were lengthened to 9 per day for 6 days and weekly hours were increased to 54, nearly half of this increase in efficiency was lost. However, the efficiency level still remained 5.3 percent better under the 9-hour day than it had been under the 8-hour day. For some reason, however, and differing sharply from the experience in the other departments studied, absenteeism resulted in only 5.9 percent of lost time.

The net effect of the 12.5-percent increase in hours during the 54-hour week, as compared with the 48-hour week and 8-hour day, was an increase in output of 20.5 percent.

40: *Workweeks of 48 hours (6 days)* vs. *48 (5½ days)* vs. *54 (6 days), day shift, group wage incentives; light, operator-paced assembling operations; women.*

This study follows the performance of 5 women in another department of the same plant described in case study 37. The workers were engaged in punching and inserting metal or plastic tabs into slotted folders. The work was entirely operator-paced, with the pace fast and steady. The operations were light, repetitive, monotonous, and did not require any special skill. Operators performed their work while seated at benches. With the exception of the 40-hour schedule, for which data were no longer available in this department, the weekly schedules worked were the same as those of case study 37.

FINDINGS OF STUDY

The 48-hour week—6 days vs. *5½ days.*—The change from a 48-hour week of 6 days and 8 hours per day to one of 5 days at 8.8 hours and 1 at 4, resulted in a slight improvement in efficiency—0.3 percent. The high rate of absenteeism during the 8-hour, 6-day week, 22.1 percent, dropped to 12.5 percent under the new schedule. As a consequence, the simple change from a 6-day week to a 5½-day week, with weekly hours remaining at 48, brought about an increase in weekly output of 12.8 percent on the day shift.

The 54-hour week.—The lengthening of daily hours to 9 for a 6-day week of 54 hours, resulted in a net loss in efficiency of only 0.5 percent. The absenteeism loss increased only slightly, from 12.5 percent to 13.2 percent.

As a consequence, the increase in hours of 12.5 percent to the 54-hour week resulted in a net gain in output of 25 percent.

41: Workweeks of 48 hours (6 days) vs. *48 (5½ days)* vs. *54 (6 days), night shift, group wage incentives; light, operator-paced assembling operations; women.*

This department represented, in essence, the night shift of the small department described in case study 40. The work of the 5 women on the night shift was the same as that of the day shift. Working conditions and wage incentives were the same as those described in case study 37. Data were no longer available on the 40-hour week.

FINDINGS OF STUDY

The 48-hour week—6 days vs. *5½ days.*—The first change observed was from 6 days at 8 hours to 5 at 8.5 and 1 at 5.5, but maintaining the 48-hour week. As a result of this change, efficiency improved slightly, 1.1 percent. The high absenteeism loss of 18.5 percent, however, improved decidedly under the new daily pattern, dropping to 5.5 percent. The combined effects of improved efficiency and greatly reduced absenteeism resulted in an increase in total weekly output by 17.3 percent, even though weekly hours remained unchanged.

The 54-hour week.—The next change in weekly hours to 6 days at 9 hours for a 54-hour week actually resulted in better efficiency on the night shift, rising to 1.7 percent above that for the 6-day week of 8 hours a day. On the other hand, however, the absenteeism loss for the night shift during the 54-hour week rose sharply to 22.3 percent.

As a consequence of the steep rise in the absenteeism, the net gain in output was only 9 percent for the night shift, whereas hours had been increased by 12.5 percent.

42: Workweeks of 48 hours (6 days) vs. *48 (5½ days)* vs. *54 (6 days), group wage incentives; light, operator-paced cutting and packing operations; women.*

This is the last of six studies conducted in the plant described in case study 37. Work in this department was operator-paced and very light. It consisted of cutting and packing celluloid signals, tabs, and corner reinforcers. The department consisted of 15 women whose length of service with the company ranged from 5 to 23 years. Most of these women had worked together for more than 10 years. The weekly and daily schedules worked were the same as those described in case study 37, except that the 40-hour period could no longer be studied. All other data pertaining to this plant were cited in case study 37.

FINDINGS OF STUDY

The 48-hour week—6 days vs. *5½ days.*—As in the other departments already discussed, weekly hours were maintained at 48 by increasing daily hours from 8 to 8.8, with 4 hours on Saturday, while reducing the days worked from 6 to 5½. As a result of this change, efficiency improved by 2.7 percent and absenteeism losses were reduced from 8 percent to 4.7 percent.

The 54-hour week.—When hours were increased to 9 per day for a straight 54-hour week, efficiency increased still further, to 5 percent above the 6-day, 48-hour week. But absenteeism losses reverted to nearly the same rate as those for the former 6-hour day by rising to an average of 8.3 percent.

Because of the higher efficiency, however, total weekly output was better by 17.8 percent, as against an increase of weekly hours of 12.5 percent over the 6-day, 48-hour week.

43: *Workweek of 40 hours* vs. *one of 44 hours, day shift, individual wage incentives; light, operator-paced operations in machine-stripping of tobacco leaves; women.*

The operation studied consisted of machine-stripping the center stem from tobacco leaves in a cigar manufacturing plant. The stripping machine is controlled by foot pedals and is fed by hand. The work is done in a sitting position. The operational cycle consists of spreading out the wrinkled tobacco leaf and feeding it into the machine by holding it with both hands. The two halves of the leaf are separated from the center stem by passing the latter between the two cutting edges attached to the center of the rollers. One worker operated one machine.

The work was completely operator-paced, light, repetitive, and monotonous. Care not to tear or cut the tobacco leaves, attention and coordination of both hands and feet imposed a strain on eyes and nerves. The steady and fast pace was primarily due to the continuity of the workflow, the rhythmic nature of the operation, the direct relationship of the amount of output to the operator's earnings, and a moderate work schedule averaging not more than 44 hours per week.

Working conditions.—The stripping department was only moderately noisy. Although air conditioning kept the temperature warm and humid at all times, for the proper conditioning of tobacco, the temperature was not uncomfortable. Lighting was good. Dust was kept at a minimum. Adequate safety aisles and work space, and proper safeguards on moving parts of machines, made this a nonhazardous operation. The first-aid room was well staffed and equipped. Two cafeterias, restrooms, and lockers provided for the employees' comforts. Smoking was forbidden in work areas.

The work force.—The department contained about 500 stripping machines operated by Negro women on fixed day and night shifts. The sample selected for this study consisted of 40 women on the day shift, whose performance was followed from June 1941 to September 1945. A training period of 3 to 4 weeks was considered sufficient to turn out an experienced stripping-machine operator.

Wage incentives.—Each operator was on piecework and was paid by the number of trays of tobacco leaves stripped. Earnings averaged 55 to 65 cents an hour. There was no ceiling on earnings.

Hourly schedules.—An unusual pattern of daily hours was worked, designed to meet the needs of women with home responsibilities, such as caring for children after school hours.

During the 40-hour week, the fixed day shift worked 6 days a week—3 days at 8 hours, 2 at 6, and 1 at 4. During the 44-hour week, the same shift worked 5 days at 7½ hours and 1 at 6½.

There were no organized rest periods. One-half hour was allowed for lunch.

FINDINGS OF STUDY

40 hours vs. *44 hours.*—As already indicated, the change from 40 to 44 hours a week was accomplished by changing the daily schedule from 3 days at 8 hours, 2 at 6, and 1 at 4 to a schedule of 5 days at 7½ hours and 1 at 6½.

The first 6 months at 44 hours showed no change in the hourly performance or in the percentage of scheduled time lost because of absenteeism. During the succeeding months at 44 hours, efficiency increased by 3 percent above the 40-hour level, but absenteeism increased still more sharply, from 1.9 percent at 40 hours to 7.3 percent at 44. The gain in efficiency was offset by the increase in the absence rate, so that output increased only 7.4 percent against an increase in hours of 10 percent. In other words, the 4 hours added to the 40-hour schedule resulted in only 3 hours of additional output.

Sporadic overtime up to 48 hours a week was found during part of the 44-hour period, resulting in an average workweek of 44½ hours as compared with one of 43½ hours for the balance of the period of longer hours. While the absenteeism loss at 44½ hours remained the same as at 43½ hours, efficiency dropped 2.4 percent.

Injuries.—Information was available only for a combination of disabling injuries and first-aid cases, under 44 hours. The weekly rate of injury cases per 1,000 workers was 11 for the day shift. After Monday, the rate increased up to Thursday, then dropped slightly on Friday, and reached the lowest point of the week on Saturday, which was a short workday.

44: *Workweek of 40 hours* vs. *one of 43½ hours, night shift, individual wage incentives; light, operator-paced operations in machine-stripping of tobacco leaves; women.*

The fixed night shift belonged to the same department described in the preceding case study, 43. Only those factors will be cited here in which the night shift differed from the preceding day-shift study.

The 26 Negro women selected for this study worked a weekly schedule of 40 hours (3 days at 5⅚ hours, 2 at 8½, and 1 at 5½) and a schedule of 43½ hours (5 days at 8⁷⁄₁₀ hours) during the survey period from June 1941 to September 1945.

FINDINGS OF STUDY

The 40-hour week vs. *43½ hours.*—During the first 6 months of 43½ hours, the night shift maintained the same rates of efficiency and absenteeism which had prevailed under the preceding 40-hour schedule. Thereafter, efficiency increased by an average of 2.1 percent. (During both the 40- and 43½-hour workweeks, the night shift was slightly more efficient than the day shift—1.5 percent and 0.7 percent respectively.) At the same time, the rate of absenteeism rose sharply from 2.2 percent at 40 hours to 9.7 percent at 43½. A partial explanation of this increase may be that a greater number of hours were involved in a day's absence during the 5-day, 43½-hour week than during the 6-day, 40-hour week. The slight rise in efficiency did not suffice to offset the sharp increase in absenteeism. As a consequence, the 8.8-percent increase in hours above 40 a week resulted in only 2.6 percent more output. In other words, only 1 hour of additional output was obtained for every 3½ hours added to the 40-hour schedule.

Turn-over.—As in the preceding day-shift study, most separations were due to "quits". The night-shift quit rate rose from 5.6 per 100 persons to 20.9 when hours were increased. This increase is similar to that of the day shift which had remained at the 6-day work schedule, while the night shift went on a 5-day week during longer hours. Dislike of work accounted for fully half of the quits at 44 hours.

Injuries.—Data combining disabling injuries and first-aid cases were available only for the period of a 44-hour, 5-day workweek. The weekly rate of injury cases per 1,000 workers was 23 for the night shift. On Monday, the injury rate was the same for both shifts and represented the lowest point of the week for the night shift. After Monday, it rose sharply and remained at a level above the peak of the day shift (on Thursday) for the remainder of the 5-day week.

Pay increases.—The night shift also received a bonus of 10 percent on total weekly earnings during the 40-hour week. As on the day shift, efficiency increased for the following 3 months—rising 6½ percent above the pre-bonus level—after which efficiency gradually declined.

When the rate for piecework units was increased—equivalent to an 11.9-percent raise—during the longer workweek, the night shift showed an increase in efficiency up to 6 percent during the following 5 months.

45: *Workweeks of 48 hours* vs. *40 and 45 hours, individual wage incentives; light, operator-paced operations in machine-stripping of tobacco leaves; women.*

The operation of machine-stripping tobacco leaves was identical with the one described in another cigar manufacturing plant, case study 43. The pace of work was fast and entirely controlled by the operator. There was no idle time. Work was light and continuous, demanding constant manual and visual attention. It was monotonous and repetitive, and required the rhythmic coordination of both hands and feet.

Working conditions.—There was only a moderate amount of dust in the selected department. The volume of noise also was moderate. Temperature and humidity were controlled and kept fairly high to keep tobacco in a proper condition for handling. Modern lighting and ample window space provided very good illumination. Music was played in the plant during various intervals of the day. Facilities for the comforts of workers generally were good.

The strong odor of tobacco and the warm and highly humid air occasionally caused headaches and nausea among workers. Exposure to industrial injuries was limited to minor cuts on fingers and hands. Work space and safety aisles were ample for the operation. The company had a good safety program and was well equipped to administer first aid.

Wage incentives.—Operators were paid under a piece-rate incentive system, and earned an average of 60 cents an hour.

Hourly schedules.—The performance of 13 selected women was followed from December 1943 to May 1946. During the selected period, the weekly and daily schedules worked were: (a) 48 hours (three 9½-hour days alternating with two 9¾-hour days); (b) 40 hours (five 8-hour days); and (c) 45 hours (five 9-hour days). One-half hour was allowed for lunch. Most of the selected female operators were of middle age and had 5 to 25 years' service with the company.

FINDINGS OF STUDY

The 9½- vs. *8-hour day.*—When daily hours were decreased from 9½ and 9¾ to 8 with retention of the 5-day week, efficiency rose steadily up to the end of the 40-hour period, at which point it had reached an increase of 19.3 percent. It is possible that efficiency might have leveled off at a point even higher than this. But at this point hours were increased.

The 16.7-percent reduction in hours, from 48 to 40 per week, had resulted in a loss of only 0.6 percent in average weekly output due to the sharp rise in efficiency. The 40-hour week therefore was practically as productive as the 48-hour week.

When daily hours were increased to 9 a day and a total of 45 a week, efficiency dropped 5.4 percent below the highest point reached at the end of the 40-hour period, though still remaining 12.9 percent above the efficiency level maintained during the 48-hour week.

The increase in weekly hours from 40 to 45 represented a 12.5-percent increase in hours and resulted in a 6.4-percent gain in output. The addition of 5 hours to the 40-hour week therefore resulted in approximately 2½ hours of additional output. In comparison with the 48-hour week, the 45-hour schedule represented a 6.2-percent drop in hours and a 5.8-percent gain in output. In other words, a gain of approximately 2¾ hours of output almost offset the 3 hours dropped from the 48-hour schedule.

The trend in absenteeism losses could not be related to changes in hours, as there were marked fluctuations in the monthly averages of absenteeism in all periods. The over-all level of absenteeism was 9 percent for the three levels of hours combined.

Turn-over.—A sharp drop in the number of separations was noted when hours were dropped, while accessions kept pace with separations. At 48 hours, the separation rate per 100 employees was 9.4; at 40 it was 4.4. When hours were again increased, to 45 per week, the separation rate remained almost unchanged (4.7) while the number of accessions rose to 8.7, indicating a period of expanded activities in which management made special efforts to keep its old employees. There were no discharges during the 45-hour week. The majority of separations were due to "quits for outside reasons" in all 3 periods. "Dislike of working conditions" was given for 12½ percent of the quits during 48 hours and for 8.7 percent during 40 hours, and 7.8 percent during 45 hours.

46: Workweeks of wartime 45 and 47 hours and postwar 40 hours, individual wage incentives; light, operator-paced operations in machine-stripping of tobacco leaves; women.

The operation of machine-stripping tobacco leaves in a cigar manufacturing plant was described in case study 43. Work was entirely operator-paced, light, rhythmic, monotonous, and repetitive. Coordination of both hands and feet was required in running the machine. Work was continuous and demanded constant visual attention. The pace of production was very fast in this shop.

Working conditions.—Humidity was kept high and temperature at a moderate level for proper handling of tobacco. Although ventilation was good, a strong odor of tobacco and ammonia pervaded the shop. Lighting was adequate and noise of medium volume. Facilities for the workers' comfort were strictly functional, restrooms often unattractive and even unsanitary. Smoking was forbidden in the plant.

Exposure to strong odors, the warmth, and the high humidity, resulted in frequent headaches and nausea. Work injuries consisted mainly of minor cuts on hands and fingers. First-aid facilities were adequate for the nonhazardous nature of this work.

Wage incentives.—Wages were paid at piece rates. As a measure of quality control, a ceiling was placed on earnings. Occasionally, an efficient operator reached her daily quota before the expiration of scheduled daily hours.

permitting her to go home early. As a rule, however, workers could not reach the ceiling on earnings without working a full day.

Hourly schedules.—The survey followed the performance of 24 women operating stripping machines. The period selected for study extended from October 1943 to March 1946. During the war, this period included a 45-hour workweek of 5 days at 9 hours per day, which was followed by a 47-hour week, and finally, by one of 46½ hours—with daily hours ranging from 9 to 9½. After the war, the performance during a 40-hour week could be studied, with daily hours reduced to 8. All schedule changes were obtained by changing daily hours without altering the pattern of a 5-day week.

FINDINGS OF STUDY

The 45-hour week vs. *47-hour week.*—When hours were increased from 45 to 47 per week, efficiency remained fairly constant, actually rising by an average of 0.7 percent, while the average percentage of time lost because of absenteeism dropped from 4.1 to 3.3. The slight improvement in performance resulted in an output rise of 6 percent as compared to an hourly increase of 4.4 percent. In other words, about 2¾ hours of additional output were obtained when 2 hours were added to the 45-hour week.

The subsequent 46½-hour workweek represented a period of a concerted drive by management to step up the production pace in an effort to offset the exodus of workers to more remunerative war industries at a time when replacements were difficult to obtain. This drive resulted in raising efficiency 3.1 percent above the level maintained during the preceding 47-hour week. The percentage of scheduled time lost due to absenteeism increased slightly, the absence rate rising from 3.3 percent to 4.6 percent. The combined effect of these two factors was to increase total weekly output fractionally (0.4 percent) although hours had been reduced by 1.1 percent. On the whole, the change of ½ hour in the weekly schedule had little effect.

The postwar 40-hour week.—The postwar reduction of the workweek to 40 hours resulted in a sharp and steady decline in efficiency during the first few months immediately after the war. When workers had settled down to normal peacetime production, the efficiency level had risen 1.1 percent above the level obtained during the preceding period of stepped-up production. Attendance also improved, the average rate of absenteeism dropping from the earlier level of 4.6 percent to 3.2 percent. The combined effect of improved efficiency and reduced absenteeism was reflected in a decline in total weekly output by only 11.7 percent as against a decrease in hours of 14 percent. Consequently, the elimination of 6½ hours from the 46½-hour week resulted in a loss of only 5½ hours of output.

47: *Workweeks of wartime 44½ and 46½ hours and postwar 40 hours, individual wage incentives; light, operator-paced operations in hand-stripping of tobacco leaves; women.*

The process of hand-stripping tobacco leaves is similar to that of machine-stripping (see case study 43). While seated at a knee-high work bench, the operator opens a wrinkled tobacco leaf, places it on the bench, holds the end of the tobacco leaf with one hand and, with a quick and even motion, tears the stem from the entire length of the leaf with the other hand. The cycle of the operation is completed when the two stripped halves of the leaf are stacked on the work bench.

Work was entirely operator-paced, light, rhythmic, monotonous and repetitive. The extreme boredom of the operation was enhanced by the lack of any machine noise and the minimum of conversation because of workers' preoccupation in their jobs. The work required dexterity of both hands and demanded continuous visual attention. The work pace was extremely fast.

Except for the absence of noise in hand-stripping, working conditions were the same as those described in case study 46.

The piece-rate incentive system was described in case study 46.

Hourly schedules.—The performance of 10 women, engaged in hand-stripping tobacco leaves, was followed from September 1943 to March 1946. During the entire period, only one shift was in operation, working 5 days per week.

Work schedules above 40 hours per week were obtained by adding ½ to 1½ hours to the 8-hour day while retaining the 5-day week. The 3 schedules observed were wartime workweeks of 44½ and 46½ hours, and a postwar week of 40 hours.

FINDINGS OF STUDY

The 44½-hour week vs. *46½ hours.*—The rise in the wartime schedule from 44½ hours a week to 46½ brought about a 4-percent drop in efficiency, while the rate of absenteeism remained at 2.8 percent in both periods. As a consequence, output increased only by 0.2 percent although hours had been increased by 4.5 percent. Thus, the 2 hours added to the 44½-hour week resulted in practically no increase in output.

When the labor shortage became acute and workers were leaving to go into better-paying war industries, management began a drive for more production to offset losses in personnel. Although weekly hours remained unchanged at 46½, workers' response to the production drive was reflected in a somewhat higher level of efficiency, the general level being 3 percent higher than in the preceding period of the same schedule of hours. Absenteeism losses remained almost unchanged, rising slightly from 2.8 percent to 3.1 percent. The campaign for more production succeeded in raising the output rate by 2.8 percent above the previous level for the same schedule. It succeeded in adding the output of 1⅓ hours to the weekly output total without an increase in working hours.

The postwar 40-hour week.—A postwar schedule of 40 hours per week was obtained by decreasing daily hours to 8. The immediate effect of this cut-back was a sharp rise in efficiency which reached a level 6.7 percent above that of the preceding 46½-hour week. Concurrently, absenteeism rose to 5.4 percent. Total output reflected the increase in the efficiency rate by declining less than hours. The 14-percent drop in the hours schedule was accompanied by a 10.5-percent decrease in output—a loss of a little more than 4¾ output hours for a reduction of 6½ scheduled hours from the 46½-hour week. Stated differently, the 6½ hours above the 40-hour level had resulted in 4¾ hours of output, and this during an intensive campaign for higher production.

48: Workweeks of wartime 44 and 46½ hours and postwar 40 hours, individual wage incentives; light, operator-paced operations in hand-stripping of tobacco leaves; women.

The process of stripping the stem from a tobacco leaf by hand was described in case study 47, which dealt with an identical operation done in another plant located in the same area. With the exception of the data cited below, the conditions enumerated in the preceding case study, 47, also apply to this case.

Temperature and humidity were more moderate in this department than in the one described in the preceding case study, as the only operation done in this plant was hand-stripping which does not require as high a degree of humidity as other cigar-making operations.

Hourly schedules.—The selected period extended from September 1943 to March 1946 and included weekly work schedules of 44 and 46½ hours during the war, and 40 hours after the war. The workweek consisted of 5 days for all periods. Changes in total weekly hours were obtained by changes in daily hours between 8 and 9½. A sample of 21 women, engaged in hand-stripping tobacco leaves, was selected for the survey.

FINDINGS OF STUDY

The 44-hour week vs. *46½ hours.*—The increase in the wartime schedule from 44 to 46½ hours per week resulted in a slightly poorer performance: efficiency decreased by almost 1 percent and absenteeism losses increased slightly, from the former rate of 2.5 percent to 2.9 percent. As a consequence, output did not increase in the same proportion as hours, rising only 4.2 percent while hours had increased by 5.7 percent. Expressed in terms of hours, 1.8 additional output hours were obtained by lengthening the 44-hour week by 2½ hours.

The drain on the wartime reservoir of available manpower, coupled with the exodus of workers from nonwar to war industries, induced management to step up individual production efforts. During this period, weekly hours remained unchanged from the preceding period—46½ hours per week. As a result of management's drive for more hourly output without increasing the work force or working hours, efficiency increased by almost 2 percent above the previous level for the same number of weekly hours. The decrease in the absence rate from 2.9 percent to 2.1 percent was negligible. The net effect of the production drive was a 2.7-percent rise in total weekly output, or a gain of 1½ output hours over the preceding period of the same weekly schedule of 46½ hours.

The postwar 40-hour week.—In the months immediately following the end of the war, the efficiency trend followed a sharp and continuous decline although the workweek had been reduced to 40 hours. After 4 months, however, the downward trend of efficiency was reversed and a continued rise of efficiency was in evidence up to the end of the selected period. Although efficiency may have increased still further during subsequent months at 40 hours, the last available measure of efficiency—2.7 percent above the preceding level of 46½ hours—represents at least the minimum of average performance to be expected for this level of hours. Absenteeism losses increased somewhat, rising from the previous rate of 2.1 percent to a level of 3.1 percent. Against a 14-percent decrease in hours (from 46½ to 40 hours a week) the output level decreased only 12.4 percent. Expressed in terms of hours, a loss of 5¾ output hours resulted from a 6½-hour reduction in the weekly schedule.

49: Workweeks of prewar 40 and 44 hours, wartime 46, 45, and 47½ hours, and postwar 40 hours, individual wage incentives; light, operator-paced operations in machine-stripping of tobacco leaves; women.

The process of stripping tobacco leaves by machine in a cigar-manufacturing plant was described in case study 43. General plant conditions were the same as those enumerated in case study 46, except for the differences cited below.

Hourly schedules.—The performance of 13 female operators of tobacco-stripping machines, selected for this survey, could be followed for a period extending from June 1941 to April 1946. The scope of the survey included, therefore, prewar as well as war and postwar periods of different work schedules. The standard workweek consisted of 5 days during the entire period surveyed. By increasing daily hours from 8 up to 9½, different levels of weekly hours were obtained.

FINDINGS OF STUDY

Prewar 40 and 44 hours.—Lengthening the 40-hour week by 4 hours prior to the war resulted in an efficiency drop of 3 percent. The percentage of scheduled time lost due to absenteeism was low for both periods, with absence rates of 1.9 percent and 0.8 percent for the 40- and 44-hour weeks respectively. Dut to the decrease in hourly output, the net gain in total weekly output was only 7.9 percent although hours had been increased by 10 percent. Slightly over 3 additional output hours were obtained by the addition of 4 hours to the 40-hour week.

Wartime 46 hours.—Although the first wartime schedule studied was 2 hours longer than the previous 44-hour week, hourly output increased sharply, by 13.8 percent, in spite of the fact that this plant was not engaged in war production. This increase must be attributed to a large degree to management's success in stepping up the pace of production to offset the labor shortage, which acutely affected nonwar industries. Absenteeism losses increased from 0.8 percent under the 44-hour week to 3.7 percent, indicating that the production drive was not as effective in keeping down absenteeism losses as it was in stimulating workers to greater efforts while at work. The increase in hourly output, however, was sufficient to step up output sharply by 15.6 percent while hours were increased by 4.5 percent over the preceding 44-hour week. Consequently, total weekly output was increased by 6¾ output hours with only 2 hours added to the schedule.

Wartime 45 hours.—The subsequent 45-hour period represented a 1-hour reduction from the previous 46-hour week. Efficiency increased by 5.8 percent during this slightly shorter schedule, primarily due to the continued pressure to increase output per man-hour. Absenteeism losses, however, continued to increase slightly, the rate averaging 5.1 percent. As a result of the increased efficiency, total weekly output actually increased by 2 percent while hours were decreased by 1 hour. Thus, the workers were producing almost one more hour of output for one hour less work per week.

Wartime 47½ hours.—During the final wartime schedule studied, weekly hours had been raised from 45 to 47½. Approximately the same level of hourly output was maintained as during the previous 45-hour week. Efficiency actually rose by almost 1 percent. Pressure for added output had apparently reached the point at which efficiency began to stabilize. The absenteeism losses dropped to 4.3 percent from the preceding level of 5.1 percent. The lengthening of the workweek from 45 to 47½ hours represented a 5.6-percent rise in hours as against a 7.2-percent increase in total weekly output, reflecting the combined effects of a slight increase in efficiency and a somewhat improved work attendance. In effect, the 47½-hour week represented a net gain of 3½ output hours for 2½ scheduled hours added to the 45-hour week.

Postwar 40 hours.—The months immediately following the end of the war were excluded from the study of the 40-hour postwar week as they represented an unsettled period of work performance. Although the workers were not engaged in war production, they had been under pressure to accelerate their production pace during the war. With the cessation of hostilities, a reaction set in as evidenced by a temporary slowing up of the work pace. Toward the end of the period observed, efficiency seemed to stabilize at a level about 1.3 percent higher than that obtained for the preceding 47½-hour week. Significantly, the postwar level of efficiency was 19.3 percent better than that experienced before the war for the same 40-hour workweek. The accelerated production pace, acquired during the war, had seemingly carried over into the postwar period.

Absenteeism losses were not reduced by the shortened postwar schedule, the level being 5.5 percent as compared with 4.3 percent for 47½ hours and 1.9 percent for the prewar 40-hour week. The slight increase of 1.3 percent in efficiency over the 47½-hour schedule was offset by the rise in scheduled time lost due to absenteeism, so that approximately 7½ output hours were lost when 7½ scheduled hours were eliminated from the 47½-hour week. Compared with the prewar 40-hour level, the postwar schedule of the same number of hours resulted in 15.1 percent more output each week, representing a gain of 6⅓ output hours over the prewar 40-hour week.

50: Workweeks of 40, 48, and 53 hours for women, individual wage incentives; light, operator-paced packing operations.

This study was conducted in a candle-manufacturing plant. The operation surveyed, hand-packing of candles, was light and required little special skill or training. The workers sat at long tables and placed a prescribed number of candles into market containers. The work pace was medium-fast, operator-controlled, and afforded very little idle time to the operators.

Working conditions.—Working conditions were good. The large work areas were free from dust, fumes, and noise. A modern ventilating system removed wax and acid odors: large windows and a complete fluorescent installation provided excellent light. Restroom facilities were sanitary and adequate. There were no eating facilities in the plant; employees brought lunches from home and ate at their work stations. Minor injuries were treated by an employee trained in first aid. There were no organized rest periods.

The work force.—Twenty-four female packers were selected for study. Their ages ranged from 25 to 65 years, with the largest concentration around 40 years. One-third of the work force had been in the company's employ for more than 10 years.

Wage incentives.—The workers operated under an individual bonus incentive system. They were guaranteed a minimum hourly base rate and received a premium for units produced in excess of a fixed quota.

Hourly schedules.—The period from April 1941 through December 1944 provided three levels of scheduled hours for study. During this period weekly hours changed from 40 (5 days at 8 hours) to 48 (5 days at 9 hours and a 3-hour Saturday) and subsequently to 53 (5 days at 9½ hours and a 5½-hour Saturday).

FINDINGS OF STUDY

Workweeks of 40 and 48 hours.—Efficiency was highest during the 40-hour week, with 5 days at 8 hours. When daily hours were increased from 8 to 9 and a 3-hour Saturday was added to the schedule, efficiency dropped 10.3 percent.

The percentage of time lost due to absenteeism almost doubled during the longer workweek. It increased from a level of 4.5 percent at 40 hours to 8.3 percent at 48 hours.

In terms of total output, the increase of 20 percent in scheduled hours resulted in an increase in output of only 3.3 percent. Thus, given the same hourly efficiency and absenteeism rate which prevailed during the shorter workweek, the additional output gained during the 48-hour week could have been obtained by increasing scheduled weekly hours from 40 to about 42.

Workweeks of 48 and 53 hours.—When weekly hours were raised from 48 to 53 by increasing daily hours to 9½ and lengthening the Saturday schedule to 5½ hours, efficiency rose slightly but was still 9.2 percent below the level which obtained during the 40-hour week.

The small improvement in efficiency, 1.3 percent, might indicate that the

Saturday schedule of 3 hours during the 48-hour week was too short. It is permissable to assume that the same amount of time was necessary to reach an operational level of efficiency during the 5½-hour as during the 3-hour Saturday. Consequently, the longer Saturday afforded an additional 2½ hours of production at the regular work pace.

Absenteeism was highest during the 53-hour week. The percentage of time lost due to absenteeism rose steadily from 4.5 percent at 40 hours to 8.3 percent at 48 hours, and to 9.4 percent at 53 hours.

The 10.4 percent increase in hours above 48 was accompanied by a 10.3 percent gain in total weekly output. The slight improvement in efficiency during the 53-hour week was offset by increased absenteeism with the result that about 5 hours of additional output were obtained for the 5 hours added to the 48-hour week.

Compared with the 40-hour week, the 53-hour week represented a 32.5-percent increase in hours. Total output, however, rose only 13.9 percent. Thus, although 13 hours were added to the schedule, only about 5½ hours of additional output were achieved.

51: Workweeks of 40 hours, 44½ hours, 53 hours, and 48 hours, group wage incentives; medium, operator-paced foundry operations; men.

This study was conducted in a small nonferrous metal foundry. The operations included those usually performed in a foundry—coremaking, squeezer and floor-mold casting, shake-out, and chipping. The work pace was steady and unhurried, and controlled by the operator. The physical demands of the work were medium. The castings ranged in weight from 20 to 200 pounds.

Working conditions.—Working conditions in this plant compared favorably with those observed in the average foundry. Unpleasant conditions, incidental to foundry operations, such as excessive heat, dust, and noise, existed in this plant only to a moderate degree. Dust collectors near sandblast machines were effective in reducing the dust content in the air. The high ceiling, with opening skylights, large window space on two walls and large openings in the third side of the building made for relatively comfortable temperatures and good ventilation. Noise was sufficiently low to permit music, played in the plant, to be audible in the foundry.

Aisles were wide and generally unobstructed. Work areas were clean and uncrowded. A complete fluorescent installation provided excellent lighting. Restroom and comfort facilities, including showers, were sanitary and adequate in number. Good, inexpensive lunches were served in the plant cafeteria.

Safety clothing and appliances were supplied by the company. Two nurses treated injuries in a well-equipped first-aid room.

Rest pauses, while not formally organized, were taken when the work flow permitted.

The work force.—The plant was located in a highly developed industrial area which provided an ample supply of stable, skilled, and experienced workers. As a result, when the foundry personnel was increased from 12 workers in 1940 to 56 in 1943, the effects on the quality of the labor force were insignificant.

The foundry workers were men whose average age was approximately 45 years. Of the original group of 12 workers, the majority were in the company's employ for more than 15 years. Management was of the opinion that the workers added to the labor force compared well with the old timers.

Wage incentives.—A group bonus system was in operation in the foundry. Workers were paid a guaranteed hourly rate and a premium based on the total foundry output. The hourly base pay rates amounted to $1.05 for coremakers and floor-mold operators and ranged from $.65 to $.85 for laborers.

Hourly schedules.—The periods selected for study permit comparison of four stabilized hourly levels. During the period from January through August 1940, the foundry operated on a 40-hour schedule of 5 days at 8 hours. The next period, extending from June through November 1941, was marked by the addition of 4.5 hours on Saturday, thus increasing the workweek to 44.5 hours. In June 1942, 6 months after our entry into the war, the workweek was increased to 53 hours with 5 days at 9 hours and Saturday at 8 hours. This schedule was maintained through November 1942. From January through May 1943, a reduced schedule of 48 hours, or 6 days at 8 hours, was worked.

FINDINGS OF STUDY

The 40-hour week vs. *44½ hours.*—When the level of hours was raised from 40 to 44.5 by adding Saturday at 4.5 hours to the workweek, efficiency dropped 1.9 percent.

Absenteeism increased from 1.2 percent to 4.2 percent.

Output increased to a level 5.9 percent above that which had prevailed during the shorter hours. This increase was effected by lengthening scheduled hours 11.3 percent. Stated differently, 2⅓ additional hours of production were obtained for the additional 4½ hours worked.

The 53-hour week.—The conversion to war production apparently acted as a strong stimulus to improved efficiency. When hours were increased from 44.5 to 53 per week, efficiency rose 5.3 percent.

The time lost because of absenteeism increased only slightly, from 4.2 percent to 5.5 percent.

The combined effects of a marked increase in efficiency and a small increase in absenteeism resulted in an output level appreciably higher than that of the prewar 44.5-hour schedule. Total output increased 23.6 percent during the wartime longer workweek. In comparison, hours had been lengthened 19 percent. In other words, an additional 10.6 hours of production were obtained when 8.5 hours were added to the schedule.

The 48-hour week.—After a period of 5 months on the 53-hour schedule, weekly hours were cut back to 48. The reduction in hours was accompanied by an increase in efficiency of 8.8 percent. The percentage of time lost, however, rose from 5.5 percent to 7 percent.

A decrease in scheduled hours of 9.4 percent resulted in a decrease in output of only 3 percent. In terms of hours, only 1.6 hours of output were lost when the workweek was reduced by 5 hours, from 53 to 48.

52: Intermittent schedules ranging from 24 to 48 hours a week for women, individual wage incentives; light, operator-paced machine-sewing operations.

The operations surveyed consisted of the various sewing operations entailed in the production of men's trousers. All operations were performed on electric-powered sewing machines and were entirely operator-paced. The pace was fast and the work required great manual dexterity. The speed and character of the operations were such that they induced a nervous rather than a physical strain.

Working conditions.—The plant facilities can be characterized as functional. No special effort was made to make the plant attractive or comfortable. The atmosphere was free from dust, smoke, or fumes. Summer and winter temperatures were moderate. Ventilation was good. The lighting installation, although not modern, provided adequate illumination. Noise was moderate. Aisles and work areas were usually unobstructed and were adequate in size. There was no cafeteria. There were no organized rest periods; pauses were taken when the work flow permitted.

The work force.—The plant was located in a small, rural, farming community. Most of the 96 female operators, whose performance was surveyed, had outside interests such as farming and gardening. During the planting and harvesting seasons, their tendency was to hold working hours down to an absolute minimum so as to allow them time for these outside activities. The workers ranged in age from 19 to 70 years, with a strong concentration in the late thirties. Most of them had high school education, were self-reliant, and skeptical of anything that smacked of company patronage.

Wage incentives.—All workers operated under an individual piecework system with a minimum guarantee of 40 cents per hour. The piece rates, based on company cost experience rather than time study, were set through negotiation between management and the labor organization representing the employees. Earnings ranged from 60 cents per hour to $1.25 and averaged about 80 cents for the entire group.

Hourly schedules.—During the entire 20-month period surveyed only one shift was scheduled. Hours nominally were from 7:45 a.m. to 4:45 p.m. including 1 hour for lunch. Actual hours worked by individual operators, however, varied greatly: while some worked as few as 24 or 30 hours per week, others—in other sewing operations—worked 48 hours. Schedules varied because of shortages of materials, the presence or absence of workers in key operations (such as pocket makers), and the pressures and delays involved in the carrying out of military contracts.

As a result, there were no fixed and uniform patterns of daily and weekly hours. Because of the fast pace of the work, however, it was believed that the effects of long weekly hours would be felt quickly—particularly so because the processes were of a routine, repetitive, mass-production character. The findings reflect the experiences of employees who worked a specified number of weekly hours at any time during the period surveyed. Thus, the output experiences of all operators who worked 48 hours, for example, were grouped together regardless of the particular month during which that schedule was worked.

FINDINGS OF STUDY

Efficiency.—Analysis of the experience of the 96 female operators indicates that the highest efficiency levels were obtained during a workweek of 24 or 28 hours. Thereafter the average hourly rate of output dropped as hours increased, although it remained fairly stable at the 32-, 36-, and 40-hour levels. Efficiency was lowest at 48 hours a week. A comparison of the efficiency level at 24 hours with that achieved during the 48-hour week shows an efficiency decline of 7.1 percent. In comparison with the 40-hour week, efficiency during the 48-hour workweek was about 4 percent poorer.

Absenteeism.—Because hours of individual workers varied widely, it was not possible to determine actual absenteeism rates measuring the percentage of scheduled hours lost. It was possible, however, to determine relative rates for each of the weekly schedules during which employees lost only part of a week and returned to work during the same week. (The computed rates understate the actual amount of absenteeism loss because of the exclusion of absences lasting an entire week.)

As hours increased from 24 to 40 a week, the relative absenteeism rate increased steadily, reaching a maximum of 6.3 percent during the 40-hour workweek. Thereafter absenteeism decreased sharply. At 44 hours it was 3.3 percent and at 48 hours, 1.2 percent. Apparently workers were anxious to earn the time-and-a-half bonus pay for overtime.

Output.—Generally, weekly output kept pace with increasing hours. As hours went up, weekly output went up proportionately. The higher efficiencies during the shorter workweeks, together with low absenteeism losses, resulted in an output situation averaging about 4.5 percent higher than that which obtained during the 40-hour week. When hours rose above 40, total output increased only about 2 percent more than did hours.

96 women on machine-sewing operations

Item	Scheduled hours						
	24.0	28.0	32.0	36.0	40.0	44.0	48.0
Index of scheduled hours	60.0	70.0	80.0	90.0	100.0	110.0	120.0
Index of efficiency	103.7	103.6	102.6	100.8	100.0	98.9	96.3
Relative percentage of absenteeism [1]	2.2	3.3	2.6	4.0	6.3	3.3	1.2
Index of output	64.8	74.8	85.4	93.0	100.0	112.2	122.0

[1] Does not include full-week absences.

53: *Intermittent schedules ranging from 20 to 55 hours a week for men, individual wage incentives; medium-heavy, operator-paced pressing of men's trousers.*

The performance of 13 pressers was surveyed in the same plant which furnished the material for case study 52. Pressing, in this plant, was done by machine and foot-pedal-controlled hand irons and was entirely man-paced. The piecework incentive system and interdependence of all operations were conducive to a fast pace. Compared with other operations in the clothing industry, pressing appeared to be the most physically demanding.

Working conditions.—The atmosphere near the pressing machine was hot and often humid. Working conditions, otherwise, were similar to those described in the previous case study.

The work force.—Hourly earnings of the selected employees ranged from 85 cents to $1.30 and averaged $1.10. Most of the men owned and worked on small farms and vineyards. The supplementary income derived from this work served to make for a certain amount of independence in the workers' relations with the company. This manifested itself in several ways. It was almost impossible, for example, to schedule longer hours during the planting and harvesting seasons. The absence curve generally rose, according to management, during the hunting and fishing seasons. The introduction of new procedures often met with resistance on the part of workers who were skeptical of new-fangled ideas. In short, labor-management relations, while cordial, were marked by the particular influences found in a rural, farming community.

Hourly schedules.—There were no fixed and uniform schedules of daily and weekly hours. As was indicated in the previous study, hourly schedules were determined by the uneven work flow. Consequently, working hours frequently varied from week to week and differed among pressers during the same week. During the 20-month period surveyed the workweek for pressers ranged from 20 to 55 hours. The methods used to determine levels of efficiency and relative absenteeism rates during the various weekly schedules are the same as those described in case study 52.

FINDINGS OF STUDY

Efficiency was highest during a workweek of 24 or 28 hours. Thereafter hourly efficiency decreased as hours increased but remained fairly stable at 32, 36, and 40 hours. After 40 hours, however, efficiency dropped more sharply. The 55-hour week was about 6 percent poorer in average hourly output than the 40-hour week and about 9 percent poorer than the 24-hour week. It is also significant that hours below 24 per week were not as efficient as the longer hours and were on a par with the efficiency achieved during the 48-hour week.

Absenteeism.—There was no absenteeism during the 24-hour workweek. At 36 hours, it was 3.5 percent and at 40 hours it rose to 7.8 percent. But at 44 hours it was only 1.9 percent; at 48 hours, 0 percent; and at 55 hours, 1.2

percent. Apparently the incentive of overtime pay was responsible for the improvement in attendance during the longer workweeks. It is noteworthy that when hours fell below 24 per week, the percentage of time lost due to absenteeism rose to 4.4 percent.

Output.—Weekly output generally kept pace with increased hours, the decrease in absenteeism offsetting the decrease in efficiency. The output level was relatively as good at 44 and 48 hours as at 24 and 32 hours.

These conclusions are based on erratic hourly schedules. If the long hours had been worked steadily rather than intermittently, the value of overtime pay as an incentive to good attendance might have become less effective as fatigue accumulated. Furthermore, the downward trend in efficiency indicates that, had long hourly schedules been maintained for an appreciable length of time, the level of output would have been considerably lowered.

13 men on pressing men's trousers

Item	Scheduled hours								
	20.0	24.0	28.0	32.0	36.0	40.0	44.0	48.0	55.0
Index of scheduled hours	50.0	60.0	70.0	80.0	90.0	100.0	110.0	120.0	137.5
Index of efficiency	97.8	103.2	101.4	100.1	99.6	100.0	98.8	97.0	93.6
Percentage of absenteeism [1]	4.4	0	1.2	1.9	3.5	7.8	1.9	0	1.2
Index of output	52.0	67.3	76.0	85.3	94.0	100.0	115.8	126.4	137.1

[1] Does not include full-week absences.

54: Intermittent schedules ranging from 28 to 52 hours a week for women, individual wage incentives; light, operator-paced sewing operations.

Machine- and hand-sewing operations were surveyed in a plant producing military and civilian overcoats during the war. The weight of the material handled ranged from 4 to 6 pounds. All work was performed under an individual piece-rate incentive system. The work pace was fast and controlled by the operator.

Working conditions.—The plant was located in a residential area of an industrial city and belonged to the same company which owned the rural plant described in case studies 52 and 53. Plant facilities were fair. Lighting and ventilation were poor. Work areas and aisles were often crowded and obstructed. There was no lunchroom. Comfort facilities met only minimum requirements. There was little dust, and noise was moderate. There were no organized rest periods.

The work force.—The performance of 32 experienced female operators was surveyed. Their ages ranged between 45 and 55 years. The great majority of them were married and had numerous home duties to perform outside of working hours. The average earnings of the group was about 90 cents per hour.

Hourly schedules.—As was indicated in the previous studies conducted in clothing plants, no fixed daily or weekly schedules were worked. While the nominal workday was 8 hours and the workweek 40 hours, this schedule was constantly revised depending upon the volume of work at hand and the work flow. As a result, schedules ranged from 28 to 52 hours a week during the 20-month period surveyed.

The methods used to compute levels of efficiency and relative absenteeism rates were the same as those described in case study 52.

FINDINGS OF STUDY

Efficiency.—An analysis of the performance of the selected group reveals a rise in efficiency of 6.3 percent as hours were increased from 28 to 40 a week. The improvement in efficiency as hours approached 40 a week indicates the added hours probably caused no fatigue and that actually the workers were able to utilize the added worktime to increase their earnings by increasing their hourly output.

The rising trend in efficiency, however, was reversed when the workweek extended beyond 40 hours. At 44 hours, efficiency dropped about 1 percent and at 52 hours about 3 percent from the efficiency level at 40 hours.

Absenteeism.—The percentage of time lost due to absenteeism remained fairly stable during the work schedules ranging between 28 and 40 hours a week. The relative percentages were 5 percent at 28 hours; 5.2 percent at 32 hours; 3.1 percent at 36 hours; and 4.8 percent at 40 hours.

As was true in case study 52, attendance improved when hours were increased beyond 40 a week. During the 44-hour workweek, the relative absenteeism rate was 2.3 percent. At 52 hours, it dropped to 0.6 percent. The increased attendance during the longer workweeks can be attributed to the workers' desire to remain on the job during those weeks when the extra—or overtime—hours were worked, in order to take advantage of the added overtime pay. The effect of a sustained period of long hours on absenteeism is not demonstrated in this study. It must be remembered that workweeks of 44 hours and more were scheduled only intermittently. It is likely, as previous studies have shown, that absenteeism would have increased had long hours been worked continuously for an extended period.

Output.—When weekly hours dropped from 40 to 28, the proportionate drop in total weekly output was 4 percent greater. At 36 hours, output kept pace with the change in hours. When hours were raised from 40 to 44, output increased by 2 percent more than did hours; at 48 hours output increased 1.9 percent more than did hours; and at 52 hours output increased 0.5 percent more than did hours. Thus, the drop in absenteeism offset the drop in effi-

32 women on sewing operations

Item	Scheduled hours						
	28.0	32.0	36.0	40.0	44.0	48.0	52.0
Index of scheduled hours	70.0	80.0	90.0	100.0	110.0	120.0	130.0
Index of efficiency	94.1	95.2	100.0	100.0	99.1	98.3	96.0
Relative percentage of absenteeism[1]	5.0	5.2	3.1	4.8	2.3	1.7	.6
Index of output	65.8	76.0	91.6	100.0	112.0	121.9	130.5

[1] Does not include full-week absences.

ciency, but at a decreasing rate with each additional increase in hours above 40. The effects of fatigue are indicated, though perhaps to a lesser extent than would be the case if the schedules of long hours had been worked continuously rather than sporadically.

55: Intermittent schedules ranging from 28 to 52 hours a week for men, individual wage incentives; medium-heavy, operator-paced pressing of overcoats.

The performance of 22 hand- and machine- pressers was surveyed in the same plant which furnished the material for case study 54. A piece-rate system of payment was in effect. The work required long experience and was highly skilled. The physical effort required of the workers ranged from light to medium. With the exception of the higher temperatures near the pressing machines in this department, working conditions were similar to those described in the previous case study, 54. The nature of the operation made for a steady and deliberate rather than a fast pace.

The work force.—The men selected were urban workers whose average earnings were about $1.13 an hour. They ranged in age from 35 to as high as 71 years, with the highest concentration around 55 years. The selected group consisted of experienced workers who had spent from 15 to 50 years in the industry.

FINDINGS OF STUDY

Efficiency during irregular work schedules.—During the 20-month period surveyed, the workweek fluctuated between 28 and 52 hours. The methods used to compute efficiency levels and relative rates of absenteeism were the same as those described in case study 52.

A comparison of the performance of the selected workers during each schedule of hours reveals a steadily rising trend of efficiency as weekly hours were increased from 28 to 40. The level of efficiency during the 40-hour workweek was 4.7 percent higher than that of the 28-hour workweek and 4.1 percent higher than that of the 32-hour workweek. It would appear that when assured of a full week of work, the selected workers increased their hourly output.

When the workweek was increased beyond 40 hours, the upward trend in efficiency was arrested and hourly output leveled off. Efficiencies during the 44-, 48-, and 52-hour workweeks were approximately the same as that achieved during the 40-hour workweek.

The failure of efficiency to drop when hours were extended to 52 a week runs counter to the experiences noted in the previous clothing industry studies. In this connection, it should be recalled that (1) The work pace on this operation was deliberate rather than fast: (2) the workers were old-timers of a relatively high average age who had well-established ideas of what constituted a day's work: and (3) extended schedules of 44 hours and more per week were worked only sporadically rather than continuously.

Absenteeism.—Attendance remained generally stable during the entire 20-month survey period. The relative rates of absenteeism were 1.2 percent during the 28-hour workweek, 1.7 percent during the 40-hour workweek, and 1.2 percent during the 52-hour week. Once more, the comparatively low rates of absenteeism during long hours of work might be attributed to the workers' desire to earn the time-and-a-half pay for overtime. It is doubtful, however, in light of the experience observed in other industries, that the overtime pay would act as an incentive to good attendance, if long hours were worked continuously for an extended period rather than intermittently.

Output.—Output increased in almost exact proportion to the number of hours added to the schedules of 36 and more hours a week. When weekly hours dropped below 36, the approximate 4-percent drop in efficiency resulted in a comparable decrease in total output. The factors advanced earlier as possibly influencing the efficiency and attendance experiences of the group are also applicable in the analysis of its output experience.

22 men on pressing overcoats

Item	Scheduled hours						
	28.0	32.0	36.0	40.0	44.0	48.0	52.0
Index of scheduled hours	70.0	80.0	90.0	100.0	110.0	120.0	130.0
Index of efficiency	95.3	95.9	99.4	100.0	99.4	100.5	99.3
Relative percentage of absenteeism[1]	1.2	3.3	1.5	1.7	.8	1.7	1.2
Index of output	67.0	75.6	89.8	100.0	110.4	120.8	130.1

[1] Does not include full-week absences.

56: Intermittent schedules ranging from 28 to 52 hours a week for women, individual wage incentives; light, operator-paced sewing operations.

This plant manufactured military and civilian jackets during the war. The work surveyed was about evenly divided between the operation of electric-powered sewing machines and hand sewing. As in case study 55, the operations in this plant required highly skilled and experienced workers. The production pace was importantly influenced by the strict quality control maintained by management. Although a piece-rate incentive system was in effect, the emphasis was on quality rather than on volume of output and made for a steady and unhurried work pace.

Working conditions.—Working conditions compared favorably with those described in the previous case study. Lighting and ventilation were good. Work areas and aisles were adequate in size and generally unobstructed. Noise was moderate. Comfort facilities were adequate. There was no cafeteria. Rest pauses were taken by individual workers when the work flow permitted.

The work force.—The performance of 123 female workers was surveyed for a period of 20 months. Most of the selected workers were between 45 and 55 years old and had worked from 5 to 25 years in the industry. They were characterized by management as experienced, stable workers who were dependent upon their jobs for their livelihood.

Hourly schedules.—This plant, like the clothing plants previously studied, could not maintain fixed daily and weekly schedules. The pressures of war contracts, the dislocations caused by material shortages, style changes, and the absence of key workers served to make the work schedules extremely flexible. Weekly hours ranged from 28 to 52 during the survey period. The methods used to compute levels of efficiency and relative rates of absenteeism were the same as those described in case study 52.

FINDINGS OF STUDY

Efficiency.—Analysis of the workers' performance indicates a small, gradual rise in efficiency as weekly hours were increased from 28 to 40. Hourly output during the 40-hour week was 2.8 percent higher than that achieved during the 28-hour week. When weekly hours were extended to 44, efficiency again rose slightly, less than 1 percent, and remained at that level during the 48- and 52-hour workweeks. Apparently, the workers, operating at a relatively slow pace, were able to maintain and even improve their hourly output during the intermittently scheduled longer workweeks.

Absenteeism.—The rates of time lost due to absenteeism reached their highest points, 6.8 percent at 32 hours and 6.1 percent at 40 hours. When weekly hours were lengthened beyond 40, the absenteeism rates declined sharply, dropping to 2.1 percent during the 44-hour week and 1.1 percent during the 52-hour week. The desire to earn the overtime bonus apparently acted as an incentive toward good attendance during the 44-hour and longer workweeks. But, again, the longer work schedules were worked only intermittently and the results achieved during these longer hours may not be indicative of what might have happened if they had been worked steadily over a long period of time.

Output.—Improved attendance and the relatively small increase in efficiency during the 44- to 52-hour workweeks resulted in a better total output situation than that which obtained during the shorter workweeks. While the 28-hour week represented a drop of 30 percent in hours from the 40-hour level, total output was 31.5 percent lower. During the 32-hour week, a 20-percent decrease in hours from the 40-hour level, total output was 23.4 percent lower. On the other hand, when hours rose 10 percent above the 40-hour level, output was 15.5 percent higher; when hours were increased by 30 percent (to 52) output increased 39.4 percent. The data indicate that the work pace was slow enough to permit the occasional scheduling of long workweeks without adversely affecting the performance of this group.

123 women on sewing operations

Item	Scheduled hours						
	28.0	32.0	36.0	40.0	44.0	48.0	52.0
Index of scheduled hours	70.0	80.0	90.0	100.0	110.0	120.0	130.0
Index of efficiency	97.3	97.7	98.5	100.0	100.6	100.8	100.7
Relative percentage of absenteeism [1]	5.5	6.8	3.1	6.1	2.1	1.8	1.1
Index of output	68.5	77.6	91.5	100.0	115.5	126.7	139.4

[1] Does not include full-week absences.

57: Intermittent schedules ranging from 28 to 52 hours a week for men; individual wage incentives; medium-heavy, operator-paced pressing of jackets.

The performance of 29 male workers doing hand- and machine-pressing operations was surveyed in the same plant which furnished the material for the previous case study. The operations were entirely man-paced and, as a consequence of the strict quality control maintained by management, relatively slow. Working conditions were similar to those described in case study 56. Most of the selected men ranged in age between 45 and 60 years. They were a stable group of urban workers who had spent from 20 to 35 years in the industry.

FINDINGS OF STUDY

Efficiency.—Analysis of the workers' performance during workweeks ranging from 28 to 52 hours shows an experience similar to that noted for the female workers in the plant. As weekly hours were increased from 28 to 40, efficiency rose about 2.1 percent. When the workweek was extended to 44 hours, efficiency rose less than 1 percent above the level achieved during the 40-hour week, and remained at that level during the 48- and 52-hour workweeks.

Absenteeism.—The rates of time lost due to absenteeism, although significantly lower, followed the same trend observed in the absenteeism rates of female workers in the previous study. The rates were: 3.1 percent at 28 hours; 3.6 percent at 32 hours; 1.4 percent at 36 hours; and 3 percent at 40 hours. Thereafter absenteeism decreased sharply, dropping to less than 1 percent during the 44- to 52-hour workweeks.

Output.—As a result of the better attendance and the slight rise in efficiency, total output was somewhat better during the 44- to 52-hour workweeks than during the shorter weekly schedules. At 28 and 32 hours, the decrease in total output was slightly greater (1.4 percent) than the corresponding decreases in hours from the 40-hour workweek. When hours rose above 40, the increase in total output was 3.1 percent greater at 44 hours and 4.3 percent greater at 52 hours than the corresponding hourly increases above the 40-hour workweek.

In conclusion, it must be pointed out that previous studies have shown that the value of overtime pay as an incentive to good attendance deteriorates quickly when long hours are worked continually for an extended period. The uncommon experience of improved attendance during workweeks ranging from 44 to 52 hours, observed in all groups surveyed in the clothing industry, might be attributed to the intermittent scheduling of the longer workweeks. It is likely that the absenteeism and efficiency trends would have been quite different had the long hours been worked steadily.

Note: Examination of the efficiency trends of the six groups studied reveals a relationship between the work pace of each group and its trend of hourly output. In case studies 55 to 57, where the work pace was moderate or slow, the workers were able to maintain and in two cases slightly improve their hourly output as weekly hours rose to 52. On those operations where the work pace was fast, however (case studies 52 and 54), and in spite of the fluctuating nature of the schedule, increases in hours beyond 40 a week were accompanied by lowered efficiencies.

29 men on pressing of jackets

Item	Scheduled hours						
	28.0	32.0	36.0	40.0	44.0	48.0	52.0
Index of scheduled hours	70.0	80.0	90.0	100.0	110.0	120.0	130.0
Index of efficiency	97.9	98.9	98.2	100.0	100.6	100.8	100.9
Relative percentage of absenteeism [1]	3.1	3.6	1.4	3.0	.8	.7	.7
Index of output	68.6	78.6	89.9	100.0	113.1	123.7	134.3

[1] Does not include full-week absences.

58: *Workweeks of 48, 40, 46, and 43 hours for women, individual wage incentives; light, operator-paced hat-finishing operations.*

This study was conducted in the custom trimming department of a men's hat-manufacturing plant. The operation surveyed was the hand-sewing of hat bands and trimming. The work pace was fast and controlled by the operator. Work was light and of a routine nature. Rest pauses were taken as the work flow permitted.

The workers operated under an individual piece-rate incentive system.

Working conditions.—The working conditions in this shop were excellent. Work areas were large and unobstructed. Lighting and ventilation were good. There was practically no noise. Music was played at frequent intervals during the day.

Plant facilities were very good. Inexpensive meals were served in a large, pleasant cafeteria. A motion picture projection room, ping-pong tables, and lounge chairs were provided for the employees' recreation. A large, fully equipped hospital sponsored by the company treated the illnesses and injuries sustained by employees. Many welfare services, such as a mutual benefit association, voluntary group life insurance, and a retirement pension plan, were available to the employee and her family.

The work force.—The performance of 28 women was surveyed for a period of 3 years. The labor force was characterized by management as stable and experienced. The ages of the workers were generally high, with the majority ranging from 45 to 55 years. Most of the workers had been with the company more than 10 years.

Hourly schedules.—During the selected period—August 1942 through July 1945—four different levels of hours were scheduled: (1) 48 hours per week with 6 days at 8 hours; (2) 40 hours per week by eliminating the 8-hour Saturday; (3) a 46-hour schedule, with 5 days at 8 hours and Saturday at 6 hours; (4) a workweek of 43 hours, consisting of 3 days at 9 hours and 2 at 8.

FINDINGS OF STUDY

48 vs. *40 hours.*—When the workweek was changed from 48 to 40 hours, by the elimination of Saturday, efficiency increased 3.7 percent.

The percentage of time lost due to absenteeism dropped from 10.7 percent to 8.4 percent.

The combined effect of increased efficiency and decreased absenteeism when scheduled hours were shortened by 16.7 percent resulted in a loss of 11.4 percent in total output. In other words, for the 8 hours dropped from the 48-hour schedule, only 5½ hours of output were lost.

40 vs. *46 hours.*—After the 40-hour week had been worked for 5 months, the workweek was increased to 46 hours by the addition of a 6-hour Saturday. Efficiency dropped 1.6 percent from the level achieved during the 40-hour week. It was, however, 2 percent higher than the efficiency level of the 48-hour workweek.

Absenteeism during the 46-hour week increased to a level of 10.3 percent, or comparable to the absenteeism rate of the 48-hour week.

Although hours were increased 15.7 percent above the 40-hour workweek, total output was increased only 10.7 percent. In terms of hours, for the 6 hours added to the schedule, 4½ hours of output were gained.

46 vs. *43 hours.*—After a period of 5 months, the workweek was reduced to 43 hours by eliminating Saturday and increasing 3 days of the week to 9 hours. Efficiency rose 2.9 percent above that of the preceding workweek of 46 hours. In comparison to the original 48-hour workweek, efficiency on this 5-day week was 5 percent higher.

Absenteeism increased from a level of 10.3 percent during the 46-hour week to 16.7 during the 43-hour week. The data do not reveal a specific reason for this increase in absenteeism. (The period during which the 43-hour schedule was worked, however, included VE-day and the vacation months of June and July. The increase in absenteeism might have been caused by unauthorized extensions of allowed vacation periods.)

The rise in absenteeism caused a loss in total output disproportionate to the decrease in scheduled hours. When weekly hours were reduced from 46 to 43 hours, or 6.5 percent, output dropped 10.7 percent.

In comparison to the original schedule of 48 hours, the difference of 10.4 percent in the scheduled hours was accompanied by a loss of 12.4 percent in output. Stated differently, 6 hours of output were lost when 5 hours were dropped from the schedule.

The workers apparently were more efficient on the 5-day schedules than on the 6-day schedules. In terms of over-all output, taking into account both efficiency and absenteeism, the most economical schedule appeared to have been the straight 40-hour workweek, with 5 days at 8 hours.

59: Workweeks of wartime 48 hours and postwar 40 hours for women, individual wage incentives; light, operator-paced operations in the packaging of biologicals.

The plant in which the department surveyed was located, was engaged in the manufacture of pharmaceuticals and biologicals. The departments included in case studies 60 through 63 were located in this same plant.

Operations in the selected department consisted of filling and capping or flame-sealing biological market containers. Mechanical filling machines and analytical balances were used. Each team of two operators was seated in a sterile, glass-enclosed room about 6 feet square. One worker filled the container, the other capped or flame-sealed it, and placed the container in a storage box. The work may be described as light, operator-paced machine operations.

Working conditions.—Working conditions were good. Lighting was excellent. Air conditioning kept temperature at 65 to 70 degrees, and dust was at an absolute minimum. Work was done under sterile conditions. The workers wore white caps, gowns, and masks over their mouths. Noise was at an absolute minimum. There were even restrictions against talking. The fragile glass ampules had to be handled with bare hands and there was a work hazard of accidental self-vaccinations from broken ampules. Resulting illnesses lasted from 3 to 6 days, but after several such self-vaccinations the workers usually developed an immunity, and no longer suffered ill effects.

Wage incentives.—Workers in the department operated under an individual wage-incentive system. In addition to a fixed hourly wage, the workers received bonuses for production in excess of established quotas.

Hourly schedules.—The performance of a selected group of 17 women on the day shift was surveyed under working schedules of 48 and 40 hours a week. The period of the 48-hour week, comprising 6 days of 8 hours, covered the last months of the war. After the war the workweek was shortened by eliminating Saturday work.

FINDINGS OF STUDY

Efficiency.—When the workweek was reduced from 48 to 40 hours, efficiency began to rise gradually, but steadily. The rising trend continued through the period available for study, and a stable level under the shorter workweek had not yet been reached by March 1946, the end-point of the period. At that time it had reached a point 12 percent higher than the level of efficiency which existed in the wartime period of the longer workweek.

Absenteeism.—Attendance was poor in both periods. Absenteeism averaged 12.1 percent during the wartime 6-day workweek, and rose after the war to 15.2 percent despite the elimination of Saturday work. This postwar trend in absenteeism appeared as well in case studies 60 through 63 which represent other groups of workers in this plant. It is possible that a wartime pressure for reduced absenteeism was removed after the war, and the resulting feeling of relaxation offset the decrease in weekly hours.

Output.—A stable level of weekly output under the shorter workweek schedule had not been reached by the end of the period as efficiency was still rising. By the last month of the period it had reached a point at which the 16.7 percent reduction in weekly hours meant a loss of only 10 percent in output. In terms of hours of output lost, the 8 hours eliminated from the schedule was accompanied by a loss of only about 4¾ hours of output each week.

Daily Pattern of Efficiency and Absenteeism

A combined analysis of daily patterns of efficiency and absenteeism under the two workweek schedules was made for all the selected workers represented in case studies 59 through 63.

Efficiency.—During the 48-hour workweek there was not much change in the level of efficiency for the different days of the week. The difference between the level for any one day and that for the other days of the week was never more than 2 percent.

When the sixth day was eliminated from the week, efficiency was higher on every day. The pattern showed a slight decline in efficiency on Tuesday, a subsequent rise through Thursday, the peak day, and a slight decrease on Friday. The range between the high and low points of the week, however, was narrow, not exceeding about 2 percent.

Absenteeism.—During the 6-day week, absenteeism declined from a high-point of 11.2 percent on Monday to 8.8 percent on Friday. It jumped sharply on Saturday, to 20.8 percent.

When Saturday work was eliminated, absenteeism was highest the first 3 days of the week, rising slightly from 10.7 percent on Monday to 12.7 percent on Wednesday. Thereafter it declined to 9.4 percent on Thursday, and 8.7 percent on Friday.

60: Workweeks of wartime 48 hours and postwar 40 hours for women, group wage incentives; light, operator-paced operations in the packaging of biologicals.

The women in this study worked on group incentives on the day shift in the same department as the group in case study 59.

Operations consisted of boxing and labeling biological and ampule products by hand. The women worked in groups seated along both sides of long tables. The items traveled on a conveyor belt in the center of the table. Equipment included glue-rolling, labeling, and taping machines. The work may be characterized as light, operator-paced packaging operations.

Working conditions were similar to those outlined in the preceding case study.

Wage incentives.—A group wage-incentive system was in operation. In addition to fixed hourly wages, the workers received bonuses based on excess production over fixed quotas for the group.

Hourly schedules.—The performance of 25 women was surveyed under a wartime workweek of 48 hours (6 days at 8 hours) and a postwar workweek of 40 hours (5 days at 8 hours).

FINDINGS OF STUDY

Efficiency.—During the 40-hour workweek period, efficiency showed a steadily rising trend to an end-point 6.9 percent higher than the level which had prevailed during the longer workweek schedule. A stabilized level had not been reached at the end of the period, and it is not known how much further efficiency might have risen.

Absenteeism.—Absenteeism remained essentially unchanged when the workweek was reduced to 5 days. The rates were high in both periods, 13.7 and 13.8 percent. The failure of absenteeism to decrease during the shorter workweek may have resulted from a possible easing-off of the wartime pressure for good attendance.

Output.—Although output had not reached a stabilized level at the end of the period surveyed, it had reached a point at which the 16.7-percent decrease in the workweek meant a drop of only 10.9 percent in output. At that point, only 5¼ hours of output were being lost each week for the 8 hours dropped from the schedule.

Daily Pattern of Efficiency and Absenteeism

A combined analysis of daily patterns of efficiency and absenteeism under the two work schedules for all selected workers in case studies 59 through 63 is presented in case study 59.

61: *Workweeks of wartime 48 hours and postwar 40 hours for women, individual wage incentives; light, operator-paced operations in the packaging of pharmaceuticals.*

The department surveyed was located in the same plant as that described in case studies 59 and 60.

Operations of these women consisted of bottling, labeling, and packaging dry pharmaceuticals for shipment. Boxes or bottles were filled by hand. A strip of cotton was placed in the top of each bottle, and the bottle was capped with a special hand tool. Labeling was done either by hand or by machine. The bottles were then wrapped in transparent paper, a descriptive folder enclosed, and the wrapping sealed.

Working conditions.—Lighting was adequate and noise, moderate. Large window areas and electric fans kept temperatures at a comfortable level. There was a moderate amount of dust. Aisles showed some amount of congestion and blocking.

Wage incentives.—An individual wage-incentive system was in operation. Workers received a fixed hourly wage plus a bonus based on production in excess of fixed quotas.

Hourly schedules.—The performance of a selected group of 26 women on the day shift was studied. During the war a 48-hour workweek was maintained, consisting of 6 days of 8 hours. After the war, Saturday work was eliminated, making for a 40-hour workweek.

FINDINGS OF STUDY

Efficiency.—When the workweek was reduced to 40 hours, efficiency began to rise, and continued to increase through the period surveyed. A stable level had not been reached by the end of the period, but efficiency had reached a point 5.1 percent higher than the level achieved during the earlier period of the 48-hour workweek.

Absenteeism.—Absenteeism was high under both schedules of hours with no appreciable difference in the rates: 9.4 percent during the wartime schedule of 6 days per week and 9.2 percent in the postwar period of the 5-day week. The continued high rate of absenteeism after the war, despite the cut-back in hours, as noted for the preceding groups surveyed (see case studies 59 and 60) may have resulted from a relaxation of the wartime pressures for good attendance.

Output.—Because of the steady rise in efficiency in the period of the shorter workweek, output had not yet reached a stabilized level. In the last month of the period, the 16.7 percent decrease in hours was accompanied by a 12.2 percent loss in output. At that point, 5¾ hours of output were being lost each week by the elimination of 8 hours from the schedule.

Daily Pattern of Efficiency and Absenteeism

A combined analysis of daily patterns of efficiency and absenteeism under the two levels of weekly hours for all selected workers in this plant is presented in case study 59.

62: Workweeks of wartime 48 hours and postwar 40 hours for women, group wage incentives; light, operator-paced operations in the packaging of pharmaceuticals.

The workers in this study were employed in the same department as those in case study 61.

The operations consisted of filling, capping, and labeling fluid pharmaceuticals. Bottles were cleaned by means of air jets and placed on a conveyor belt feeding a vacuum filling machine. Here the bottles were placed under filling nozzles, the nozzles lowered into the bottles, and the flow of liquid controlled by a foot pedal. The bottles were then capped and sealed by hand. The operations were performed while standing. They may be characterized as light, operator-paced, packaging operations.

Working conditions were the same as those cited in case study 61.

Wage incentives.—A group wage-incentive system was employed, whereby, in addition to an hourly wage, the workers received a bonus based on production in excess of fixed quotas achieved by the group.

Hourly schedules.—The performance of all workers in the group was surveyed under two levels of weekly hours. The number of workers ranged between 25 and 42. The working schedules were a wartime workweek of 48 hours (6 days at 8 hours) and a postwar workweek of 40 hours (5 days at 8 hours).

FINDINGS OF STUDY

Efficiency.—There was a slight increase of 1.5 percent in efficiency when hours were reduced from 48 to 40 per week.

Absenteeism.—The absenteeism rate was 6.4 percent during the 48-hour wartime workweek. It rose to 9.6 percent after the war despite the elimination of Saturday work, a possible result of an easing up after the pressures to maintain attendance during the war.

Output.—The 16.7-percent decrease in the workweek was accompanied by an 18.3-percent drop in output. The slight increase in efficiency was offset by the rise in absenteeism, with the result that 8¾ hours of output were lost by the elimination of 8 hours from the 48-hour workweek.

Daily Pattern of Efficiency and Absenteeism

A combined analysis of the daily patterns of efficiency and absenteeism under the two workweek schedules for all selected workers in the plant is presented in case study 59.

63: Workweeks of wartime 48 hours and postwar 40 hours for women, individual wage incentives; light, operator-paced operations in the packaging of cough drops.

The department surveyed was located in the same plant as the departments included in case studies 59 through 62.

The operations consisted of machine-wrapping and hand-packing cough drops. A roll of foil was hand-threaded through the wrapper machine. Cough drops were fed into the machine by a hopper, and were individually wrapped automatically. The operator hand-packed the wrapped cough drops in market containers, inserted a circular in the box, covered the box, and placed it on a conveyor. Although the wrapping machine was automatic, the operator was kept occupied in packing the cough drops, and her speed of operation was not limited by the speed of the machine. The work may be characterized as light, operator-paced, packaging operations.

Working conditions.—Excellent lighting was provided by fluorescent fixtures and white walls. The nature of the product required a controlled temperature of 75 degrees. There was a considerable amount of sugar dust in the air and on the floors. The floors were littered with cough drops and wrappers. The room was too small for the 14 machines installed in it. The noise of the machines was excessive and there was a high incidence of headaches. Unguarded moving parts of the machines extended into the aisles. According to the safety engineer, operators were inclined to insert fingers into moving parts of the machines to dislodge badly wrapped cough drops.

Wage incentives.—There was an individual wage incentive consisting of a bonus based on production in excess of a fixed quota in addition to the fixed hourly wage.

Hourly schedules.—This study surveys the performance of a selected group of 9 women on the day shift under two schedules of hours. During the war a 48-hour week of 6 days of 8 hours was worked. After the war Saturday work was eliminated, making for a 40-hour workweek.

FINDINGS OF STUDY

Efficiency.—The shortening of the workweek from 48 to 40 hours resulted in an increase of 7.9 percent in efficiency.

Absenteeism.—Absenteeism was high in both periods. During the 48-hour workweek the rate was 10.4 percent. It rose to 12.4 percent after the war in spite of the elimination of Saturday work. The trend is similar to that which occurred among the other groups of workers surveyed in this plant in the postwar period, and may have resulted from a possible relaxation in efforts to maintain good attendance.

Output.—The 16.7-percent reduction in the workweek resulted in a loss of 12.1 percent in weekly output. The elimination of 8 hours from the 48-hour workweek thus meant a loss of about 5¾ hours of output.

Injuries.—There was a sharp decline in the frequency rate of injuries in the department during the shorter workweek. In the wartime 48-hour workweek period, there was an average of 2,750 injuries (requiring first-aid treatment) per million man-hours of work among all workers in the department. After the war, when the workweek was cut back to 40 hours, the average decreased to about 1,400 injuries. The reduction of the workweek to 5 days thus reduced injuries by half.

64: Workweeks of prewar 40 and 55 hours, wartime 58 and 50 hours, postwar 45 to 50 hours for men, individual wage incentives; heavy, operator-paced machining operations.

Operator-paced machining processes on heavy metal parts were studied in this department. Work included grinding, single- and multi-spindle drill press, punch press, cold saw, assembling, sheet metal, arc, spot, and gas-welding operations. The work was heavy, and required a considerable amount of sustained physical effort. It entailed no idle operator time. The welding work imposed a nervous strain on operators. Continuous mental, visual, or manual attention was demanded on the majority of the operations.

Working conditions.—Within the limitations inherent in heavy metal-machining operations, care was taken to make the shop clean and safe. Lighting was adequate and noise of moderate volume. Some vibration, dust, and noise was caused by the punch-press operations. Soiled hands and clothing resulted from handling oily, greasy, and dirty materials. Heat and dampness were moderately high during the summer and rainy seasons respectively. Fumes and sparks were created by the welding operations.

The only food served in the plant was that offered by a mobile snack wagon which passed through every department twice each forenoon and afternoon coincident with the four 5-minute smoking periods, which constituted the organized rest periods installed in the plant. Workers were permitted to smoke in designated areas during these periods. Washroom and locker facilities were sanitary and adequate in number.

Safety.—Machines were safely spaced and well-guarded. The wide aisles had safety markings. A variety of lifting devices were used to reduce the frequency of injuries from improper lifting. Goggles and protective clothing were supplied wherever necessary. Conveyor belts under the floor automatically removed scrap metal. A safety engineer consulted with an active safety committee composed of management and employee representatives. The operators were to a considerable degree responsible for their own safety and that of their fellow workers; for example, guarding against possible eye injuries when blowing out metal chips with compressed air. Although welders wore special helmets and spark-proof clothing, they were exposed to burns or infections from sparks. There was a considerable amount of exposure to cuts, abrasions, crushed toes or fingers, and similar lost-time injuries. One physician and three nurses were employed full time, and another physician part time. Extensive facilities were available for the treatment of work injuries.

Wage incentives.—The selected workers were on individual wage incentives. Under the Dyer incentive system, time-study standards were set for 60 units of good work per hour as 100-percent efficiency to be expected from the average worker. Experienced operators were expected to earn at least 25 percent above the standard through incentive premiums.

Ten different labor grades were established with four pay-rate levels within each labor grade. Thus, the lowest grade included a range from 75 cents to 87 cents an hour, the highest grade from $1.38 to $1.58 an hour.

Overtime bonus during the war was paid at time and a half for all hours over 8 a day and over 40 a week. Before and after the war, it was paid at the rate of time-and-a-half for hours over 8 up to 10 a day, over 40 up to 50 a week, and for all work on Saturday. Double time was paid for daily hours over 10 and weekly hours over 50, and for Sundays and holidays. Incentive workers on temporary day work were paid their regular hourly rate plus 80 percent of the average incentive bonus during the preceding fiscal quarter.

Hourly schedules.—Company records did not indicate the number of hours worked each day or the number of days worked per week. It was, therefore, necessary to rely on company estimates for establishing daily breakdowns of weekly schedules worked.

The selected period extended from June 1940 to December 1945. It included the following weekly schedules and approximate patterns of daily hours: Before the war, 40 hours (5 days at 8 hours) and 55 hours (5 days at 10 hours, Saturday at 5); during the war, 58 and 50 hours (5 days at 10 hours, with additional Saturday work of 8 hours for a 58-hour week): after the war, 45 to 50 hours (5 days at 9 to 10 hours). The plant operated

2 shifts. The 18 male operators selected for this study were on the day shift, which started at 7 a.m. One-half hour was allowed for lunch when weekly hours were below 55, one hour when hours exceeded this level.

FINDINGS OF STUDY

It is pertinent to an analysis of the findings in this plant to note that workers became aware of the demand for the company's products in the war effort by the amount of increases in the available work load, in the size of the labor force, and in the length of the workweek. Management also exerted pressure for more production, for good attendance, and for improved safety conditions.

Prewar 40- and 55-hour weeks.—The prewar change in hours occurred when the 40-hour week was increased to 55 hours by lengthening daily hours to 10 and adding a 5-hour Saturday. During the longer workweek, efficiency declined by 6 percent.

Absenteeism losses remained unchanged, 2.7 percent at 40 hours and 2.6 percent at 55.

Total weekly output increased by 29.6 percent as against an increase of 37.5 percent in weekly hours, due to the decline in efficiency during the longer workweek. In terms of output hours, the addition of 15 hours to the 40-hour week increased total weekly output by the equivalent of 11.8 output hours.

Wartime 58-hour week.—The first wartime schedule studied was lengthened to 58 hours per week by increasing Saturday work from 5 hours to 8.

As cited in the introduction of the findings, workers were well aware of the need for the company's products in the war effort. As a result, their efficiency increased 11.9 percent above the hourly output level maintained during the prewar 55-hour week.

Absenteeism losses rose slightly, to 3.6 percent.

Total output increased by 16.7 percent over the preceding rate for 55 hours, although hours were raised by only 5.5 percent. In other words, the addition of 3 working hours to the prewar 55-hour week resulted in more than 9 additional output hours because of the higher level of wartime efficiency.

Wartime 50-hour week.—By eliminating the 8-hour Saturday, the next wartime schedule was reduced to five 10-hour days.

Efficiency increased by 7.4 percent over the preceding 58-hour week.

Absenteeism losses remained about the same, 3.6 percent for 58 hours and 3.4 percent for 50.

Output.—Because of the sharp rise in efficiency, output dropped only 7.1 percent as against a 13.8-percent reduction in hours—a loss of only 4 output hours for an 8-hour reduction in the weekly schedule.

Postwar 45- to 50-hour week.—The erratic postwar schedule ranged from 45 to 50 hours per week (five 9- to 10-hour days).

Compared with the prewar 40-hour week, postwar efficiency was 14.8 percent higher due to the accelerated production pace acquired during the war and carried over into the postwar period.

Absenteeism and output data could not be developed as the work schedule was very erratic and accurate information on absence rates was lacking for the postwar period.

65: Workweeks of wartime 58, 55, and 50 hours and postwar 48 hours for men, individual wage incentives; heavy, operator-paced machining operations.

The study follows the performance of 14 men on the day shift of the same department described in case study 64. Only points of difference from the preceding case study will be cited in this survey.

Hourly schedules.—As indicated in the preceding case, records revealed only total weekly hours, so that the number of hours worked per day, or days worked per week, were only approximations.

The selected period included wartime weeks of 58, 55, and 50 hours (5 days at 10 hours, with 5 or 8 hours on Saturday); and a postwar week of 48 hours (6 days at 8 hours).

FINDINGS OF STUDY

Wartime 58- and 55-hour weeks.—The wartime schedule of 58 hours per week was reduced to one of 55 hours by reducing Saturday work from 8 hours to 5, and retaining five 10-hour days.

Although some improvement in hourly output may be expected even for a 3-hour decrease from the schedule of 58 hours, the 15.1-percent rise in efficiency appears to be too drastic to be credited entirely to the slight reduction in hours.

Absenteeism losses remained relatively unchanged at 3.3 percent and 3.5 percent for the longer and shorter schedules respectively.

Total weekly output reflected the rise in efficiency by increasing 8.9 percent when weekly hours were reduced by 5.2 percent. Thus, the workers were producing about 5.2 more hours of output at 55 hours than at 58.

Wartime 50-hour week.—In the next war period, Saturday work was eliminated, leaving a week of five 10-hour days.

Efficiency rose 3 percent above the preceding 55-hour level.

The absenteeism rate of 3.3 percent was essentially the same as in the two preceding schedules.

The 9.1-percent decrease in hours from 55 to 50 per week brought about a drop of only 6.1 percent in total weekly output—a loss of 3 output hours as against a 5-hour reduction in scheduled hours.

Postwar 48-hour week.—The postwar 48-hour week was obtained by reducing daily hours from 10 to 8 and adding an 8-hour Saturday.

Efficiency increased 3.2 percent over the preceding 50-hour war period.

The absenteeism rate remained stable at 3.1 percent.

The 4-percent decline in hours was accompanied by a decrease of only 0.4 percent in total weekly output. In other words, the 2 hours eliminated from the previous 50-hour week resulted in practically no loss in output.

66: Workweeks of wartime 45 and 50 hours and postwar 45 hours for women, individual wage incentives; light, operator-paced manual and machining operations.

This study pertains to 9 women, on a day shift, engaged in manual bench and light machine operations involved in winding small coils. Work was light and repetitive, and the pace entirely operator-controlled. Continuous mental and visual attention was required.

Working conditions.—The work area was relatively quiet. Lighting and ventilation were adequate, as was the space available for work and safety aisles. Exposure to injuries was confined to minor cuts and bruises. In all other respects, working conditions were the same as those described in case study 64.

Hourly schedules.—As indicated in case study 64, the pattern of daily and weekly hours worked could only be approximated. When the workweek was raised from 45 to 50 hours during the war, the increase was obtained by lengthening the five 9-hour days to 10 hours each. After the war, the weekly schedule was again reduced to 45 hours.

FINDINGS OF STUDY

Wartime 45- and 50-hour weeks.—When the 5-day wartime week was lengthened from 9 to 10 hours a day, efficiency showed no apparent effect of the longer workday and actually increased by 1.2 percent.

Absenteeism losses also remained fairly stable at 5.3 percent during the 45-hour, and 5.8 percent during 50-hour schedules.

Total weekly output increased in almost direct proportion to the increase in hours, so that 5 hours added to the 45-hour week resulted in 5.3 hours of additional output.

Postwar 45-hour week.—When the postwar schedule was cut back to 45 hours by reducing daily hours from 10 to 9 for each of the five 10-hour days, the reduction in hours had no appreciable effect on efficiency, which improved by only 0.2 percent over the rate for the longer workweek.

Absenteeism losses, however, rose to 7.9 percent in the postwar period of shorter hours.

The 10-percent decrease in the schedule was accompanied by an 11.9-percent decline in total weekly output, so that the 5-hour reduction from the 50-hour week resulted in a loss of nearly 6 output hours. Compared with the wartime schedule of 45 hours, the identical postwar week showed a 1½-percent output loss equivalent to two-thirds of an hour's output. This difference, however, was attributable entirely to the increased absenteeism rate.

67: Workweeks of prewar 40 and 55 hours, wartime 62 and 55 hours, and postwar 40 to 48 hours for men, individual wage incentives; medium-heavy, operator-paced machining operations in a repair shop.

The performance of 14 male workers on the day shift of a repair shop was followed during prewar, war, and postwar work schedules. These workers were highly skilled and experienced. The process of machining returned company products and manufacturing service parts required the use of such machines as punch presses, drill presses, grinders, lathes, handscrew and milling machines, and hand and power tools.

With few exceptions, work was medium-heavy, highly skilled, and operator-paced. Workers were responsible for careful planning and fine workmanship to avoid costly scrap. As a result, the work pace was deliberate rather than fast.

Working conditions.—The machine-shop noise usual in this type of work was of medium volume, except around punch presses and hand screw machines where noise and vibrations were greater. Boring mills created some dust. The handled material was oily, greasy, and dirty. On some operations, hands, face, and clothes were spattered from lubricants. Temperatures were moderate, the shop was well ventilated and lighted. There was no crowding. The danger of work injuries was fairly high because of the variety of operations involved in this work.

Wage incentives.—Work in this repair shop was sufficiently standardized to permit the installation of an individual incentive system. Standards were established for major repair jobs. At least 75 percent of an operator's time was done on measured work.

For additional information on such factors as working conditions, safety, wage incentives, and hours, see case study 64 which dealt with another department of the same plant.

Hourly schedules.—As mentioned in case 64, the length of the workday and the number of days worked each week could only be approximated, as company records showed only total weekly hours worked.

The period selected for study included the following weekly schedules: Before the war, 40 hours (five 8-hour days) and 55 hours (five 10-hour days and a 5-hour Saturday); during the war, 62 hours (five 11-hour days and a 7-hour Saturday) and 55 hours (as above); after the war, 40 to 48 hours (five to six 8-hour days).

FINDINGS OF STUDY

An analysis of the findings must include a consideration of the type of operator and work involved. As already mentioned, the operators were highly skilled. Work was greatly diversified. Close tolerances and exacting workmanship as well as careful planning was necessary to avoid costly scrap.

As a consequence, the work pace was deliberate rather than fast and could be readily maintained, or even stepped up, when the backlog of work—and with it scheduled hours—increased.

Prewar 40- and 55-hour weeks.—For a period prior to the war, a 5-day week of 40 hours was compared with a 55-hour week of 5 days at 10 hours and Saturday at 5.

Lengthening of the week was accompanied by a 5.6-percent increase in hourly efficiency.

The amount of scheduled time lost due to absenteeism was small during all hourly schedules, the rate rising from 1.8 percent at 40 hours to 2.9 percent at 55.

The gain of 43.6 percent in output when weekly hours were increased by 37.5 percent must be attributed to the rise in efficiency. Expressed in terms of hours, 17½ more output hours were obtained through the addition of 15 hours to the 40-hour schedule.

Wartime 62-hour week.—During the war, the weekly schedule was further increased to 62 hours by changing daily hours from 10 to 11 for 5 days and from 5 to 7 for Saturday.

Despite this additional increase in hours, efficiency increased 3 percent above the previous level at 55 hours.

Absenteeism losses remained low at 2.6 percent.

Total weekly output increased by 16.6 percent when the former 55-hour week was increased by 12.7 percent, again due to improved efficiency. Consequently, a gain of 9 output hours was obtained when 7 hours were added to the 55-hour week.

Wartime 55-hour week.—During a later war period, hours were cut back to the former 55-hour schedule (five 10-hour days and one 5-hour day).

The reduced workweek was 2.1 percent more efficient than the preceding schedule of 62 hours.

Absenteeism losses at 55 hours (1 percent) were almost negligible.

The combined effect of improved efficiency and lower absenteeism losses resulted in an output decrease of only 8 percent as against an 11.3-percent reduction in hours—a loss of only 5 output hours when 7 hours were eliminated from the former 62-hour schedule. Compared with the prewar 55-hour week, the wartime schedule of the same hours resulted in 7.2 percent more output, or an additional 4 output hours.

Postwar 40- to 48-hour week.—After the war, the workweek fluctuated between 5 and 6 days at 8 hours, for total weekly hours of 40 to 48. Efficiency dropped almost 1 percent below the last war period of 55 hours, due perhaps to less pressure for more production and a resultant slackening of the work pace. The faster pace developed during the war, however, was not entirely dissipated during the postwar period, as indicated by a 10-percent higher level of efficiency than that which had characterized the prewar 40-hour week.

68: *Workweeks of prewar 36, 43, and 54 hours, and wartime 60 and 52 hours for men, individual wage incentives; medium-heavy, semi-automatic operations.*

Most operations performed by the 10 day-shift men surveyed in this study were done on engine and turret lathes, with some work on borematics, internal, and surface grinders. Work was diversified and exacting, usually requiring close tolerances. Most operations involved a predominance of machine time during which the operator watched, checked, and adjusted the work. A high degree of skill and judgment was demanded of the operator to prevent costly scrap. The production pace, therefore, was deliberate and fairly uniform rather than fast. Work was semi-automatic and medium-heavy. The operators had only a limited control over the speed of operations.

Working conditions.—The usual machine-shop noises prevailed in this department. Some of the disagreeable features of the work were the dirt of parts handled, grinding sludge, mica dust, grease, and spray from coolants. Ventilation and lighting were adequate. The work areas were spacious and the safety aisles wide and unobstructed.

For additional information on plant conditions, see case study 64, which deals with another department of the same shop.

Hourly schedules.—Company data on work schedules were limited to total weekly hours, so that the break-down of the number of hours per day and the number of days per week worked during each schedule could only be approximated.

The period selected for study included a prewar period of 36 hours a week, consisting of 4½ days at 8 hours; a 43-hour week of 5 days at 8 to 9 hours; and a 54-hour week of five 10-hour days, and a 4-hour Saturday. A 60-hour week of five 11-hour days and a 5-hour Saturday, and a 52-hour week of 5 days at 10 to 11 hours, were studied during the war period.

FINDINGS OF STUDY

In general, this study demonstrates that semi-automatic precision work —with the emphasis on quality rather than speed of production—resulted in a deliberate and fairly stable work pace readily maintained by the operator regardless of the length of working hours.

Prewar 36- and 43-hour weeks.—Prior to the war, a change in weekly hours from 36 (four and one-half 8-hour days) to 43 (five 8- to 9-hour days) was accompanied by a 4.7-percent drop in efficiency.

In the light of subsequent schedule changes which brought about only small changes in hourly output, the 4.7-percent decrease in efficiency is not readily explainable.

There were almost no absenteeism losses at 36 hours (0.2 percent) while the 43-hour week showed a rate of 4.8 percent.

As a result of a 19.4-percent rise in hours, output increased 8.6 percent —the difference being due to the combination of lowered efficiency and increased absenteeism. By adding 7 hours to the 36-hour week, only 3 additional output hours were obtained.

The prewar 54-hour week.—The next prewar schedule, of 54 hours per week, was achieved by working five 10-hour days and adding a 4-hour Saturday.

Compared with the preceding 43-hour week, efficiency rose by 3.2 percent.

Absenteeism losses dropped from 4.8 percent to 3.3 percent.

Total weekly output was increased by 31.7 percent as against a 25.6-percent rise in hours. The equivalent of 13½ output hours was obtained by the addition of 11 hours to the 43-hour week.

Wartime 60-hour week.—During the next schedule, a wartime 60-hour week, one hour was added to each day of the week for a workweek of five 11-hour days and a 5-hour Saturday.

Efficiency remained almost unchanged, the average being 0.7 percent higher than that during the preceding 54-hour period.

Absenteeism dropped slightly, to 2.3 percent.

The lower absenteeism losses together with the slight rise in hourly output, effected a gain of 13.1 percent in total weekly output as against an 11.1-percent increase in hours. This meant a gain of 7 output hours for an addition of 6 hours to the preceding 54-hour week.

Wartime 52-hour week.—During the last period studied, wartime hours were reduced to 52 a week by eliminating Saturday work, leaving the work schedule at 5 days of 10 to 11 hours each.

During the shortened wartime schedule, efficiency rose 2.3 percent above the previous 60-hour week, reaching a level of hourly output actually 1.3 percent above that maintained during the prewar base period of 36 hours.

The amount of scheduled time lost due to absenteeism rose slightly, to 3.9 percent.

A comparison of the two war periods of 60 and 52 hours indicated that a 13.3-percent reduction in hours resulted in a 12.9-percent loss in total weekly output. The elimination of 8 scheduled hours resulted in nearly the same reduction (7¾ hours) of output. Compared with the prewar base period of 36 hours per week, the wartime week of 52 hours represented an hourly increase of 44.4 percent and an output gain of 41 percent—an addition of 16 scheduled hours for a gain of 14¾ output hours.

Analysis of Injuries for Case Studies 64 to 68

A study was made of the frequency of all disabling and nondisabling injuries occurring at the different hourly levels in the prewar, war, and postwar period. A plant-wide sample of 36 high-seniority and 31 low-seniority workers was selected for this study, representing the departments surveyed in case studies 64 to 68. The group of workers who had been with the company before the war (high-seniority workers) represented a heavy age concentration around 45 to 50 years. The other group of low-seniority workers hired since the beginning of the war were in the 30- to 45-year age groups. The total number of injuries reported for each group was identical, 328.

High-Seniority Workers

A prewar change from 40 hours per week to 52 and 55 brought about a slight increase in the frequency rate of injuries per million man-hours of exposure from 863 to 910. This count consisted primarily of minor injuries requiring only first aid. In spite of the long workweek maintained during the war, the frequency rates were considerably lower than those before the war: 666 for workweeks from 57 to 60 hours, and 685 for weeks from 50 to 53 hours. Possibly, the reduction in the number of injuries was the result of increased stress on safety during the war in an effort to keep up production by saving man-hours. During postwar hours from 44 to 48 a week, the rate dropped to 475—a reflection of the combined effects of shorter hours and, possibly, improved safety conditions and practices.

Low-Seniority Workers

The newer workers, hired during the war, showed the opposite relationship between changes in hours and injury frequency rates. As hours went down, the frequency rate of injuries went up. During the wartime week of 57 to 60 hours, the frequency rate per million man-hours was 1,722 injuries (mostly first-aid), which rose to 1,803 for a weekly schedule of 50 to 53 hours toward the end of the war. For the postwar week of 44 to 48 hours, the rate was 2,163. The reason for this unexpected experience was not apparent.

Injuries by Hour of the Day[4]

An injury distribution by hour of the day was available for 167 cases requiring first-aid treatment during an 8-hour day and for 429 cases during a 10-hour day. The totals represent the experiences of 100 workers during a 17-month period, under either schedule. The workday began at 7 a.m., and lunch time was at 12 noon, under either schedule.

During the 8-hour day, the lowest percentage of the total number of injuries of the day occurred in the first hour of the morning—1.8 percent. After the first hour, the percentage increased sharply until it reached a forenoon peak of 16.8 percent during the fourth hour. The fifth hour, being the last hour before lunch, showed a slight drop to 12 percent.

The first afternoon hour (or sixth hour of the workday) had almost the same percentage of total injuries as the last forenoon-hour—11.4 percent. In the seventh hour the percentage reached a level equal to the forenoon peak; in the eighth and last hour, the high point of the day was reached—25 percent. The last figure may have been exaggerated if workers held off until the end of the workday before visiting the first-aid room for treatment of injuries incurred earlier in the day.

During the 10-hour day, the first morning hour again contained the smallest number of injuries—5.4 percent of all injuries for the day. As in the case of the 8-hour day, the percentage increased hour after hour until it again reached the forenoon peak in the fourth hour, 14.1 percent, with the fifth hour, the hour directly before lunch, again showing a slight drop, to 11.7 percent.

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[4] See table 16, page 41.

The benefit of a lunch-time rest apparently contributed to the drop to 7.2 percent in the first afternoon hour. Thereafter, the percentage increased steadily until it reached the afternoon peak of 13.3 percent in the fourth afternoon hour, the ninth hour of the day. The last hour of the day again showed a slight recession and represented 11 percent of the total number of injuries during the entire 10-hour day.

69: Workweeks of 40 and 48 hours, in prewar, war, and postwar periods, for men, day shift, individual wage incentives; medium-heavy, operator-paced press-molding operations in the manufacture of rubber products.

This plant produced a variety of rubber products. The department selected for study was engaged in the manufacture of molded rubber specialties such as washers, force cups, bottle covers, etc.

Operations of the selected group of 21 workers on the day shift consisted of press-molding rubber stock. Each worker operated a battery of presses. Stock was placed in molds which, when full, weighed between 15 and 60 pounds, the average being about 45 pounds. The molds were lifted by hand into the press, and, after processing, lifted off and unloaded with the aid of an air hoist. Very little idle time was afforded the operator. While one press was in operation, he was occupied with the loading or unloading on the other presses in the battery. The work may be characterized as medium-heavy, operator-paced, press-molding of rubber products.

Working conditions.—Working conditions were fairly good. Adequate lighting was furnished by overhead reflector fixtures, large window areas, and skylights. Noise was moderate. Ventilation was adequate, but was not successful in removing strong rubber odors. The temperature was generally moderate, but was hot in the immediate vicinity of the molding presses in the summer, the temperature sometimes reaching 140 degrees. Aisles were wide and generally unobstructed. In some areas liquid rubber drippings and dust from soapstone and talc (used in rubber processing) made floors slippery. Danger signs were prominently displayed in these areas.

The company conducted an active safety campaign. Two safety engineers worked in conjunction with departmental safety committees. Safety equipment was furnished where required. A first-aid room was staffed with a doctor and four nurses.

There were no formal rest periods. A paid lunch period ranged from 12 to 20 minutes for men, and 30 minutes for women.

Wage incentives.—An individual wage-incentive system was maintained. Earnings were based on the percentage of a fixed production quota actually achieved by each worker.

The maintenance of standards was complicated in the rubber industry during the war by the substitution of synthetic for natural rubber. This prevented study of most rubber manufacturing operations. In this department, however, the change in the type of rubber stock did not affect standards, and the findings were comparable in all periods.

Hourly schedules.—The first period studied occurred several months before the war. A 40-hour workweek composed of 5 days of 8 hours prevailed. In response to a need for increased production, a sixth 8-hour day was added, making for a total of 48 hours a week. This schedule was maintained for the remaining months before the war and through the period of war production studied. After VJ-day, the workweek was cut back to 40 hours by eliminating the sixth workday. The day shift worked from 8 to 4, and from Monday through Friday or Saturday, depending on the length of the workweek.

FINDINGS OF STUDY

The findings illustrate the effect of increased work loads and conversion to war production, and the extent to which such factors influence the effects of changes in work schedules. The six case studies which follow represent different groups of workers in the same plant. Analysis of their performance shows a general similarity of experience.

Prewar Experience

The efficiency level of this group of workers increased 3.5 percent when the workweek was lengthened from 40 to 48 hours. Apparently the longer workweek was not particularly fatiguing to the workers. Moreover, it would appear that the work pace prevailing under peacetime conditions required less than maximum effort, and the workers were able to raise the level of hourly output when confronted with an increased work load. It should be noted, however, that workers could increase their output only by shortening the periods necessary to load and unload their machines.

Absenteeism was very low during the period of the 40-hour workweek, and rose only slightly under the longer hours. The rate in the first period was 0.7 percent. It increased to 1.7 percent in the later period.

The increase in total weekly output kept pace with that of hours. Increasing scheduled hours by 20 percent effected a rise of 22.8 percent in output, a gain of about 9 hours of output for the 8 hours added to the workweek.

War Experience

During the war period, at a continued schedule of 48 hours, efficiency rose 17 percent above that for the same 48-hour schedule before the war, bringing the level to a point 21.1 percent above that of the original 40-hour workweek period. To the stimulus of an increased work load was now added one of war morale, with the knowledge that production was directly connected with the war effort.

Absenteeism rose during the period to an average of 2.3 percent. This, however, was still low.

Because of the higher efficiency during the war, output increased 16.3 percent over the level achieved during the 48-hour workweek before the war. This resulted in an increase of the equivalent of 7¾ hours of output per week.

Compared to the normal prewar 40-hour workweek, the 20-percent increase in the schedule was accompanied by a 42.8-percent rise in output. Thus the workers were producing 17 additional hours of output for the 8 hours added to the workweek.

Postwar Experience

After the war, when the 40-hour workweek was restored, efficiency dropped 4 percent from the wartime level. The workers apparently eased up somewhat in their work pace when the pressure of production for war was removed, and the work load lightened. However, the postwar level of efficiency was still 16.3 percent better than under the prewar schedule of identical hours.

Injuries

An analysis was made of the combined injury experience of the 61 workers in the department represented in case studies 69 through 73.

In the prewar period of the 40-hour workweek, there was an average of 444 first-aid cases per million man-hours of work. When the workweek was extended to 48 hours by adding a sixth workday, the average rate was increased to 596.

In the war period studied, the longer workweek was maintained, and in some cases further increased to 54 hours. However the rate of first-aid cases dropped to 242 per million-man hours, a decline of about 50 percent. This drop apparently reflected the effectiveness of an intensified safety campaign to keep losses of manpower due to injuries down to a minimum during the crucial war period.

The improvement in the frequency rate of first-aid cases was carried over into the postwar period. Hours at this time were reduced from 48 to 40 per week. The rate remained at about the same level as in the preceding period. The average was 247 first-aid cases per million man-hours of work.

70: *Workweeks of 40 and 48 hours in prewar, war, and postwar periods, for men, evening shift, individual wage incentives; medium-heavy, operator-paced press-molding operations in the manufacture of rubber products.*

The 8 men selected for this study were on the evening shift in the same department and on the same operations as the workers in case study 69.

Working conditions, wage incentives, and workweek schedules were identical for both groups. Working hours were from 4 p.m. to midnight, and the workweek extended from Monday through Friday, or Saturday, depending on the length of the workweek.

Prewar Experience

The workweek was lengthened from 40 to 48 hours by adding a sixth day of 8 hours, several months before the war, to meet requirements for increased production.

Efficiency rose 1.6 percent under the longer workweek schedule. The work pace apparently was originally sufficiently slow to allow the workers to accelerate the pace without increased fatigue in response to the demands for more output. A similar trend in efficiency was observed for the day-shift workers during this period.

Absenteeism was low under both workweek schedules. The rates were 1.1 and 1.4 percent in the two periods respectively.

Output kept pace with the change in hours. The 20-percent increase in the schedule resulted in a rise of 21.4 percent in output, a gain of about 8½ output hours for the 8 hours added to the schedule.

War Experience

With a continued work schedule of 48 hours per week, efficiency during the war rose 21.1 percent over the prewar 48-hour level, a net gain over the original 40-hour workweek level, of 23 percent. All-out production for war may have stimulated the workers to greater effort. Again the trend is similar to that among the day-shift workers, but the rise in efficiency was more pronounced in the evening shift.

Absenteeism rose to 3 percent in this period.

Output during the 48-hour war week increased 19.3 percent over that of the prewar 48-hour workweek, a result of the higher efficiency. This furnished an additional 9⅓ hours of output per week. The 20-percent increase in the hourly schedule over the prewar 40-hour workweek was accompanied by a gain of 44.8 percent in weekly output, adding 18 output hours per week for the 8 hours added to the schedule.

Postwar Experience

With the end of the war, the decrease in the work load, and the restoration of the 40-hour workweek, efficiency dropped 4.1 percent. It would appear that the work pace was slowed down with the removal of the wartime pressure for greater output. The experience of the men on the day shift was similar in this period. Despite the postwar decline in hourly output, the new efficiency level was still 18 percent higher than it had been under the same work schedule before the war.

71: Workweeks of 40 and 48 hours in prewar, war, and postwar periods, for men, night shift, individual wage incentives; medium-heavy, operator-paced press-molding operations in the manufacture of rubber products.

This study presents an analysis of the performance of 10 men on the night shift in the same department, and on the same operations as the workers in case studies 69 and 70.

Working conditions, wage incentives, and workweek schedules were the same as those outlined in case study 69. The workday comprised the hours from midnight to 8 a.m. The 6-day workweek began on Sunday night and extended through Friday night. The 5-day week began Monday night and extended through Friday night.

FINDINGS OF STUDY

Prewar Experience

Efficiency increased 1.9 percent when the workweek was lengthened from 40 to 48 hours. As was indicated for the workers on the earlier shifts, a slow work pace in the initial period, enabled the workers to maintain and even better their rate of hourly output when an increase in production necessitated longer weekly hours. The rate of increase, however, was not as great as that achieved by the men on the day shift.

Absenteeism increased from 1.7 to 2.8 percent when the sixth workday was added. The rate of absenteeism was somewhat higher than for the day- and evening-shift workers, but the percentage was not considerable.

The 20-percent increase in the workweek was accompanied by a proportionate increase of 20.8 percent in output. The addition of 8 hours each week thus resulted in 8⅓ additional hours of output.

War Experience

The 48-hour workweek was maintained during the war period surveyed. Efficiency rose 26.7 percent over the level of the prewar week of 48 hours, and was 29 percent above the level of the original 40-hour workweek. As previously stated, production at this time was directly connected with the war effort, and knowledge of this fact may have spurred the workers to accelerate their work pace. The rate of increase was greater among the night-shift workers than among the day- and evening-shift workers discussed in case studies 69 and 70.

Absenteeism rose to 4.1 percent during the war period. Again the rate was higher than among the workers on the other shifts.

With no change in weekly hours, there was an increase of 24.9 percent in total weekly output as a result of the sharp rise in efficiency. This served to add 12 hours of output each week. The 20-percent increase in hours over the prewar 40-hour workweek was accompanied by a net gain of 50.8 percent in output. Thus the addition of 8 hours to the workweek resulted in a gain of 20 hours of output.

Postwar Experience

When the workweek was restored to 40 hours with the end of the war and the return to peacetime production, efficiency decreased 8.9 percent from the wartime level. The drop was greater than that experienced by the men on the earlier shifts. Despite the decline, however, efficiency was still 17.6 percent better than under the same schedule of hours before the war.

72: *Workweeks of 40, 48, and 54 hours in prewar, war, and postwar periods, for men, day shift, individual wage incentives; medium-heavy, operator-paced operations in the manufacture of rubber products.*

The 13 men selected for study worked on the day shift in the same department as the men on press-molding operations in case study 69. They performed a variety of operations in the manufacture of molded rubber specialties. These operations included machine-buffing rubber products; machine-cutting rubber stock into desired lengths; cutting spiral strips of rubber on a lathe; and table work, consisting of assembly of miscellaneous articles incidental to the preparations of the stock for processing. The work may be characterized as medium-heavy, operator-paced.

Working conditions and wage incentives were identical with those in case study 69.

Hourly schedules.—A normal 40-hour workweek of 5 days of 8 hours was increased to 48 hours by adding a sixth 8-hour day several months before the war. The weekly schedule was further increased to 54 hours during the war period surveyed by increasing daily hours from 8 to 9. The 40-hour week was restored at the end of the war.

FINDINGS OF STUDY

Prewar Experience

Efficiency showed a slight improvement of 0.8 percent during the period of the 48-hour workweek which followed the normal 40-hour workweek schedule. The possibility of an original slow, steady work pace that enabled the workers to maintain their level of efficiency under the lengthened workweek, which was noted for the press-molders in the department, existed for these workers as well.

When the workweek was extended from 40 to 48 hours absenteeism increased slightly, from 1 to 1.7 percent. The rates were low in both periods, and the percentages were similar to those of the press-molders on the day shift in the same periods.

Output rose in proportion to the increase in the workweek. The 20 percent increase in hours was accompanied by a 20.2 percent rise in output. The 8 hours added to the schedule thus resulted in an additional 8 hours of output each week.

War Experience

During the war, when the workweek was further increased by increasing daily hours from 8 to 9, efficiency rose an additional 9.6 percent, a net increase in efficiency over the original prewar level of 10.5 percent. The possible effect of conversion to war production on efficiency, as illustrated in case studies 69 through 72, for other male workers in the department is pointed up by the finding for this group. However, the rate of increase in hourly output was less in this instance. It may be significant that the workweek was extended to 54 hours during the war for these workers, while the other groups continued to work a schedule of 48 hours a week.

Absenteeism rose to 2.3 percent during the period. Again the rate is similar to that of pressmen on the day shift.

The 12.5 percent increase in weekly hours resulted in a rise of 22.7 percent in output. In effect, almost 11 output hours were gained by adding 6 hours to the workweek.

The 35-percent increase in hours over the prewar 40-hour workweek was accompanied by a net increase of 47.5 percent in output. The 14 hours added to the workweek therefore resulted in 19 additional hours of output.

Postwar Experience

When the workweek was restored to 40 hours after the war, efficiency rose 2.7 percent. This is in contrast to the decrease in efficiency among the other groups of men in the department during the postwar period. The difference may be attributed to the fact that there was a sharper decrease in the workweek in this case, from 54 to 40 hours. Efficiency in the postwar period was 13.5 percent better than under the same schedule of weekly hours before the war.

73: Workweeks of 40 and 48 hours in prewar, war, and postwar periods, for women, day shift, individual wage incentives; light, operator-paced trimming and finishing operations in the manufacture of rubber products.

The 9 women selected for study were engaged in hand- and machine-trimming and finishing operations in the same department as the men in case studies 69 through 72.

There was a variety of operations. Among them were hand trimming, in which the operator trimmed and finished the molded rubber articles with shears or knives; machine-trimming, in which the articles were placed on spindles and guided against knives; buffing; and machine-punch, or hydraulic-machine trimming, in which stock was trimmed by means of machine-operated dies.

Working conditions and wage incentives were the same as outlined for men in case study 69.

Hourly schedules.—An orginial 40-hour workweek of 5 days of 8 hours was lengthened to 48 hours several months before the war by the addition of a sixth 8-hour day. The 48-hour week was maintained during the war period surveyed. In the postwar period, intermittent workweeks of 40 to 48 hours were scheduled, depending on production needs.

FINDINGS OF STUDY

Prewar Experience

The increase in the workweek from 40 to 48 hours was accompanied by a 1.2 percent increase in efficiency. An orginal steady work pace, requiring less than maximum effort is suggested by the trend, which is similar to that for male workers in the department during the period.

Absenteeism rose from 2 to 4.7 percent with the addition of Saturday work. The rates were higher than for men on the day shift under the same work schedules.

The increase in output did not quite keep pace with that of hours, because the increase in absenteeism more than offset the increase in efficiency. The 20-percent increase in the workweek was accompanied by a 17.9-percent increase in output. The addition of 8 hours to the workweek therefore netted 7 hours of additional output.

War Experience

During the war period surveyed, under a continued schedule of a 48-hour workweek, there was a further improvement in efficiency of 6 percent. The aggregate increase in efficiency over the level which obtained during the prewar 40-hour workweek period was 7.3 percent. While the trend is similar to that among the male workers during this period of production for war, the degree of increase was not nearly as sharp.

Absenteeism jumped to 9.2 percent during the war period. The sharp rise may indicate the possibility of an accumulaton of fatigue over an extended period of a 48-hour workweek for women, many of whom undoubtedly had additional duties at home.

Output increased by only 1.2 percent over the preceding level, with no change in the workweek, the increase in absenteeism serving to offset the increase in efficiency. About two-thirds of an hour of output was gained each week during the period.

The 20-percent increase in hours over the 40-hour workweek was accompanied by a net rise of 19.3 percent in output. In terms of hours of output, the 8 additional scheduled hours per week resulted in a gain of nearly 8 hours of output.

Postwar Experience

Under an intermittent schedule of 40 to 48 hours a week after the war, efficiency was maintained at nearly the same level as that achieved during the war. The change was a slight decrease of 0.3 percent. Compared with the period of the 40-hour workweek before the war, there was a net gain of 6.9 percent in efficiency in the postwar period.

74: Workweeks of 40, 48, and 57 hours in prewar, war, and postwar periods, for men, day shift, individual wage incentives; light to medium-heavy, operator-paced operations in the manufacture of rubber tubing.

This department, in which the selected group of 14 men worked on the day shift, was located in the same plant as the department surveyed in case studies 69 through 73.

Operations in the department were connected with the manufacture of rubber hose. Rubber stock was extruded through a tubing machine in lengths of 50 feet or less, and passed over a mandrel. A cloth jacket was then wrapped tightly around the hose, and the hose vulcanized. After vulcanization, the cloth jacket was removed, the hose stripped off the mandrel, and the ends of the hose trimmed and finished. The work may be characterized as light to medium-heavy and operator-paced.

Working conditions.—Working conditions were good. Lighting was adequate, noise was moderate, and temperatures were comfortable. Flooring was wooden and was somewhat slippery in spots from soapstone dust. Ventilation was adequate. There was considerable talc dust in the air, however, which management insisted no ventilating system could eliminate.

Wage incentives.—Earnings were based on an individual incentive system which operated in the same fashion as that outlined in case study 69.

Hourly schedules.—The workweek was increased from 40 to 48 hours several months before the war to meet demands for increased production. This was effected by adding a sixth 8-hour day to the original workweek of 5 days of 8 hours. During the war period surveyed the workweek was extended to 57 hours by an increase in daily hours from 8 to 9½. After the war, the workweek was cut back to 48 hours.

FINDINGS OF STUDY

Prewar Experience

When the workweek was increased from 40 to 48 hours, efficiency rose 3.9 percent. The observation is suggested that, as in the case of the workers in case study 72, the original work pace of these workers was not the best of which they were capable. Consequently they were able to accelerate their pace, and thus improve efficiency, when confronted with a need for greater output, despite the lengthening of the workweek.

Absenteeism rose from 3 to 4.6 percent when the sixth workday was added.

The 20-percent increase in the workweek resulted in a rise of 22.8 percent in output. In effect, the 8 hours added to the schedule resulted in a gain of a little better than 9 hours of output each week.

War Experience

Efficiency increased an additional 12.7 percent during the war period surveyed, under a workweek schedule of 57 hours, bringing it to a point 17.1 percent above the level achieved during the prewar period of 40 hours. The rise may be attributed to a possible acceleration of pace under the pressure of all-out production for war. A similar trend was noted for the workers in the other departments surveyed in this plant (see case studies 69 through 73) but the extent of the increase was not as sharp as it had been for the men in the previous studies whose weekly hours were increased to only 48.

Absenteeism decreased from the preceding level of 4.6 percent. The rate during the war period was 2.9 percent. No explanation was found for this decrease.

The 18.8 percent increase in hours from the 48-hour schedule resulted in a rise of 36.1 percent in output. For the 9 hours added to the workweek, output equivalent to 17⅓ additional hours was obtained. Compared to the original 40-hour workweek, the 42.5-percent increase in the schedule was accompanied by a rise of 67.2 percent in output, a gain of 27 output hours for the 17 hours added to the workweek.

Postwar Experience

When hours were reduced from 57 to 48 a week as a result of a decrease in production demands after the war, efficiency showed a further increase of 1.3 percent.

Compared to the original prewar period of the 40-hour workweek, efficiency was 14.1 percent higher in the postwar, 48-hour week.

75: Absenteeism during 58-hour workweeks of 5 and 6 days in a plant manufacturing aircraft; plant-wide bonus; men and women.

This survey included all machining and assembling operations involved in the production of airplanes. In general, the work pace was medium-fast and steady, and controlled by the operator. All operations were light.

Working conditions.—The buildings were new and working conditions in the plant were excellent. High ceilings, outside walls consisting almost entirely of windows, and complete installations of fluorescent lights assured excellent lighting and ventilation. Dust, fumes, and noise were kept at a minimum. Work areas were extensive, allowing for wide aisles and plenty of working space. Housekeeping was exceptionally good. Two cafeterias and two restaurants provided meals for the employees. Carts with hot food traveled through the plant. There was a 10-minute rest period, paid for by the company, on each shift.

The most modern safety conditions existed in the plant. Aisles and intersections were clearly marked, machines well-guarded. By means of committees, workers in each department were kept alert to the observance of all possible safety precautions.

The work force.—Approximately 7,000 men and 3,000 women worked in the plant. About 75 percent of the operations did not require any previous experience. The labor force, drawn largely from cities and towns within a 40-mile radius of the plant, ranged widely in age—from 18 to 61 years. According to management, men and women of different nationalities and races worked together harmoniously, on both the day and night shifts.

Wage incentives.—A plant-wide bonus incentive system based on the number of completed planes produced each month was in operation in the plant. Examination of the bonus data revealed that changes in design, materials, and methods, rather than the efforts of the workers, were largely responsible for the variations in the percentages of average monthly bonus earnings. While the change in scheduled hours undoubtedly affected workers' efficiency, it was impossible to isolate the effects of this change from those of the other changes mentioned. Consequently it was not possible to measure the effect of changes in scheduled hours. Findings are restricted entirely to absenteeism.

FINDINGS OF STUDY

An analysis of plant-wide absenteeism percentages was made for the period from March through December 1943. Although the workweek remained at 58 hours throughout the entire period, the daily schedule was changed from 5 days at 11.6 hours to 5 days at 10 hours, with Saturday at 8 hours. The effect of this change on the percentage of time lost due to absence was insignificant. The level of absenteeism for men changed from 6 percent during the 5-day week to 6.2 percent during the 6-day week, and absenteeism among female workers dropped from 9.6 to 8.8 percent. Absenteeism was generally higher for women than for men during both schedules.

Although there was very little difference in the weekly absenteeism rates during both schedules, examination of the daily patterns reveals that from Monday through Friday absenteeism during the 6-day week was lower than during the 5-day week. Saturday absence, however, on the 6-day schedule, was the highest of the week and served to dissipate the improvement noted during the rest of the week.

The best attendance of the week occurred on Thursday, which was pay day. The desire for a long week end probably accounted for the highest absenteeism rates on Monday and Saturday. For the other days of the week, the rates were relatively level.

76: Comparison of absenteeism by sex and shift; light, operator-paced machining and assembling operations; no wage incentives.

The absenteeism experience of men and women was studied on three shifts of one plant and on two shifts in another plant. Both plants were located in the same area and belonged to the same company. Operations consisted of machining and assembling small steel and brass parts, weighing less than 5 pounds, for carbines, rifles, and fuses.

Most of the work could be characterized as light and man-paced. It was done at a steady and moderate pace.

Working conditions in both plants were good. Temperatures were moderate, ventilation was good, lighting modern and adequate. There was little noise or dust. Ample space was allowed for the work area and for safety aisles. Safety conditions were excellent. Protective clothing was provided for wherever needed, machines were well-guarded, and safety rules were strictly enforced. First-aid facilities were very good.

The work force in both plants was almost equally divided between men and women. Of the 745 men, 404 worked on the day shift, 237 on the afternoon shift, and 104 on the night shift. Of the 704 women, 436 worked on the day shift, 196 on the afternoon shift, and 72 on the night shift.

The average age of the men was 40 to 45 years, and of the women, 35 years. As the wartime labor market was very tight in the area, help was inexperienced and had to be trained on the job, with many women operating machines formerly considered as men's jobs. A number of women of advanced age (up to 70 years old) were placed on light work that could be performed in a sitting position.

Wage incentives.—Workers were paid at straight hourly rates ranging from 60 cents an hour for unskilled labor to $1.50 an hour for the highest skilled operators. The afternoon shift received a 5-percent shift bonus, the night shift 10 percent. In the absence of wage incentives, no individual performance records were available for a possible study of efficiency.

Hourly schedules.—Wartime hours covered in this study included 48, 50, and 55 a week for an average workweek of six 8-hour days with an occasional seventh day at 8 hours. Starting times for the day, afternoon, and night shifts, respectively, were 8 a.m., 4 p.m., and 12 midnight. The company paid for a 20-minute lunch period.

FINDINGS OF STUDY

The highest percentage of absenteeism was recorded on the night shift for both men and women—7.1 percent for men and 11.9 percent for women. A somewhat lower absence rate was found on the afternoon shift for both sexes in both plants—6.2 percent and 5.8 percent for the men, 9.5 percent and 9.4 percent for women. The lowest rate of absenteeism was registered on the day shift in both plants—5.5 percent and 4.9 percent for men, 8.5 percent and 8.1 percent for women.

The amount of scheduled time lost due to absenteeism was lower for men than for women on each of the three shifts.

The rate of absenteeism increased more sharply for women than for men with each later shift. In one plant, female absence rates exceeded those for men on the day shift by 3 percent, by 3.3 percent on the afternoon shift, and by 4.8 percent on the night shift. In the other plant, female absence rates exceeded those for men by 3.2 percent on the day shift and 3.6 percent on the afternoon shift.

77: Daily patterns of absenteeism for men and women during 5- and 6-day workweeks, individual wage incentives.

The plant studied manufactured regulators, armatures, and generators. With the added work load during the war, plant conditions became increasingly congested and controls over accurate reporting of individual production data became progressively lax. As a result, individual efficiencies did not seem to bear any relationship to hours during weekly schedule changes from 40 to as high as 67 hours, nor was it possible to correct efficiencies in order to obtain true performance data. It was deemed necessary, therefore, to limit the study to a comparison of daily absences on a 5-day and a 6-day week for men and women. The 10 men selected for the study of wartime absenteeism belonged to the day shift of the final assembly department. They were engaged in assembling generators with the aid of hand or power-driven tools while standing at a long bench. Work was medium-heavy and man-paced. Working conditions were poor—aisles were obstructed and work areas congested. Lighting was inadequate. Safety conditions were poor because of crowding; machines were inadequately guarded and safety regulations were poorly observed.

The 22 women selected for study belonged to the day shift of the armature department. Work was performed with the women seated at a bench and included such manual operations as coil-winding, soldering, finish-turning, and testing. The work was light and operator-paced, requiring manual dexterity. General working conditions were good and the work area was less congested than elsewhere in the plant.

One-half hour was allowed for lunch.

FINDINGS OF STUDY

For the men, a 40-hour week of five 8-hour days was compared with a 59½-hour week of five 10-hour days and a 9½-hour Saturday.

For the women, a 40-hour week of five 8-hour days was compared with a 48-hour week of six 8-hour days.

The absenteeism rate was higher for each day of the week during the 6-day week worked by both men and women, with Saturday showing a very sharp increase in the rate.

Daily absences during the 5-day week ranged from less than 1 percent to approximately 2 percent for both sexes.

During the 6-day week, male absences ranged between approximately 2 percent and 4 percent for 5 days and rose to 17½ percent on Saturday.

Female absences during the longer workweek ranged between approximately 3½ percent and 4 percent for the first 5 days and increased to 20½ percent on Saturday.

78: *Wartime workweek of 48 hours* vs. *postwar workweek of 35 hours, individual wage incentives; light, machine-paced machining operations; men and women.*

This plant was engaged in the manufacture of piston rings for airplane and automobile motors.

Operations in the department studied consisted of machine-grinding rough castings. The castings were processed through a series of grinding machines which progressively shaped them into the specified forms and sizes. The work was of a semi-automatic nature, allowing the operator only a limited amount of control over the pace. The work entailed only moderate physical exertion, but constant visual and mental attention. The work may be characterized as light, machine-paced machining operations.

Working conditions.—Working conditions were good. Excellent light was furnished by a complete fluorescent lighting system. Good ventilation was provided by a large amount of window area, and an extensive fume removal system. Grinding wheels were enclosed to keep dust and flying particles to a minimum. Noise was kept to a level moderate enough to permit frequently piped-in music to be audible. Wide aisles and adequate work areas were kept clean and generally unobstructed.

Safety.—A full-time safety engineer conducted an active campaign with the assistance of a plant safety committee. Machines were well-guarded, and safety clothing and appliances were supplied where necessary. A modern first-aid room was operated by a registered nurse.

The work force.—The findings are for all the operators and helpers in the department during the period of survey. All operators were males, and all helpers, females. No figures were available as to the proportion of men to women. In the earlier months of the study there were about 50 workers in the department. In the later months this figure was reduced to 30, as a result of a postwar decline in the work load and a consequent lay-off of personnel. Despite the change in the number of workers represented, it is believed that the findings in the two periods studied were comparable. The personnel remaining in the last period were all experienced workers who had been in the department in the earlier months. Thus the experience of 30 of the 50 workers is included in the findings in both periods.

Wage incentives.—A group wage-incentive system was in operation during the period studied. Under this system the aggregate excess production over time-studied standards was computed for the week for the entire department and each worker received, in addition to his base pay, a bonus of 1 percent of his pay for each 1 percent of production above standard.

Hourly schedules.—During the war period studied, the workweek consisted of 6 days of 8 hours, for a workweek of 48 hours. At the end of the war, faced with a cut-back in production, the company undertook several economy measures. These included a program of reduction in the labor force and a shortening of the workweek to 35 hours by eliminating Saturday work and decreasing daily hours from 8 to 7.

FINDINGS OF STUDY

Efficiency declined 3.6 percent from the level achieved during the war under the 48-hour workweek schedule. This may be attributed to a general feeling of uneasiness and insecurity induced by the falling off of available work and the lay-offs, which could cause a lowering of morale and a stretching of the work to make it last longer.

Absenteeism.—Attendance improved only slightly under the shorter workweek schedule. The rate of absenteeism during the wartime period of the 6-day workweek was 5.7 percent. When the sixth day was eliminated and the workday reduced from 8 to 7 hours, the level of absenteeism dropped to 4.1 percent.

Output.—The net effect of the 27.1 percent decrease in the workweek from 48 to 35 hours was a loss of 28.6 percent in total weekly output. In terms of hours, the 13 hours dropped from the weekly schedule resulted in a loss of 13¾ hours of output.

Injuries.—A comparison of the frequency of all injuries requiring first-aid treatment under the 48-hour workweek schedule of the war period, and a postwar schedule of 40 hours a week, which replaced the 35-hour workweek several months after the war, reveals that under the longer weekly hours work injuries (nearly all requiring only first aid) occurred at the average rate of 5,839 per million employee-hours of work. During the shorter workweek of 40 hours, this figure was reduced to an average of 3,852 injuries per million employee-hours. The decline in the rate is a measure of the effect of the elimination of Saturday from the workweek.

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UNITED STATES DEPARTMENT OF LABOR
L. B. SCHWELLENBACH, *Secretary*

BUREAU OF LABOR STATISTICS
Ewan Clague, *Commissioner*

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Work Stoppages Caused by Labor-Management Disputes in 1946

Bulletin No. 918

For sale by the Superintendent of Documents, U. S. Government Printing Office
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Letter of Transmittal

United States Department of Labor,
Bureau of Labor Statistics,
Washington, D. C., June 4, 1947.

The Secretary of Labor:

I have the honor to transmit herewith a report on work stoppages caused by abor-management disputes in the United States during 1946.

This report was prepared by Don Q. Crowther and the staff of the Labor-Management Disputes Division, under the general supervision of Nelson M. Bortz, n the Bureau's Industrial Relations Branch, Boris Stern, Chief.

Ewan Clague, *Commissioner.*

Hon. L. B. Schwellenbach,
Secretary of Labor.

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ulletin No. 918 of the
nited States Bureau of Labor Statistics

eprinted from the Monthly Labor Review, May 1947, with additional data]

Work Stoppages Caused by Labor-Management Disputes in 1946

Summary

The 4,985 work stoppages arising out of labor-management con- oversies in 1946 exceeded the previous year's total of 4,750; the umber was also slightly greater than the former peak in 1944, when ,956 stoppages were recorded by the Bureau of Labor Statistics. pproximately 4.6 million workers were directly involved in the stop- ages which began in 1946—a larger number than in any previous year n record. Idleness at the plants or establishments directly affected y stoppages aggregated 116 million man-days, or triple the time lost 1945 (38 million man-days). The average duration of a strike in 946 was approximately 24 calendar days, or about four times as long s during the war period.

Wages were a major issue in most controversies. Protection of orkers' "take-home" pay was emphasized in many of the earlier econversion wage disputes, but later in the year, after the easing and ubsequent abandonment of price controls, demands for pay increases o match rising living costs became more frequent.[1]

Thirty-one large work stoppages, involving 10,000 or more workers ach, began in 1946. They affected 2,925,000 workers, or about two- hirds of the total involved during the year. Including the 6 stoppages f 10,000 or more workers which began in late 1945 and continued into he early months of 1946, idleness resulting from these large stoppages ccounted for nearly 82 million of the 116 million man-days of idleness eported for all work stoppages during the year.

The time lost from stoppages in 1946 amounted to 1.4 percent of he estimated working time of that portion of the country's labor orce which might have become engaged in labor conflicts. Total roduction in 1946, as measured by the Federal Reserve Board's index, limbed to successive record peacetime levels during the year. Em-

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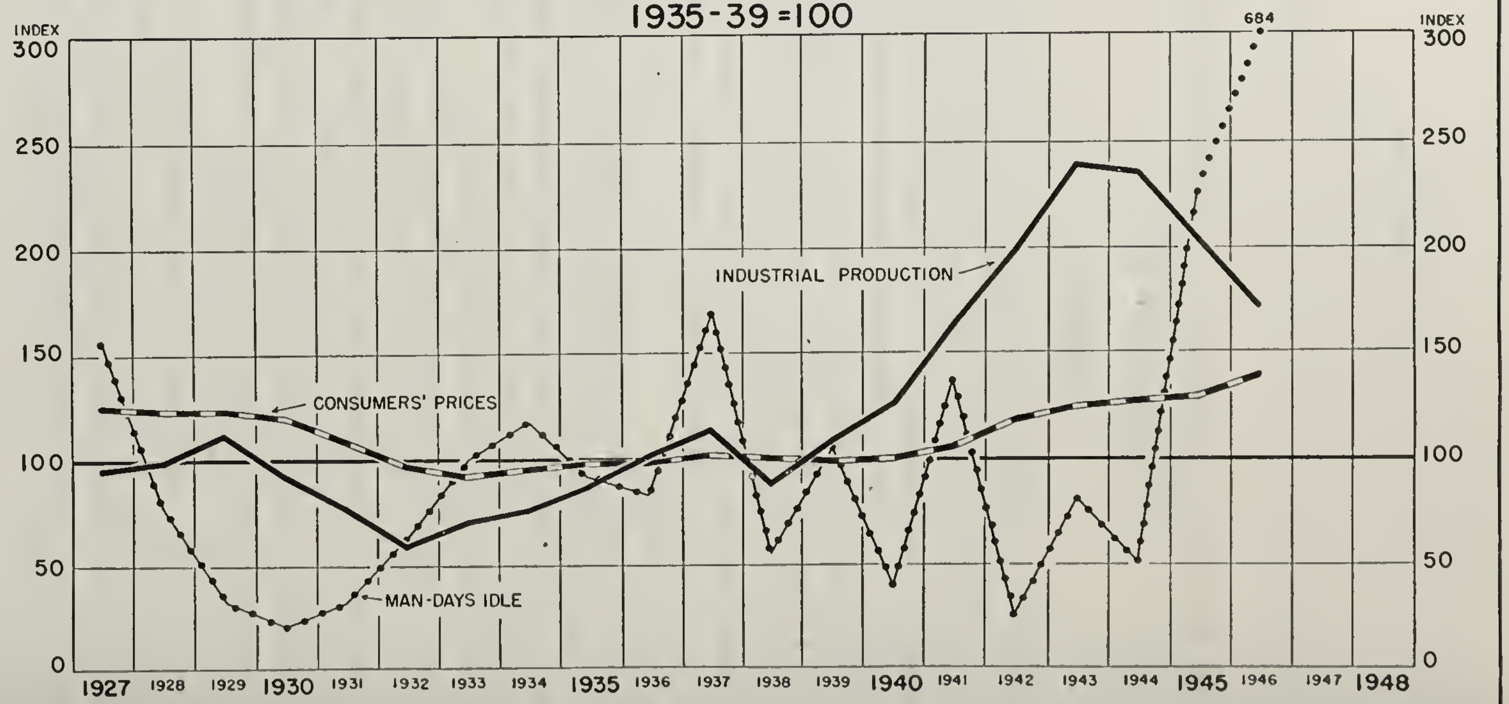
[1] For a more detailed analysis of the issues involved in stoppages during the year after VJ-day, see Postwar ork Stoppages Caused by Labor-Management Disputes, in Monthly Labor Review, December 1946 p. 872).

CHART 1

INDUSTRIAL PRODUCTION, CONSUMERS' PRICES, AND IDLENESS DURING WORK STOPPAGES

1935-39=100



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BUREAU OF LABOR STATISTICS

loyment in nonagricultural establishments likewise averaged higher ian in prewar years and was about a third larger than in 1939.

Historically, 1946 is most comparable to 1919, the first full year llowing World War I, when rising prices and union recognition or curity were among the major problems confronting American dustry and wage earners. The 3,630 strikes in 1919 involved well ver 4.1 million workers (table 1). Information on time lost is not vailable for years prior to 1927, but incomplete records indicate that iere was less idleness in 1919 than in 1946. The number of workers rectly involved in work stoppages, however, represented a larger roportion of that part of the labor force which might have been fected by strikes in 1919 than was the case in 1946—about 21 percent s against 14½ percent.

TABLE 1.—*Work stoppages in the United States, 1916 to 1946*

Year	Work stoppages		Workers involved		Man-days idle			Indexes (1935–39=100)		
	Number	Average duration (calendar days)	Number (thousands) [1]	Percent of total employed [2]	Number (thousands)	Percent of estimated working time [3]	Per worker involved	Work stoppages	Workers involved	Man-days idle
16 [1]	3,789	(4)	1,600	8.4	(4)	(4)	(4)	132	142	(4)
17	4,450	(4)	1,230	6.3	(4)	(4)	(4)	155	109	(4)
18	3,353	(4)	1,240	6.2	(4)	(4)	(4)	117	110	(4)
19	3,630	(4)	4,160	20.8	(4)	(4)	(4)	127	370	(4)
20	3,411	(4)	1,460	7.2	(4)	(4)	(4)	119	130	(4)
21	2,385	(4)	1,100	6.4	(4)	(4)	(4)	83	98	(4)
22	1,112	(4)	1,610	8.7	(4)	(4)	(4)	39	143	(4)
23	1,553	(4)	757	3.5	(4)	(4)	(4)	54	67	(4)
24	1,249	(4)	655	3.1	(4)	(4)	(4)	44	58	(4)
25	1,301	(4)	428	2.0	(4)	(4)	(4)	45	38	(4)
26	1,035	(4)	330	1.5	(4)	(4)	(4)	36	29	(4)
27	707	26.5	330	1.4	26,200	0.37	79.5	25	29	155
28	604	27.6	314	1.3	12,600	.17	40.2	21	28	75
29	921	22.6	289	1.2	5,350	.07	18.5	32	26	32
30	637	22.3	183	.8	3,320	.05	18.1	22	16	20
31	810	18.8	342	1.6	6,890	.11	20.2	28	30	41
32	841	19.6	324	1.8	10,500	.23	32.4	29	29	62
33	1,695	16.9	1,170	6.3	16,900	.36	14.4	59	104	100
34	1,856	19.5	1,470	7.2	19,600	.38	13.4	65	130	116
35	2,014	23.8	1,120	5.2	15,500	.29	13.8	70	99	91
36	2,172	23.3	789	3.1	13,900	.21	17.6	76	70	82
37	4,740	20.3	1,860	7.2	28,400	.43	15.3	166	165	168
38	2,772	23.6	688	2.8	9,150	.15	13.3	97	61	54
39	2,613	23.4	1,170	4.7	17,800	.28	15.2	91	104	105
40	2,508	20.9	577	2.3	6,700	.10	11.6	88	51	40
41	4,288	18.3	2,360	8.4	23,000	.32	9.8	150	210	136
42	2,968	11.7	840	2.8	4,180	.05	5.0	104	75	25
43	3,752	5.0	1,980	6.9	13,500	.15	6.8	131	176	80
44	4,956	5.6	2,120	7.0	8,720	.09	4.1	173	188	51
45	4,750	9.9	3,470	12.2	38,000	.47	11.0	166	308	224
46	4,985	24.2	4,600	14.5	116,000	1.43	25.2	174	408	684

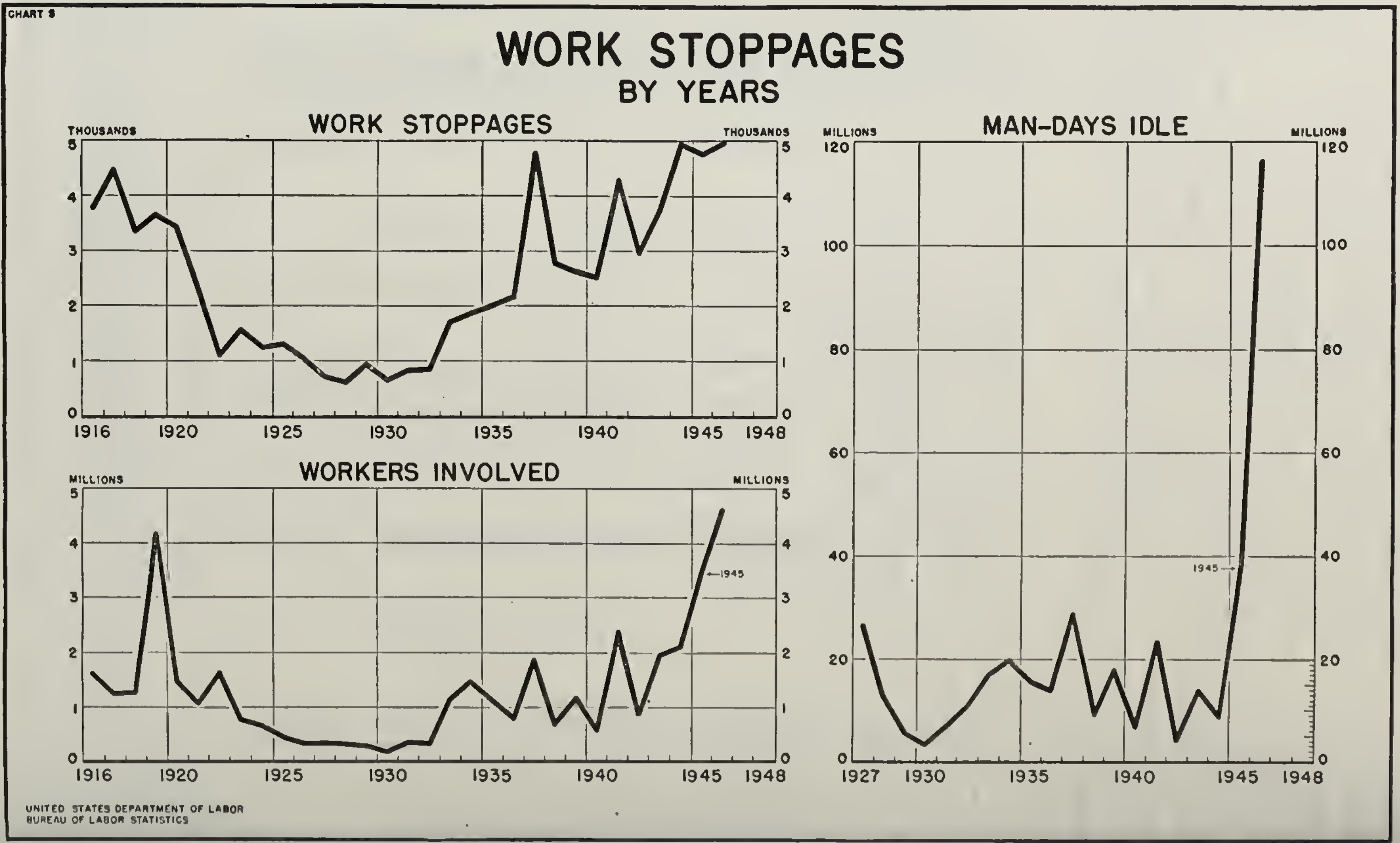
[1] The number of workers involved in some strikes which occurred from 1916 to 1926 is not known. The issing information is for the smaller disputes, however, and it is believed that the totals here given are rly accurate.

[2] "Total employed workers" as used here refers to all workers except those in occupations and professions which there is little if any union organization or in which strikes rarely, if ever, occur. In most industries includes all wage and salary workers except those in executive, managerial, or high supervisory positions those performing professional work the nature of which makes union organization or group action imprac-able. It excludes all self-employed, domestic workers, agricultural wage workers on farms employing s than 6, all Federal and State government employees, and the officials (both elected and appointed) in al governments.

[3] Estimated working time was computed for purposes of this table by multiplying the average number of nployed workers each year by the number of days worked by most employees during the year.

[4] Not available.

CHART 8



WORK STOPPAGES BY YEARS

UNITED STATES DEPARTMENT OF LABOR
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Interpretation of the Data

All known work stoppages in the United States that resulted from abor-management disputes which involved six or more workers and ontinued as long as a full day or shift are covered in this as in previous reports.[3] Information on "workers involved" and "man-days dle" includes all workers made idle in establishments directly involved n stoppages. The data do not measure the indirect or secondary ffects of stoppages on other establishments or industries whose emloyees are made idle as a result of material or service shortages

The Bureau's statistical series on work stoppages does not reflect, xcept indirectly, the degree to which the customary practices of ollective bargaining succeed in settling the overwhelming proportion f labor controversies. Some perspective on this generally unpubliized pattern of peaceful negotiations between unions and employers may be obtained by noting that in 1946 approximately 14.8 million workers were covered by collective-bargaining agreements negotiated by the representatives of some 50,000 to 60,000 local unions with an even larger number of employers. Although the number of union agreements in effect is not known, the Bureau estimates that this total is substantially in excess of 50,000. Most agreements are revised or amended annually; some are effective for longer periods. Many of these, however, contain a "reopening" clause permitting the renegotiation of certain provisions (usually those covering wages) during the life of the agreement. It may therefore be conservatively estimated that 50,000 or more agreements are rewritten in whole, or in part, each year, mostly without a work stoppage and in some cases even without a serious dispute requiring the aid of a third party.

Records of Federal and State conciliation and mediation agencies show that the number of disputes settled without recourse to interruptions of work far outnumber those which result in work stoppages. The United States Conciliation Service of the Department of Labor, for example, assisted in the adjustment of over 15,000 labor-management controversies in 1946. About 3 out of every 4 of these disputes were settled peacefully without an interruption of work. Reports of the National Mediation Board, regarding labor relations on the Nation's railroads and airlines, and the experiences of various State and local mediation agencies reflect a similar picture.

The fact that most labor-management differences were settled amicably does not, of course, minimize the gravity, or intensity, of some work stoppages which occurred in 1946. A few, such as those in steel, mining, and transportation, were extremely serious and disruptive to the general economy. In addition, a small number of localized stoppages, notably in the utility and service industries, temporarily inconvenienced many times the number of workers who were actually involved in these disputes. Other stoppages, also relatively few in number, found the employer and sometimes the general public caught in a cross-fire between two or more union groups.

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[3] For a fuller discussion of the scope and method of work-stoppage statistics used by the Bureau, see Work Stoppages in 1945, Monthly Labor Review, May 1946 (pp. 734-735).

It is equally true, however, that for each disruptive work stoppage there were many significant labor-management disputes which were settled peacefully during the year. Thus, the "Big Four" rubber companies negotiated a wage agreement amicably in March 1946; settlement of a Nation-wide telephone dispute was reached without any interruption of service; and a million railroad workers, representing all but two of the major railway unions, voluntarily agreed to arbitrate their wage demands. A scheduled national maritime stoppage was averted in June. Building-trades workers in many cities throughout the country reached mutually satisfactory understandings with their employers. The automobile industry experienced one serious stoppage, but agreements with some of the large producers were negotiated without interruptions to production. Thousands of workers and employers in many industries, continued to resolve their differences in 1946, as in preceding years, without recourse to work stoppages.

Background to 1946 Stoppages

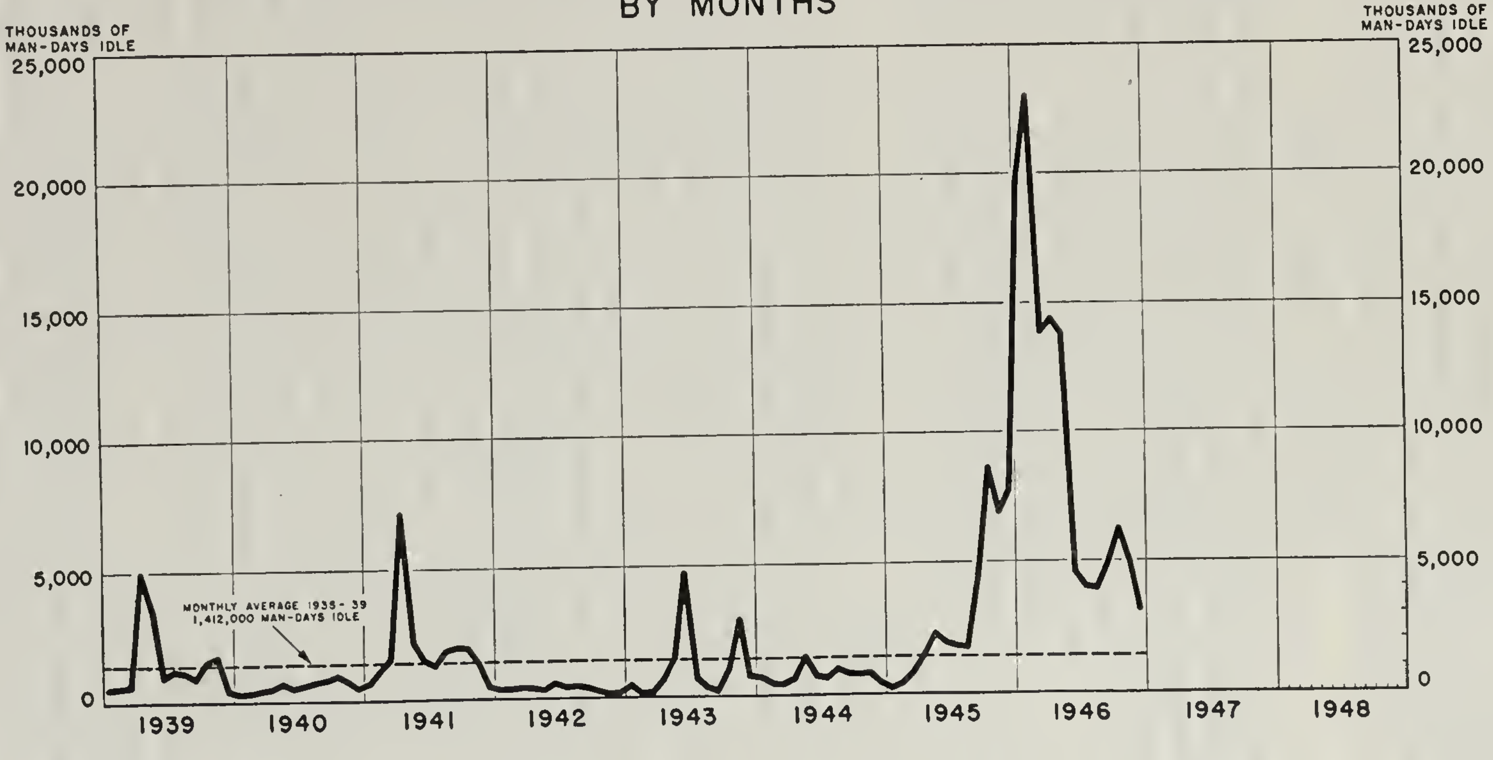
Between VJ-day and the end of 1945, relations between organized labor and management became increasingly strained. Labor's no-strike and management's no-lock-out pledges were dissolved. Patriotic and emotional ties which bound the Nation together so successfully in achieving phenomenal wartime production records were ineffectual when the economic realities of reconversion were faced. Workers were concerned about losses in earnings and rises in prices, and employers about governmental controls, reconversion problems, and new markets for their products. Both labor and management spoke hopefully about a return to "free collective bargaining," but, as the President's National Labor-Management Conference of November 1945 revealed, wide areas of disagreement still prevailed. The functions of the National War Labor Board, which had served effectively as a tribunal of final appeal during the war, were reduced, and this agency finally went out of existence on December 31, 1945.

The cleavage was also evidenced by the apparent inability of labor and management to resolve their differences without costly work stoppages. Disputes which during the war had been settled amicably, or with relatively brief interruptions to production, required weeks and even months to adjust. Approximately 75 percent of all the idleness due to work stoppages in 1945 occurred in the 4½ months following VJ-day (table 2). Many disputes which began in the autumn continued throughout the winter. As the year 1945 ended, about 370,000

CHART 3

TREND IN IDLENESS DUE TO WORK STOPPAGES

BY MONTHS



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workers were idle in 165 controversies. Included in this total were some 8,000 Northwest lumberjacks who had been on strike from late September; 13,000 glass workers and 37,000 San Francisco machinists and shipyard workers who had stopped work in October; and nearly a quarter of a million auto workers, textile-mill hands, and truck drivers who had quit their jobs for picket lines during November 1945.

Trend of Strike Activity in 1946

With the coming of the New Year, other momentous disputes were destined to result in stoppages, because, in many instances, prolonged negotiations were unsuccessful. On December 31, 1945, President Truman appointed a fact-finding board in the hope of averting a steel strike. In September of that year, the United Steelworkers of America (CIO) had submitted its demands for a $2-a-day wage increase, which had been rejected by the industry. AFL and CIO packing-house workers had sought upward revisions in pay since August 1945. Representatives for more than a million railroad workers were conferring with carrier representatives over questions of higher wages.

By mid-January 1946 negotiations gave way to strike action. Approximately 174,000 employees of three large electrical manufacturing concerns stopped work January 15. Conferences between these companies and the United Electrical, Radio, and Machine Workers of America (CIO) had been in progress since the autumn of 1945. A day later 93,000 AFL and CIO workers of major meat-packing houses walked out. Less than a week afterward (January 21) the country's steel furnaces and mills ceased operations. The steel strike, involving over 1,000 large and small basic steel producers and fabricators and about 750,000 workers, was the largest strike ever recorded in the United States. At the height of these and of about 250 smaller disputes then in progress the number of workers directly involved in labor-management work stoppages approximated 1,600,000.

The controversy between the steel workers and the largest steel producer, the United States Steel Corp., was terminated February 15 with agreement by the parties to accept a wage increase of 18½ cents previously recommended by President Truman. Settlements were reached with several other large basic-steel producers in the next few days; but, in the case of many smaller steel fabricators, the stoppage continued for weeks pending adjustment of local union-management issues and clarification of the extent to which increases in steel prices were to be permitted by the OPA.

Idleness, which in January had mounted to a record-breaking total of 19.7 million man-days, climbed still further in February to approximately 23 million man-days. In March, however, this figure was lmost halved, as both the UAW[4]–General Motors and the UE[5]–General Electric disputes were terminated. The number of smaller toppages rose, however, partly because many union-management ontracts expired and partly because of the widespread desire of orkers for wage increases in line with the 18½-cent pattern which volved out of the steel settlement and the mid-February revision of he Government's wage-stabilization regulations.

April marked a further upturn in the number of strikes. Idleness lso increased as the industry-wide controversy between the bituminous-coal operators and the United Mine Workers of America (AFL) rought a suspension of work by 340,000 soft-coal miners beginning pril 1. This dispute continued into May, so that little bituminous oal was produced during that month, except for a 2-week truce in id-May. On May 22 the Government seized the coal mines and week later it concluded an agreement with the union.

The crisis in railroad labor-management negotiations also reached the breaking point, and the Government took control of the railroads n May 17. But this action, as well as the intercession by the White House, failed to forestall a Nation-wide 2-day strike of two large naffiliated railroad unions—the Brotherhood of Locomotive Engineers and the Brotherhood of Railroad Trainmen. These two organizations had rejected the recommendations on wages and rules of a presidentially appointed fact-finding board, and their 48-hour suspension of work, from May 23 to May 25, paralyzed rail transportation throughout the country.

With the settlement of the railroad controversy, the 2-months' bituminous-coal strike, and the 8-day stoppage of 75,000 anthracite miners (the latter settled early in June), labor-management stoppages of large industry-wide proportions momentarily ended. For the first time since September 1945 idleness in June dropped below 5 million man-days. The first 6 months of 1946, however, had marked the most concentrated period of labor-management strife in the country's history. Although less than half of the year's total number of work stoppages began in the first half of 1946, these were by far the largest of any recorded during the year. They involved approximately 2,970,000 workers and, including stoppages carried over from 1945, resulted in 88.9 million man-days of idleness—77 percent of the year's total lost time, estimated at 116 million man-days.

During the 2 summer months of July and August, 1,100 stoppages occurred. Most of these dealt with wage issues. Virtually all were small, affecting relatively few workers, and idleness during each of these 2 months averaged less than in any month after VJ-day.

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[4] The United Automobile, Aircraft, and Agricultural Implement Workers of America.

[5] The United Electrical, Radio, and Machine Workers of America.

TABLE 2.—*Work stoppages in 1945 and 1946, by months*

Month	Number of stoppages—		Workers involved in stoppages—			Man-days idle during month	
	Beginning in month	In effect during month	Beginning in month	In effect during month		Number	Percent of estimated working time [2]
				Number	Percent of total employed [1]		
1945							
January	234	265	46,700	55,100	0.19	199,000	0.03
February	279	313	111,000	118,000	.41	388,000	.06
March	382	422	197,000	226,000	.78	775,000	.10
April	431	486	306,000	327,000	1.13	1,470,000	.20
May	433	517	333,000	358,000	1.24	2,220,000	.29
June	482	576	332,000	382,000	1.32	1,890,000	.25
July	523	611	325,000	413,000	1.44	1,770,000	.24
August	447	586	271,000	354,000	1.24	1,710,000	.24
September	573	730	526,000	611,000	2.26	4,340,000	.73
October	474	737	551,000	852,000	3.15	8,610,000	1.39
November	358	619	420,000	660,000	2.40	6,930,000	1.20
December	134	367	50,400	504,000	1.82	7,720,000	1.39
1946							
January	337	502	1,370,000	1,740,000	6.10	19,700,000	3.13
February	290	515	134,000	1,500,000	5.35	22,900,000	4.19
March	440	698	147,000	1,010,000	3.49	13,800,000	2.28
April	504	827	566,000	1,180,000	4.00	14,300,000	2.19
May	376	768	569,000	1,510,000	5.03	13,700,000	2.06
June	388	758	181,000	455,000	1.48	4,580,000	.75
July	563	910	228,000	408,000	1.32	3,970,000	.58
August	560	965	227,000	425,000	1.35	3,900,000	.56
September	499	853	356,000	499,000	1.57	4,880,000	.77
October	516	848	307,000	467,000	1.47	6,220,000	.85
November	344	677	435,000	707,000	2.20	4,980,000	.77
December	168	402	76,400	500,000	1.54	3,130,000	.46

[1] See footnote 2 to table 1.

[2] See footnote 3 to table 1.

September, however, brought a generally higher rate of strike activity. A serious disruption of trucking operations in and about New York City began the first of the month. On September 5 the Seafarers' International Union of North America (AFL) called a Nation-wide cessation of work after the National Wage Stabilization Board refused to approve wage increases for unlicensed seamen higher than those previously approved in June for similar groups in the National Maritime Union of America (CIO). This stoppage was characterized by AFL leaders as a protest against Government "interference" with "free collective bargaining." The stoppage was also supported by AFL and CIO longshoremen and seamen. The dispute, insofar as the Seafarers' International Union was concerned, was settled with a Government directive amending the stabilization regulations then applicable. The National Maritime Union, however, insisted that the unlicensed seamen whom it represented should have their contracts amended to incorporate the higher wage rates obtained by the AFL seamen's union. This controversy was resolved in favor of the workers after a further stoppage of approximately 10 days.

Not all of the more than 750 deep-sea vessels tied up in the AFL nd CIO stoppages of unlicensed maritime workers had weighed nchor before the expiration of contracts on September 30 between hip operators and licensed seamen. These workers, represented y the Masters, Mates, and Pilots of America (AFL) and the National Iarine Engineers' Beneficial Association (CIO), sought to have ncluded in their new collective bargaining agreements a greater legree of union recognition or "security," together with higher vages. On the Pacific Coast, contracts between the International ongshoremen's and Warehousemen's Union (CIO) and various vaterfront employers also had expired on September 30 without the arties agreeing on new terms. Over 1,000 ships were landlocked by hese stoppages, and the total number of workers idle was estimated t approximately 142,000. On the East and Gulf Coasts, settle-nents between the two licensed groups of maritime employees and hip operators were reached by the end of October, but on the West Coast the disputes involving seamen and longshoremen continued or nearly a month longer.

The autumn maritime stoppages raised the number of workers nvolved in labor-management disputes above the level of the months mmediately preceding. Idleness totaled nearly 5 million man-days in September and over 6 million man-days in October. In November, the lost time of almost 5 million man-days was substantially affected by the second industry-wide bituminous-coal stoppage which began November 21 and continued through December 7. In this controversy the Government, which had been operating the mines under the so-called Krug-Lewis agreement of May 29, 1946, insisted that the United Mine Workers could not unilaterally terminate their contract. After the miners suspended work the Government sought, and obtained, a Federal court order instructing union officials to terminate the stoppage and the miners to resume work. When the terms of the court's order were not complied with, Justice T. Alan Goldsborough of the United States District Court of the District of Columbia fined the union $3,500,000 and its president, John L. Lewis, $10,000 for contempt of court. The miners were ordered back to work by Mr. Lewis on December 7, and both the union and the Government took prompt steps to bring the legal issues in dispute before the United States Supreme Court.[6]

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[6] On March 6, 1947, the Supreme Court ruled that the anti-injunction provisions of the Norris-LaGuardia Act were not applicable to the federally operated bituminous-coal mines. The Court upheld the lower court's contempt conviction but ruled that the fine against the United Mine Workers was to be reduced from $3,500,000 to $700,000, provided the union withdrew its contract termination notice. Action to this effect was taken by the UMWA president on March 19 and on April 24 Justice Goldsborough ordered a refund of $2,800,000.

With the termination of the bituminous-coal controversy, strike activity dropped to its lowest level since VJ-day. The number of stoppages beginning in December totaled 168 and workers involved aggregated less than 80,000. At the year's end, fewer than 60,000 workers were idle in the 160 labor-management controversies then in effect. Total idleness was only about an eighth as great as during the final weeks of 1945.

Characteristics of Work Stoppages in 1946

INDUSTRIES AFFECTED

The impact of the large labor-management controversies upon the Nation's industries is reflected in the data presented in table 3.[7] Although the large-scale stoppages in such industries as steel, meat packing, electrical manufacturing, and transportation accounted for a high proportion of the total time lost, there were significant or unusual stoppages in a number of industries not disclosed by the over-all statistics. Thus, controversies involving relatively small numbers of public-school teachers, municipal employees, and utility workers had a widespread effect upon their communities. Teachers, as members of the "white collar" or "fixed income" group, were among those salaried workers particularly hard-pressed by rising living costs. They participated in 16 stoppages during the year—an unusually high number as compared with previous years. Municipal workers, whose wages in many instances are also comparatively inelastic, ceased work in some 60 cases in efforts to improve their pay or conditions of employment.

Twenty-four stoppages occurred in the heat, light, and power industries. In most of these disputes essential services were generally continued—in some cases with the aid of supervisory personnel—and settlements were usually reached in a relatively few days. The most serious and largest utility strike of the year involved the Duquesne Light Co. and associated companies in the Pittsburgh area. This stoppage continued for 27 days and disrupted commercial and industrial activity in a large segment of western Pennsylvania.

Public attention was also focused on stoppages in urban and interurban public transportation systems. Philadelphia, Los Angeles, and Detroit were among the larger cities affected by such localized controversies. Shipments of express, parcels, and freight in and about New York City were substantially curtailed on several occasions because of trucking strikes. Operations of a large air-transport company were temporarily suspended as a result of the first strike of airline pilots in the history of the country. There were also a few serious ork stoppages involving local telephone, telegraph, and wireless ompanies. As a result of these and other larger stoppages previously escribed, more workers were directly involved in labor-management ontroversies in the field of transportation, communication, and public tilities in 1946 than in any previous year on record.

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[7] Where workers in a particular industry were involved in 2 or more stoppages during the year, they were counted separately for each dispute. This explains why in some industries (bituminous-coal mining, for example) more workers were involved in work stoppages than the total number actually employed in these industries.

Table 3.—*Work stoppages beginning in 1946, by industry group*

Industry group	Stoppages beginning in 1946			Man-days idle during 1946	
	Number	Workers involved			
		Number	Percent of total employed [2]	Number	Percent of estimated working time [2]
ll industries	[1] 4,985	4,600,000	14.5	116,000,000	1.43
anufacturing	[1] 2,887	2,210,000	16.7	81,700,000	2.42
Iron and steel and their products	478	859,000	54.1	23,500,000	5.81
Electrical machinery	134	232,000	40.1	10,800,000	7.30
Machinery (except electrical)	324	244,000	20.5	13,700,000	4.51
Transportation equipment (except automobiles)	61	59,200	10.8	2,340,000	1.68
Automobiles and automobile equipment	132	163,000	21.7	15,000,000	7.81
Nonferrous metals and their products	134	78,200	18.2	4,280,000	3.91
Lumber and timber basic products	61	16,400	2.6	959,000	.60
Furniture and finished lumber products	208	44,900	10.0	1,550,000	1.36
Stone, clay, and glass products	136	32,000	7.1	1,180,000	1.02
Textile-mill products	188	50,700	3.8	1,360,000	.39
Apparel and other finished products made from fabrics and similar materials	173	24,300	2.1	574,000	.19
Leather and leather products	100	29,000	7.2	434,000	.42
Food and kindred products	278	167,000	13.4	2,220,000	.70
Tobacco manufactures	14	4,190	4.3	255,000	1.02
Paper and allied products	76	21,500	5.1	606,000	.57
Printing, publishing, and allied industries	67	14,200	3.2	326,000	.28
Chemicals and allied products	122	48,100	7.9	1,190,000	.77
Products of petroleum and coal	21	4,280	2.5	108,000	.24
Rubber products	89	99,400	39.1	813,000	1.26
Miscellaneous manufacturing industries	120	22,900	4.9	612,000	.51
onmanufacturing	[1] 2,108	2,360,000	12.8	34,100,000	.72
Agriculture, forestry, and fishing	28	17,500	(3)	219,000	(3)
Mining	570	974,000	[4]120.1	21,400,000	10.35
Construction	351	146,000	10.3	1,450,000	.40
Trade	385	64,100	.9	882,000	.05
Finance, insurance, and real estate	29	2,140	(3)	14,700	(3)
Transportation, communication, and other public utilities	479	1,020,000	27.1	9,020,000	.94
Services—personal, business, and other	206	54,700	(3)	924,000	(3)
Government—administration, protection, and sanitation	62	9,660	(3)	51,000	(3)

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[1] The total number of stoppages shown is less than the sum of the group figures which follow. The reason s, a few strikes which extended into 2 or more industry groups have been counted separately (in this table) n each industry group affected, except in the totals for all industries, with allocation of workers involved and man-days idle to the respective groups. Not included in this table were 3 strikes of a general or city-wide character (at Rochester, N. Y., Oakland, Calif., and Portland, Maine) which involved 74,000 workers and 128,000 man-days of idleness.

[2] See footnotes 2 and 3 to table 1.

[3] Not available.

[4] The number of workers involved was greater than the total employed in the mining industry; many workers participated in more than 1 stoppage during the year and were counted separately each time. Most bituminous-coal miners were out twice during the year.

TABLE 4.—*Work stoppages in 1946, by specific industry* [1]

Industry	Number of stoppages beginning in 1946	Number of workers involved [1]	Man-days idle during 1946 [1]
All industries	[2] 4, 985	4, 600, 000	116, 000, 000
Manufacturing			
Iron and steel and their products	[2] 478	859, 000	23, 500, 000
Ordnance and accessories	3	240	27, 600
Blast furnaces, steel works, and rolling mills	89	493, 000	10, 800, 000
Iron and steel foundry products	80	99, 300	2, 690, 000
Tin cans and other tinware	11	14, 700	549, 000
Wire products	23	12, 500	543, 000
Hand tools, cutlery, and general hardware	35	20, 200	1, 210, 000
Heating apparatus, enameled-iron sanitary ware, and boilershop products	108	94, 300	3, 490, 000
Metal stamping and coating	48	21, 500	726, 000
Fabricated structural metal products	31	37, 200	1, 020, 000
Miscellaneous iron and steel products	62	66, 000	2, 430, 000
Electrical machinery	[2] 134	232, 000	10, 800, 000
Electrical equipment for industrial use	53	149, 000	8, 120, 000
Electrical appliances	16	7, 280	232, 000
Insulated wire and cable	5	5, 410	147, 000
Aumotive electrical equipment	17	20, 700	457, 000
Electric lamps	4	100	4, 070
Communication equipment and related products	34	42, 600	1, 760, 000
Miscellaneous electrical products	13	7, 020	55, 600
Machinery (except electrical)	[2] 324	244, 000	13, 700, 000
Engines and turbines	10	19, 200	1, 380, 000
Agricultural machinery and tractors	51	68, 800	4, 400, 000
Construction and mining machinery	18	19, 900	959, 000
Metalworking machinery	67	24, 000	1, 050, 000
Special-industry machinery (except metalworking machinery)	63	23, 000	955, 000
General industrial machinery	78	55, 200	4, 190, 000
Office and store machines and devices	12	9, 860	153, 000
Household and service-industry machines	35	24, 200	568, 000
Transportation equipment (except automobiles)	[2] 61	59, 200	2, 340, 000
Railroad equipment	12	10, 800	311, 000
Aircraft and parts	15	21, 300	557, 000
Ships and boat building and repairing	31	25, 700	1, 380, 000
Motorcycles, bicycles, and parts	2	930	95, 100
Transportation equipment, not elsewhere classified	2	500	2, 500
Automobiles and automobile equipment	[2] 132	163, 000	15, 000, 000
Motor vehicles and motor-vehicle bodies	58	118, 000	13, 700, 000
Motor vehicle parts and accessories	71	43, 400	1, 240, 000
Automobile trailers	4	1, 790	29, 700
Nonferrous metals and their products	[2] 134	78, 200	4, 280, 000
Smelting, refining, and alloying of nonferrous metals	38	53, 200	3, 570, 000
Aluminum and magnesium products	16	9, 780	128, 000
Jewelry, silverware, and plated ware	11	1, 420	79, 900
Watches and clocks	8	770	34, 600
Engraving, plating, and polishing	14	1, 020	39, 100
Lighting fixtures	14	2, 400	94, 400
Miscellaneous nonferrous-metal products	38	9, 570	332, 000
Lumber and timber basic products	61	16, 400	959, 000
Sawmills and logging camps	39	13, 300	860, 000
Planing and plywood mills	22	3, 150	98, 600
Furniture and finished lumber products	[2] 208	44, 900	1, 550, 000
Furniture (household, office, etc.)	125	27, 300	854, 000
Office and store fixtures	10	1, 380	9, 230
Wooden containers	31	4, 020	139, 000
Window and door screens and shades	6	1, 280	25, 400
Morticians' goods	13	3, 030	98, 300
Miscellaneous wood products	26	7, 870	426, 000
Stone, clay, and glass products	[2] 136	32, 000	1, 180, 000
Glass and glass products	22	6, 160	339, 000
Cement	10	2, 180	51, 300
Structural clay products	40	9, 780	310, 000
Pottery and related products	14	4, 970	176, 000
Concrete, gypsum, and plaster products	26	3, 170	83, 30
Cut-stone and stone products	4	650	8, 660
Abrasive, asbestos, and miscellaneous nonmetallic mineral products	25	5, 100	212, 000

See footnotes at end of table.

TABLE 4.—*Work stoppages in 1946, by specific industry* [1]—Continued

Industry	Number of stoppages beginning in 1946	Number of workers involved [1]	Man-days idle during 1946 [1]
Manufacturing—Continued			
Textile-mill products	188	50,700	1,360,000
Cotton textile mills	55	19,300	812,000
Rayon and silk textile mills	13	3,540	151,000
Woolen and worsted textile mills	31	8,800	119,000
Knitting mills (except hosiery)	30	2,680	72,900
Dyeing and finishing textiles (except woolen and worsted)	9	1,520	12,700
Carpets, rugs, and other floor coverings	9	2,710	51,100
Hats (except cloth and millinery)	4	2,700	32,300
Hosiery mills	13	6,660	66,700
Miscellaneous textile goods	24	2,820	42,200
Apparel and other finished products made from fabrics and similar materials	173	24,300	574,000
Men's and boys' suits, coats, and overcoats	1	50	1,330
Men's and boys' shirts, work clothing, and allied garments	32	6,670	163,000
Women's and misses' outerwear	63	5,470	57,400
Women's undergarments and accessories	10	1,300	15,600
Millinery	2	30	670
Children's and infants' outerwear	27	1,330	11,500
Fur goods	4	110	990
Miscellaneous apparel and accessories	12	2,490	42,800
Miscellaneous fabricated textile products	22	6,810	281,000
eather and leather products	100	29,000	434,000
Leather—tanned, curried, and finished	22	2,690	105,000
Industrial leather belting and packing	2	270	15,700
Footwear (except rubber) including cut stock and findings	59	22,700	214,000
Leather gloves and mittens	2	2,090	51,200
Luggage	5	500	12,900
Handbags and small leather goods	6	600	27,900
Miscellaneous leather goods	4	160	6,930
Food and kindred products	278	167,000	2,220,000
Meat products	50	97,600	966,000
Dairy products	18	3,340	21,600
Canning and preserving fruits, vegetables, and sea foods	19	19,300	270,000
Grain-mill products	37	7,120	114,000
Bakery products	67	20,500	356,000
Sugar	3	880	58,800
Confectionery and related products	15	3,020	61,200
Beverage industries	46	9,900	189,000
Miscellaneous food preparations and kindred products	23	5,670	182,000
Tobacco manufactures	14	4,190	255,000
Cigarettes	----------	----------	165,000
Cigars	12	3,910	85,600
Tobacco stemming	2	270	5,150
Paper and allied products	76	21,500	606,000
Pulp, paper, and paperboard	34	12,200	386,000
Containers—paper and paperboard	28	4,460	170,000
Miscellaneous paper and allied products	14	4,800	49,700
Printing, publishing, and allied industries	67	14,200	326,000
Newspapers and periodicals	31	5,090	179,000
Books	2	90	3,110
Miscellaneous printing and publishing	34	9,050	143,000
Chemicals and allied products	[2] 122	48,100	1,190,000
Paints, varnishes, and colors	14	1,650	61,200
Vegetable and animal oils	9	1,770	21,100
Drugs, toilet preparations, and insecticides	17	2,440	84,600
Soap and glycerin	2	2,580	28,100
Wood distillation and naval stores	3	810	5,470
Fertilizers	12	1,520	25,600
Industrial chemicals	64	37,300	950,000
Miscellaneous chemical products	2	50	10,800
Products of petroleum and coal	21	4,280	108,000
Petroleum refining	12	1,980	28,900
Paving and roofing materials	9	2,290	78,800
Rubber products	89	99,400	813,000
Tires and inner tubes	40	78,000	492,000
Rubber footwear, heels and soles, and related products	9	5,120	42,000
Industrial rubber goods	25	13,400	228,000
Rubberized fabrics and vulcanized rubber clothing	1	270	28,200
Rubber sundries and sponge rubber	10	1,990	17,400
Miscellaneous rubber industries	4	600	4,740

See footnotes at end of table.

TABLE 4.—*Work stoppages in 1946, by specific industry* [1]—Continued

Industry	Number of stoppages beginning in 1946	Number of workers involved [1]	Man-days idle during 1946 [1]
Manufacturing—Continued			
Miscellaneous manufacturing industries	[2] 120	22, 900	612, 000
Professional and scientific instruments, photographic apparatus, and optical goods	34	10, 200	266, 000
Brooms and brushes	6	1, 270	85, 100
Musical instruments	3	1, 090	43, 300
Toys and sporting and athletic goods	13	1, 900	39, 700
Pens, pencils, and other office and artist's materials	10	1, 370	20, 400
Buttons	4	410	6, 940
Costume jewelry and miscellaneous novelties	10	700	25, 600
Fabricated plastic products	12	1, 370	39, 300
Miscellaneous industries	30	4, 630	86, 000
Nonmanufacturing			
Agriculture, forestry, and fishing	28	17, 500	219, 000
Agriculture	14	5, 610	64, 900
Fishing	14	11, 900	154, 000
Mining	570	974, 000	21, 400, 000
Metal mining	18	24, 600	1, 190, 000
Coal mining, anthracite	34	109, 000	649, 000
Coal mining, bituminous	485	834, 000	19, 500, 000
Crude petroleum and natural gas production	4	750	23, 800
Nonmetallic mining and quarrying	27	4, 700	46, 500
Miscellaneous	2	190	32, 400
Construction	351	146, 000	1, 450, 000
Building construction	312	141, 000	1, 340, 000
Highways, streets, bridges, docks, etc	31	4, 610	100, 000
Miscellaneous	8	670	10, 200
Trade	385	64, 100	882, 000
Wholesale	124	15, 500	207, 000
Retail	261	48, 760	675, 000
Finance, insurance, and real estate	29	2, 140	14, 700
Finance—banks, credit agencies, investment trusts, etc	2	140	500
Insurance	4	260	1, 860
Real estate	23	1, 740	12, 300
Transportation, communication, and other public utilities	479	1, 020, 000	9, 020, 000
Railroads	17	356, 000	912, 000
Streetcar and local bus transportation	54	33, 700	197, 000
Intercity motorbus transportation	62	12, 900	244, 000
Motortruck transportation	112	70, 600	1, 230, 000
Taxicabs	66	6, 890	69, 500
Water transportation	68	350, 000	5, 240, 000
Air transportation	2	14, 700	247, 000
Communication	24	159, 000	688, 000
Heat, light, and power	24	7, 620	57, 000
Miscellaneous	50	10, 700	140, 000
Services—personal, business, and other	206	54, 700	924, 000
Hotels	29	11, 500	265, 000
Laundries	41	5, 880	94, 500
Cleaning, dyeing, and pressing	14	1, 420	38, 500
Barber and beauty shops	8	4, 550	104, 000
Business services	14	620	10, 600
Automobile repair services and garages	22	890	12, 000
Amusement and recreation	28	24, 300	311, 000
Medical and other health services	4	110	2, 770
Educational services	26	4, 360	45, 100
Miscellaneous	20	1, 070	40, 200
Other nonmanufacturing industries	62	9, 660	51, 000
Government—administration, protection, and sanitation	62	9, 660	51, 000

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[1] Not included in this table, except in the totals for all industries, were 3 strikes of a general or city-wide character (at Rochester, N. Y., Oakland, Calif., and Portland, Maine) which involved 74,000 workers and 128,000 man-days of idleness.

[2] This figure is less than the sum of the group totals below. This is because a few strikes, each affecting more than 1 industry, have been counted as separate strikes in each industry affected, with the proper allocation of workers and man-days idle to each industry.

TABLE 5.—*Work stoppages in 1946, by industry group and major issues involved*

Industry group	Number of stoppages beginning in 1946 in which the major issues were—					
	Wages and hours	Union organization, wages, and hours	Union organization	Other working conditions	Inter- or intra-union matters	Not reported
All industries	[1] 2,244	924	722	876	253	10
Manufacturing	[1] 1,304	674	404	383	119	3
Iron and steel and their products	224	94	53	97	10	--------
Electrical machinery	57	32	29	11	5	--------
Machinery (except electrical)	151	86	42	35	9	1
Transportation equipment (except automobiles)	29	9	5	10	8	--------
Automobiles and automobile equipment	50	25	15	37	5	--------
Nonferrous metals and their products	56	36	23	13	6	--------
Lumber and timber basic products	24	18	10	3	6	--------
Furniture and finished lumber products	103	59	29	9	8	--------
Stone, clay, and glass products	79	19	16	15	6	1
Textile-mill products	76	49	34	22	7	--------
Apparel and other finished products made from fabrics and similar materials	66	58	33	8	8	--------
Leather and leather products	53	15	11	14	7	--------
Food and kindred products	123	61	43	37	14	--------
Tobacco manufactures	8	4	--------	1	1	--------
Paper and allied products	32	20	9	9	6	--------
Printing, publishing, and allied industries	36	13	10	5	3	--------
Chemicals and allied products	53	33	12	21	3	--------
Products of petroleum and coal	9	4	3	4	1	--------
Rubber products	47	9	7	24	1	1
Miscellaneous manufacturing industries	49	34	21	8	8	--------
Nonmanufacturing	[1] 915	246	317	493	130	7
Agriculture, forestry, and fishing	18	6	1	2	1	--------
Mining	133	14	44	344	30	5
Construction	236	18	34	22	40	1
Trade	162	81	109	16	16	1
Finance, insurance, and real estate	4	9	10	5	1	--------
Transportation, communication, and other public utilities	237	68	64	81	29	--------
Services—personal, business, and other	83	44	52	16	11	--------
Other nonmanufacturing industries	46	6	3	7	--------	--------
General strikes[2]	--------	--------	--------	--------	3	--------

See footnotes at end of table.

Table 5.—*Work stoppages in 1946, by industry group and major issues involved*—Con.

Industry group	Number of workers involved in stoppages in which the major issues were—					
	Wages and hours	Union organization, wages, and hours	Union organization	Other working conditions	Inter- or intra-union matters	Not reported
All industries	3,360,000	433,000	126,000	421,000	241,000	1,530
Manufacturing	1,590,000	250,000	71,300	259,000	46,800	160
Iron and steel and their products	772,000	22,600	11,800	43,800	8,640	--------
Electrical machinery	206,000	14,200	3,570	6,670	1,230	--------
Machinery (except electrical)	133,000	86,500	5,530	15,400	3,160	100
Transportation equipment (except automobiles)	22,200	7,700	2,900	14,000	12,500	--------
Automobiles and automobile equipment	55,500	18,800	11,700	74,200	2,660	--------
Nonferrous metals and their products	54,000	13,700	2,440	7,010	1,020	--------
Lumber and timber basic products	9,160	5,680	670	120	800	--------
Furniture and finished lumber products	25,200	15,800	1,870	690	1,320	--------
Stone, clay, and glass products	18,400	4,230	1,970	6,790	580	30
Textile-mill products	26,500	8,180	7,080	7,880	1,110	--------
Apparel and other finished products made from fabrics and similar material	9,350	10,500	1,890	1,140	1,400	--------
Leather and leather products	19,500	2,590	1,160	4,640	1,040	--------
Food and kindred products	127,000	7,200	8,930	18,000	5,910	--------
Tobacco manufactures	2,120	1,540	--------	180	350	--------
Paper and allied products	8,910	5,060	540	4,460	2,520	--------
Printing, publishing, and allied industries	10,900	930	1,820	460	150	--------
Chemicals and allied products	22,900	15,900	640	7,830	870	--------
Products of petroleum and coal	780	1,360	210	1,920	10	--------
Rubber products	50,100	1,460	4,300	43,100	400	20
Miscellaneous manufacturing industries	12,600	6,400	2,270	540	1,160	--------
Nonmanufacturing	1,770,000	183,000	54,400	162,000	194,000	1,370
Agriculture, forestry, and fishing	14,800	1,630	210	830	100	--------
Mining	816,000	2,420	10,300	112,000	31,800	1,270
Construction	90,400	4,150	10,700	1,470	39,000	90
Trade	40,400	6,950	5,980	3,500	7,280	10
Finance, insurance, and real estate	230	1,250	430	130	110	--------
Transportation, communication, and other public utilities	760,000	162,000	20,900	42,500	36,800	--------
Services—personal, business, and other	40,800	3,340	4,480	940	5,140	--------
Other nonmanufacturing industries	6,480	1,070	1,400	710	--------	--------
General strikes [2]	--------	--------	--------	--------	74,000	--------

See footnotes at end of table.

ABLE 5.—*Work stoppages in 1946, by industry group and major issues involved*—Con.

Industry group	Man-days idle during 1946 in stoppages in which the major issues were—					
	Wages and hours	Union organization, wages, and hours	Union organization	Other working conditions	Inter- or intra-union matters	Not reported
l industries	91,100,000	18,800,000	2,180,000	2,330,000	1,430,000	6,260
anufacturing	63,700,000	14,700,000	1,220,000	1,510,000	519,000	2,750
Iron and steel and their products	21,500,000	1,500,000	140,000	308,000	25,000	--------
Electrical machinery	10,100,000	609,000	26,100	29,300	2,110	--------
Machinery (except electrical)	7,330,000	5,930,000	169,000	154,600	76,800	160
Transportation equipment (except automobiles)	1,840,000	439,000	7,090	35,700	25,160	--------
Automobiles and automobile equipment	13,200,000	1,570,000	44,600	171,000	26,700	--------
Nonferrous metals and their products	3,660,000	505,000	70,000	31,300	9,750	--------
Lumber and timber basic products	334,000	590,000	17,700	1,130	16,300	--------
Furniture and finished lumber products	550,000	938,000	31,400	15,500	16,600	--------
Stone, clay, and glass products	949,000	163,000	21,100	41,100	2,960	2,520
Textile-mill products	396,000	354,006	316,000	287,000	6,580	--------
Apparel and other finished products made from fabrics and similar materials	80,000	422,000	37,000	6,030	29,400	--------
Leather and leather products	254,000	140,000	9,220	17,000	13,500	--------
Food and kindred products	1,620,000	167,000	173,600	137,000	126,000	--------
Tobacco manufactures	45,200	206,000	----------	1,230	3,040	--------
Paper and allied products	201,000	264,000	4,300	40,800	96,200	--------
Printing, publishing, and allied industries	205,000	25,000	66,000	8,350	21,800	--------
Chemicals and allied products	438,600	649,000	14,400	82,500	2,800	--------
Products of petroleum and coal	36,400	29,300	12,600	29,200	170	--------
Rubber products	606,000	82,600	24,200	99,800	410	70
Miscellaneous manufacturing industries	382,000	162,000	39,000	10,800	18,200	--------
nmanufacturing	27,500,000	4,040,000	954,000	827,000	915,000	3,510
Agriculture, forestry, and fishing	164,000	33,000	2,460	1,400	18,500	--------
Mining	20,500,000	95,900	142,000	503,000	118,000	2,880
Construction	859,000	68,400	325,000	8,620	187,000	600
Trade	433,000	193,000	145,600	59,800	52,000	30
Finance, insurance, and real estate	1,470	8,600	2,720	1,150	770	--------
Transportation, communication, and other public utilities	4,810,000	3,560,000	239,006	241,000	166,000	--------
Services—personal, business, and other	513,000	64,600	92,100	8,640	245,000	--------
Other nonmanufacturing industries	21,800	20,000	6,080	3,080	----------	--------
General strikes [2]	----------	----------	----------	----------	128,000	--------

This figure is less than the sum of the figures which follow. This is because a few strikes, each affecting re than 1 industry, have been counted as separate strikes in each industry affected, with the proper cation of workers involved and man-days idle to each industry.

These were strikes of a general or city-wide character in Rochester, N. Y., Oakland, Calif., and rtland, Maine.

WORK STOPPAGES, BY STATES

Although New York had the largest number of work stoppages hich began in 1946, Pennsylvania's time loss occasioned by labor-anagement controversies was approximately twice as great as that r any other State (table 6). This, of course, reflects the importance the steel and coal industries in Pennsylvania. Michigan and hio each experienced over 10 million man-days of idleness and were osely followed by such other industrialized States as New York and linois. Stoppages in these five States combined accounted for about alf of the country's total idleness.

TABLE 6.—*Work stoppages in 1946, by States*

State	Stoppages beginning in 1946			Man-days idle during 1946 (all stoppages)	
	Number	Workers involved			
		Number	Percent of total	Number	Percent of total
All States	[1]4,985	4,600,000	100.0	116,000,000	100.0
Alabama	118	121,000	2.6	2,060,000	1.8
Arizona	20	6,980	.2	257,000	.2
Arkansas	40	14,300	.3	226,000	.2
California	246	258,000	5.6	6,090,000	5.2
Colorado	26	26,200	.6	590,000	.5
Connecticut	86	59,200	1.3	3,160,000	2.7
Delaware	17	5,890	.1	95,000	.1
District of Columbia	29	21,800	.5	180,000	.2
Florida	42	17,200	.4	152,000	.1
Georgia	61	27,700	.6	540,000	.5
Idaho	13	3,290	.1	33,100	(2)
Illinois	438	339,000	7.4	9,040,000	7.8
Indiana	171	178,000	3.9	5,470,000	4.7
Iowa	66	40,700	.9	561,000	.5
Kansas	33	31,400	.7	290,000	.2
Kentucky	165	138,000	3.0	2,960,000	2.6
Louisiana	50	29,000	.6	372,000	.3
Maine	22	10,500	.2	44,800	(2)
Maryland	53	80,700	1.8	1,400,000	1.2
Massachusetts	266	111,000	2.4	3,230,000	2.8
Michigan	311	248,000	5.4	10,600,000	9.2
Minnesota	55	45,100	1.0	873,000	.8
Mississippi	26	14,600	.3	147,000	.1
Missouri	168	63,800	1.4	1,700,000	1.5
Montana	15	11,300	.2	223,000	.2
Nebraska	19	15,500	.3	235,000	.2
Nevada	9	2,260	(2)	17,000	(2)
New Hampshire	23	5,540	.1	130,000	.1
New Jersey	247	193,000	4.2	6,530,000	5.6
New Mexico	15	5,870	.1	103,000	.1
New York	679	432,000	9.4	9,350,000	8.1
North Carolina	56	14,400	.3	452,000	.4
North Dakota	9	4,250	.1	61,000	.1
Ohio	396	450,000	9.8	10,600,000	9.2
Oklahoma	42	16,800	.4	329,000	.3
Oregon	45	21,400	.5	272,,000	.2
Pennsylvania	639	877,000	19.1	20,100,000	17.3
Rhode Island	45	11,400	.2	257,000	.2
South Carolina	19	10,200	.2	388,000	.3
South Dakota	7	2,300	(2)	13,700	(2)
Tennessee	131	64,900	1.4	1,110,000	1.0
Texas	97	94,800	2.1	2,010,000	1.7
Utah	17	16,700	.4	782,000	.7
Vermont	7	2,600	.1	16,100	(2)
Virginia	108	72,200	1.6	1,240,000	1.1
Washington	79	49,600	1.1	884,000	.8
West Virginia	150	229,000	5.0	5,600,000	4.8
Wisconsin	91	73,700	1.6	4,820,000	4.2
Wyoming	10	10,600	.2	205,000	.2

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[1] The sum of this column is more than 4,985, because the stoppages extending across State lines have been counted as separate stoppages in each State affected, with the proper allocation of workers involved and man-days idle.

[2] Less than a tenth of 1 percent.

WORK STOPPAGES, BY CITIES

Four cities—New York, Chicago, Detroit, and Philadelphia—each experienced over 100 work stoppages in 1946, and 100 other cities (table 7) experienced 10 or more stoppages. Idleness directly arising out of labor-management disputes exceeded 1,000,000 man-days in 10 cities—Buffalo, Chicago, Cleveland, Detroit, Houston, Los Angeles, New York, Philadelphia, Pittsburgh, and San Francisco.

TABLE 7.—*Work stoppages in 1946 in cities which had 10 or more such stoppages during the year* [1]

City	Number of stoppages beginning in 1946	Workers involved	Man-days idle	City	Number of stoppages beginning in 1946	Workers involved	Man-days idle
Akron, Ohio	42	43,600	343,000	Lowell, Mass	12	1,930	76,200
Albany, N. Y	13	850	22,600	Lynn, Mass	12	16,400	706,000
Aliquippa, Pa	13	17,800	239,000	Memphis, Tenn	24	13,000	173,000
Allentown, Pa	20	8,450	711,000	Milwaukee, Wis	26	16,700	367,000
Atlanta, Ga	26	9,140	365,000	Minneapolis, Minn	21	9,950	187,000
Baltimore, Md	28	39,100	788,000	Mobile, Ala	20	16,600	159,000
Barberton, Ohio	10	12,000	423,000	Nashville, Tenn	14	1,880	55,500
Belleville, Ill	13	2,000	121,000	Newark, N. J	57	18,900	517,000
Birmingham, Ala	25	31,500	675,000	New Bedford, Mass	15	2,790	30,600
Boston, Mass	55	19,100	353,000	New Haven, Conn	19	4,430	95,700
Bridgeport, Conn	14	12,600	505,000	New Orleans, La	23	15,900	220,000
Buffalo, N. Y	34	38,500	1,040,000	New York, N. Y	451	222,000	3,930,000
Camden, N. J	16	10,600	48,300	Oakland, Calif	19	5,730	608,000
Cedar Rapids, Iowa	15	7,500	73,100	Passaic, N. J	15	10,100	125,000
Charleston, W. Va	12	1,340	94,000	Paterson, N. J	18	3,620	68,300
Chattanooga, Tenn	15	3,440	53,100	Pawtucket, R. I	11	1,810	29,900
Chicago, Ill	141	93,500	2,530,000	Peoria, Ill	11	4,120	186,000
Cincinnati, Ohio	37	23,000	562,000	Philadelphia, Pa	118	105,000	2,440,000
Cleveland, Ohio	83	79,000	2,210,000	Pittsburgh, Pa	64	129,000	2,690,000
Clifton, N. J	11	1,920	56,500	Portland, Oreg	18	10,300	170,000
Columbus, Ohio	15	9,250	381,000	Providence, R. I	18	5,430	89,000
Dallas, Tex	14	2,030	79,400	Reading, Pa	20	7,980	156,000
Danville, Ill	10	1,930	136,000	Richmond, Va	16	3,620	48,800
Dayton, Ohio	14	24,600	661,000	Rochester, N. Y	26	32,800	148,000
Denver, Colo	14	5,120	160,000	Rockford, Ill	12	1,060	253,000
Des Moines, Iowa	17	2,540	44,000	Rock Island, Ill	12	13,300	346,000
Detroit, Mich	134	139,000	3,290,000	St. Louis, Mo	83	21,200	998,000
Duluth, Minn	10	4,270	50,000	St. Paul, Minn	13	4,940	108,000
E. Chicago, Ind	16	20,400	391,000	Salem, Mass	10	650	7,330
E. St. Louis, Ill	21	5,220	90,400	San Diego, Calif	13	8,700	262,000
Erie, Pa	17	14,100	583,000	San Francisco, Calif	31	31,800	1,780,000
Evansville, Ind	15	3,440	31,200	Scranton, Pa	27	2,620	47,500
Fall River, Mass	18	1,030	4,290	Seattle, Wash	38	22,900	380,000
Gadsden, Ala	11	10,200	26,900	South Bend, Ind	10	6,830	172,000
Gary, Ind	12	39,700	663,000	Springfield, Ill	14	4,450	255,000
Grand Rapids, Mich.	12	3,310	230,000	Springfield, Mass	12	6,380	427,000
Hartford, Conn	16	11,200	401,000	Springfield, Mo	10	1,430	13,100
Haverhill, Mass	13	1,590	7,320	Stockton, Calif	13	1,600	17,000
Hoboken, N. J	16	15,800	265,000	Syracuse, N. Y	10	6,410	242,000
Houston, Tex	18	33,300	1,040,000	Tacoma, Wash	13	4,660	138,000
Huntington, W. Va	15	6,650	128,000	Tampa, Fla	11	3,830	52,500
Indianapolis, Ind	16	12,300	675,000	Terre Haute, Ind	16	1,100	18,500
Jackson, Mich	13	9,880	472,000	Toledo, Ohio	42	16,800	233,000
Jersey City, N. J	26	23,300	493,000	Trenton, N. J	17	8,770	270,000
Johnstown, Pa	10	15,100	325,000	Tulsa, Okla	11	2,070	58,900
Joliet, Ill	15	5,430	93,400	Washington, D. C	27	15,600	162,000
Kansas City, Mo	33	12,900	447,000	Waterbury, Conn	10	16,200	855,000
Knoxville, Tenn	15	3,730	155,000	Wheeling, W. Va	12	4,950	120,000
Lansing, Mich	10	3,470	543,000	Wilkes Barre, Pa	18	2,460	73,700
Lawrence, Mass	15	3,190	29,700	Wilmington, Del	13	1,720	32,100
Los Angeles, Calif	87	67,600	1,160,000	Worcester, Mass	11	9,190	255,000
Louisville, Ky	25	11,800	173,000	Yonkers, N. Y	10	980	12,500

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[1] Intercity stoppages, except those noted below, are counted in this table as separate stoppages in each city affected, with the proper allocation of workers involved and man-days idle to the respective cities. In a few instances it was impossible to secure the detailed data necessary to make such allocations. Therefore, the following stoppages are not included in the figures for any cities affected: (1) the Nation-wide railroad strike involving 350,000 workers in May, (2) the Oakland, Calif., area general strike involving 50,000 in December, (3) a dispute involving 5,000 employees of food canners and processors in and around the area east of Oakland, Calif., in March, (4) a strike against the Truck Owners Association of California involving 3,000 workers in September, and (5) a strike of 5,000 lumbermen in the Columbia Basin area of Oregon and Washington in September and October.

MAJOR ISSUES INVOLVED[8]

About half of the stoppages ending in 1946 arose over problems associated with the negotiation of initial agreements or changes in the provisions of existing collective-bargaining agreements. Wages were the most important single issue. The concern of workers over their ability to maintain, if not increase, their earnings was matched by doubts on the part of many employers as to the speed with which reconversion would be accomplished, the extent to which wage increases might be offset by price relief, and future trends in productivity and profits. As living costs rose, especially during the latter part of 1946, real earnings declined. Wages, or wage-and-hour problems combined, became the key issue in about 45 percent of all work stoppages which ended in 1946 (table 8). These stoppages involved 75 percent of all workers and about 82 percent of the recorded idleness. If to the above "wage-and-hour" group are added stoppages in which wage matters were combined with questions of union organization, wages were of major concern in 63 percent of the stoppages, which included 84 percent of the workers involved and 95 percent of the man-days of idleness.

Wages were also a factor in some disputes in which other issues, or groups of issues, appeared to dominate. In fact, the diversity and complexity of the causes or issues involved in work stoppages present difficult problems of classification for statistical purposes. Frequently, a considerable array of proposals and counterproposals are presented in the initial negotiations. Some of the proposals are for "trading purposes"; others represent the basic changes each party seeks to attain. Even these economic factors, if accurately appraised, do not take into account the human element—the psychology of the workers, the attitude of the employer, the strategy and tactics of union leaders—which, at times, may substantially determine which particular issue, or group of issues, will emerge as the hard core of the controversy. As a guide to the analysis of these problems, the Bureau endeavors to obtain from the parties directly involved their opinion as to the major issues in dispute. From the information thus furnished, together with other data available to the Bureau, each stoppage is classified in the manner set forth in table 8.

Problems of union organization—recognition of a labor organization by an employer, strengthening of the bargaining position, demands for a closed or union shop, and related questions—were the major factor in about 1 strike out of 7. Relatively few (2.6 percent) of the year's stoppages arose over the closed or union shop, and they involved less than 1 percent of the total number of workers affected by all stoppages. Including those additional instances in which wages were also a key issue, questions over the union or closed shop figured prominently in about 1 of every 10 stoppages ending in 1946.

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[8] The data in this and most of the following sections of the article relate to stoppages *ending* in the calendar year 1946. Thus a number of large disputes which began in 1945 and terminated in 1946 are included. These stoppages more than offset those which began in 1946 but had not ended by the close of the year. This explains, for example, the total idleness figure of 124,000,000 man-days in table 8.

TABLE 8.—*Major issues involved in work stoppages ending in 1946* [1]

Major issue	Stoppages		Workers involved		Man-days idle	
	Number	Percent of total	Number	Percent of total	Number	Percent of total
All issues	4,990	100.0	4,940,000	100.0	124,000,000	100.0
Wages and hours	2,238	44.9	3,710,000	75.1	101,000,000	81.9
Wage increase	1,570	31.6	2,250,000	45.4	76,700,000	62.0
Wage decrease	25	.5	27,000	.6	225,000	.2
Wage increase, hour decrease	82	1.6	400,000	8.1	5,220,000	4.2
Wage decrease, hour increase	2	(2)	180	(2)	420	(2)
Other[3]	559	11.2	1,040,000	21.0	19,200,000	15.5
Union organization, wages, and hours	914	18.3	439,000	8.9	16,600,000	13.4
Recognition, wages and/or hours	413	8.3	53,700	1.1	1,700,000	1.4
Strengthening bargaining position wages, and/or hours	96	1.9	183,000	3.7	5,840,000	4.7
Closed or union shop, wages, and/or hours	387	7.8	199,000	4.0	8,910,000	7.2
Discrimination, wages and/or hours	16	.3	2,970	.1	140,000	.1
Other	2	(2)	480	(2)	960	(2)
Union organization	703	14.1	129,000	2.6	2,190,000	1.8
Recognition	401	8.0	42,600	.9	852,000	.7
Strengthening bargaining position	42	.8	26,700	.5	457,000	.4
Closed or union shop	128	2.6	23,700	.5	634,000	.5
Discrimination	83	1.7	21,400	.4	133,000	.1
Other	49	1.0	14,600	.3	114,000	.1
Other working conditions	879	17.6	425,000	8.6	2,500,000	2.0
Job security	418	8.4	172,000	3.4	905,000	.8
Shop conditions and policies	355	7.1	173,000	3.5	775,000	.6
Work load	90	1.8	62,300	1.3	765,000	.6
Other	16	.3	17,600	.4	51,300	(2)
Interunion or intraunion matters	246	4.9	236,000	4.8	1,140,000	.9
Sympathy	57	1.1	148,000	3.0	459,000	.4
Union rivalry or factionalism	125	2.5	43,800	.9	539,000	.4
Jurisdiction	50	1.0	16,900	.3	110,000	.1
Union regulations	8	.2	3,460	.1	7,950	(2)
Other	6	.1	24,700	.5	25,700	(2)
Not reported	10	.2	1,530	(2)	6,260	(2)

[1] It should be noted that this and most of the subsequent tables are based on the stoppages ending in the year and that the totals differ from those in preceding tables, which show the number of stoppages beginning in the year.

[2] Less than a tenth of 1 percent.

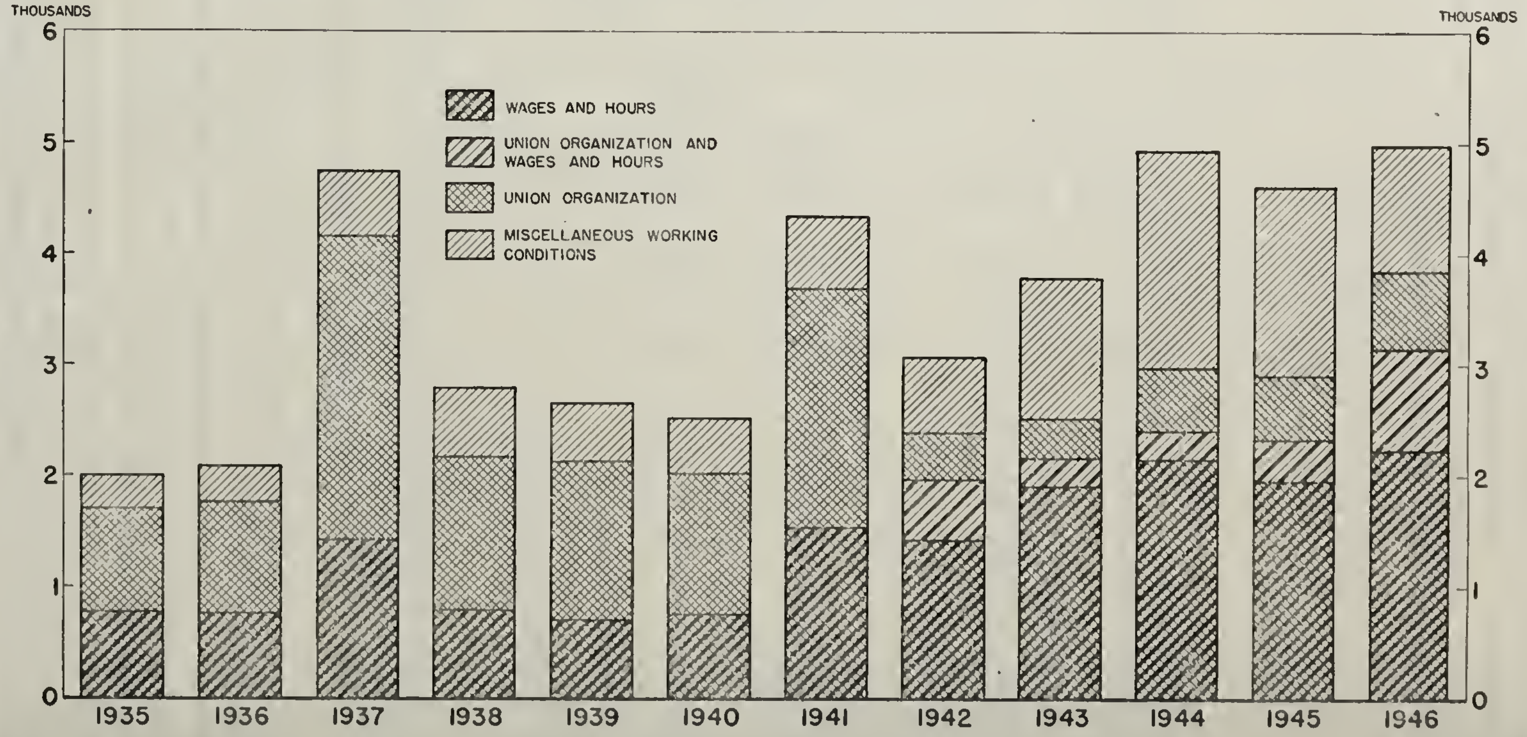
[3] Includes stoppages involving adjustments of piece rates, incentive rates, wage classifications for new and changed operations, retroactive pay, holiday and vacation pay, payment for travel time, etc.

Stoppages arising over interunion or intraunion matters, which included issues involving sympathy, union rivalry or factionalism, and jurisdiction, remained comparatively low, but they, nevertheless, attracted considerable public attention. The spotlight, in particular, was focused on those disputes which were not directed against employers but were primarily conflicts between union groups, generally called "jurisdictional strikes." The Bureau classifies these disputes as rival union strikes (those between unions of different affiliation) and jurisdictional strikes (those between unions belonging to the

CHART 4

MAJOR ISSUES INVOLVED IN WORK STOPPAGES

NUMBER OF WORK STOPPAGES



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same affiliated body). Combined, these two issues accounted for only 3.5 percent of the stoppages ending during the year, a little more than 1 percent of the workers, and about half of 1 percent of the total amount of lost time.

Outstanding as an example of a jurisdictional struggle has been the intermittent strife in Hollywood between the Conference of Studio Unions, made up primarily of AFL craft affiliates, and the more inclusive AFL International Alliance of Theatrical Stage Employees.[9] Illustrative of disputes involving union rivalry was the controversy in which the Seafarers International Union (AFL) picketed piers in New York City and other Atlantic ports urging AFL workers to refuse to handle cargo of CIO ships unless the International Longshoremen's and Warehousemen's Union (CIO) abandoned its boycott against AFL-manned ships on the West Coast.

About 1 out of every 100 stoppages involved a sympathy demonstration in which other unions ceased work to support the strike of a particular group of employees or to protest action taken by a group of employers or a public agency. In April such a sympathetic strike tied up the Port of Philadelphia when both AFL and CIO unions supported the United Harbor Workers, affiliated with District 50, United Mine Workers (AFL). The following month both AFL and CIO unions of Rochester, N. Y., staged a 1-day general stoppage to protest the refusal of the city to recognize or bargain collectively with the AFL Federation of State, County, and Municipal Employees and the city's action in discharging 500 employees in the public works department seeking to form a union. The 2-day Oakland general strike in December 1946 involved 50,000 workers. It arose as a protest against a police escort given to alleged strikebreakers by the city administration through picket lines of the AFL Retail Clerks' International Protective Association.

DURATION

The average duration of work stoppages ending in 1946 was about 24 calendar days. This simple unweighted average of all strikes, irrespective of number of workers involved, was higher than for any time since the predepression years of 1927 and 1928. It exceeded the relatively high averages which prevailed in the late 1930's during the period of intense union organizational activity. The 1946 average was more than double that of the preceding year, and 3 to 4 times as long as during the war period.

Controversies lasting 3 months or longer constituted about 6 percent of total stoppages (table 9). The significance of this group in the general strike picture, however, was more far reaching than this per-

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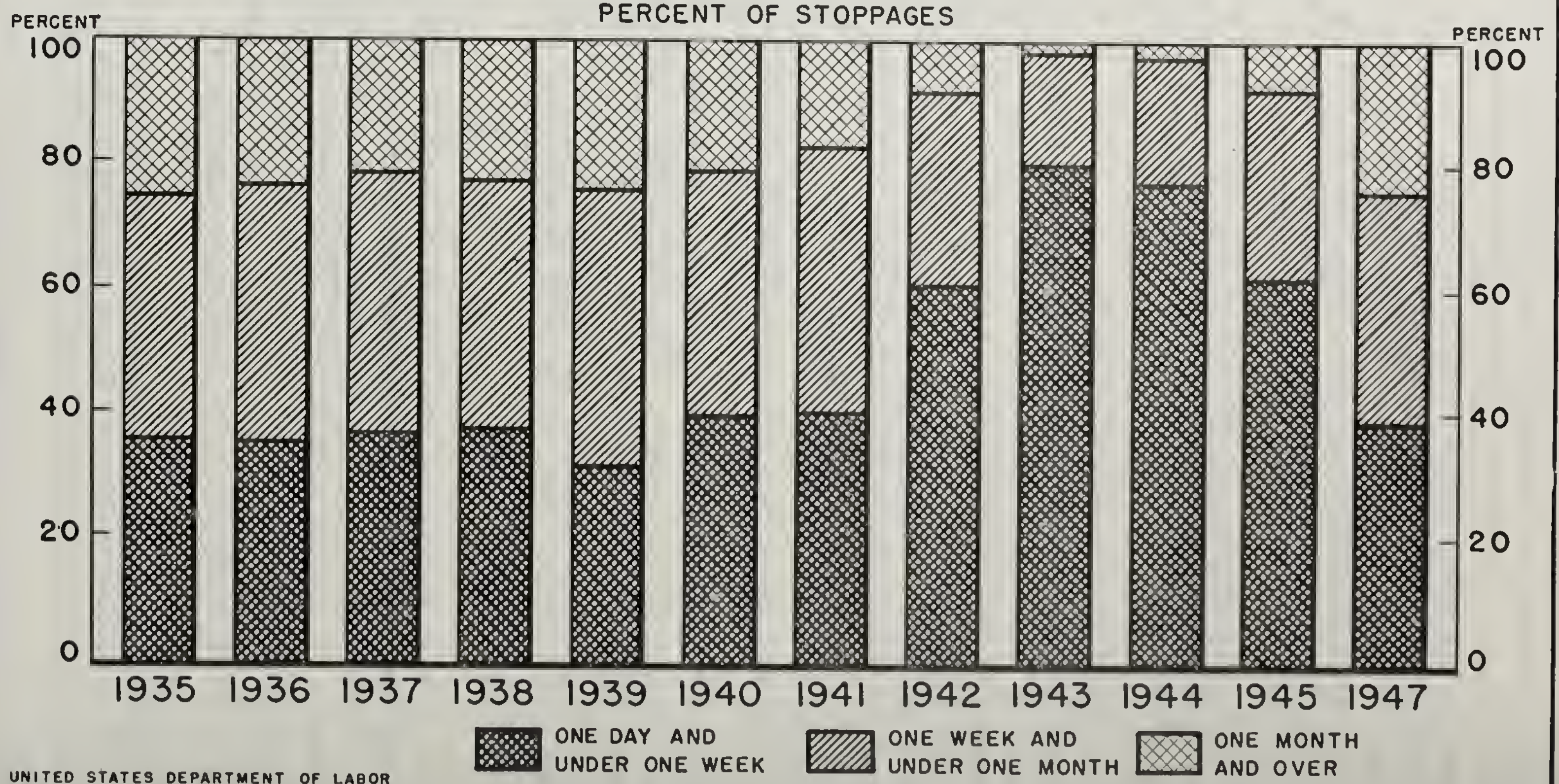
[9] International Alliance of Theatrical Stage Employees and Moving Picture Machine Operators of the United States and Canada.

CHART 5

DURATION OF WORK STOPPAGES

1935-1946

PERCENT OF STOPPAGES



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centage figure indicates. These prolonged controversies involved about a seventh of all the workers and between a third and a half of the time loss. By contrast, in 1945, only 1 strike out of every 200 continued as long as 3 months, and time lost from these stoppages comprised but a twenty-fifth of the year's total.

Of the 303 stoppages which lasted 3 months or longer, 33 involved 1,000 or more workers. Included in this group of large strikes were such prominent disputes as those involving the nonferrous metal vorkers, auto builders of Mack Truck Co. and Diamond Motors, employees of Pratt and Whitney and Yale and Towne, and California redwood lumber workers. A number of plants of the Allis-Chalmers Co., were affected by labor-management stoppages which continued for varying periods ranging from 5 to 11 months. In addition, a few strikes which began in 1945 continued throughout the entire year 1946. These included the controversy between 13 railroad unions and the Toledo, Peoria, and Western Railroad which began October 1, 1945, a Southern textile strike, and the UAW–J. I. Case dispute. The last stoppage was terminated March 9, 1947. Issues of wages or wages and union security were the principal points of disagreement in most of these prolonged controversies.

TABLE 9.—*Duration of work stoppages ending in 1946*

Duration	Stoppages		Workers involved		Man-days idle	
	Number	Percent of total	Number	Percent of total	Number	Percent of total
All periods	4, 990	100. 0	4, 940, 000	100. 0	124, 000, 000	100. 0
1 day	394	7. 9	241, 000	4. 9	241, 000	. 2
2 to 3 days	775	15. 5	692, 000	14. 0	1, 390, 000	1. 1
4 days and less than 1 week	749	15. 0	321, 000	6. 5	1, 160, 000	. 9
1 week and less than ½ month	1, 045	20. 9	672, 000	13. 6	4, 350, 000	3. 5
½ and less than 1 month	818	16. 4	730, 000	14. 8	9, 560, 000	7. 7
1 and less than 2 months	642	12. 9	1, 450, 000	29. 2	46, 600, 000	37. 6
2 and less than 3 months	264	5. 3	168. 000	3. 4	8, 740, 000	7. 1
3 months and over	303	6. 1	671, 000	13. 6	51, 800, 000	41. 9

WORK STOPPAGES, BY NUMBER OF WORKERS INVOLVED

About half of the stoppages in 1946 were small, involving fewer than 100 workers each. Groups of 100 to 500 workers were involved in a third of the stoppages, and a sixth of the total stoppages involved 500 or more workers each. The data in table 10 show for each industry group the size of the stoppages in terms of the number of workers involved. The average number of workers involved per strike was 923.

TABLE 10.—*Work stoppages beginning in 1946, classified by number of workers involved and industry group*

Industry group	Number of stoppages[1]	Median number of workers involved	Number of stoppages in which the number of workers involved was—							
			6 and under 20	20 and under 100	100 and under 250	250 and under 500	500 and under 1,000	1,000 and under 5,000	5,000 and under 10,000	10,000 and over
All industries:										
Number	4,985	100	632	1,825	1,132	623	375	328	39	31
Percent	100.0	-------	12.7	36.6	22.7	12.5	7.5	6.6	0.8	0.6
Manufacturing										
Iron and steel and their products	470	125	30	172	105	79	49	32	3	------
Electrical machinery	129	150	4	46	32	20	14	11	1	1
Machinery (except electrical)	318	128	26	106	82	52	30	18	2	2
Transportation equipment (except automobiles)	56	265	4	11	13	5	6	16	1	------
Automobiles and automobile equipment	131	250	10	31	24	10	18	29	6	3
Nonferrous metals and their products	127	90	11	54	25	16	10	10	------	1
Lumber and timber basic products	60	82	4	30	20	1	2	2	1	------
Furniture and finished lumber products	207	70	30	93	39	25	11	9	------	------
Stone, clay, and glass products	134	110	8	54	37	23	10	2	------	------
Textile-mill products	186	125	15	65	55	28	13	10	------	------
Apparel and other finished products made from fabrics and similar materials	170	68	37	74	39	14	4	2	------	------
Leather and leather products	100	113	9	38	22	17	9	5	------	------
Food and kindred products	276	86	38	108	64	27	17	21	1	------
Tobacco manufactures	14	188	2	2	4	3	2	1	------	------
Paper and allied products	75	122	2	33	21	7	7	5	------	------
Printing, publishing, and allied industries	67	75	9	32	15	5	4	1	1	------
Chemicals and allied products	120	85	25	37	21	17	7	11	2	------
Products of petroleum and coal	20	110	4	6	5	2	3	------	------	------
Rubber products	89	450	------	20	13	13	16	23	4	------
Miscellaneous manufacturing industries	119	75	19	53	25	8	9	5	------	------
Nonmanufacturing										
Agriculture, forestry, and fishing	28	265	------	7	6	4	5	6	------	------
Mining	566	180	21	141	185	116	63	34	3	3
Construction	351	80	39	149	88	28	24	17	3	3
Trade	379	40	116	150	61	31	12	8	1	------
Finance, insurance, and real estate	29	23	9	17	2	------	------	1	------	------
Transportation, communication, and other public utilities	473	68	93	185	76	52	19	34	3	11
Services—personal, business, and other	205	50	52	87	36	14	7	7	1	1
Other nonmanufacturing industries	62	74	15	22	14	6	4	1	------	------
Interindustry	21	4,512	------	2	3	------	------	6	6	4
General strikes [2]	3	-------	------	------	------	------	------	1	------	2

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[1] The total number of stoppages shown for each industry group may differ from the number shown for the corresponding group in tables 3, 4, and 5 because of the fact that in those tables each stoppage extending into more than one industry group is counted as a separate stoppage in each group affected. In table 10 such stoppages are shown at the end as "interindustry" stoppages.

[2] These were strikes of a general or city-wide character in Rochester, N. Y., Oakland, Calif., and Portland, Maine.

MAJOR STOPPAGES

The 31 stoppages beginning in 1946 in which 10,000 or more workers were involved are listed separately in table 11. These 31 stoppages involved 2,925,000 workers (64 percent of the year's total) and resulted in 67,000,000 man-days of idleness (58 percent of the yearly total).

Table 11.—*Work stoppages beginning in 1946 in which 10,000 or more workers were involved*

Beginning date	Approximate duration (calendar days)	Establishment(s) and location	Union(s) involved	Major terms of settlement	Approximate number of workers involved
Jan. 3	65	Western Electric Co., New Jersey and New York.	Western Electric Employees Association—affiliated with National Federation of Telephone Workers (Ind.).	Wage increase of 18.2 percent retroactive for 5 weeks prior to Mar. 9.	24,000
Jan. 9	7	Western Electric Co., Nation-wide	Association of Communication Equipment Workers—affiliated with National Federation of Telephone Workers (Ind.).	Equipment workers returned to work under union orders pending formal strike action by National Federation of Telephone Workers. Mar. 9 wage increase of 5 cents an hour retroactive to Apr. 21, 1945, plus a 16.4 percent wage increase retroactive to Feb. 2, 1946.	142,000
Jan. 15	(1)	Electrical Manufacturing: General Motors, General Electric, and Westinghouse plants.	United Electrical Workers (CIO)	Wage increases of 18½ cents per hour for employees of General Motors and General Electric. Westinghouse workers obtained 18-cent increase with establishment of a fund of 1 cent an hour per employee to adjust differentials between men and women.	174,000
Jan. 16	19	Meat-packing Industry, several States	United Packinghouse Workers (CIO) and Amalgamated Meat Cutters (AFL).	Wage increase of 16 cents an hour	93,000
Jan. 21	(2)	Steel, industry-wide	United Steelworkers (CIO)	Wage increase of 18½ cents an hour	750,000
Do	86	International Harvester Co., Illinois, Indiana, Iowa, and New York.	United Farm Equipment Workers (CIO)	Wage increase of 18 cents an hour	29,000
Jan. 29	29	Caterpillar Tractor Co., Peoria, Ill	United Farm Equipment Workers (CIO)	Wage increase of 15 cents an hour for employees earning $1 an hour or less, and 15 percent for those earning more than $1 an hour. Maintenance of membership provision established with 15-day escape clause.	17,000
Feb. 4	(3)	American Brass Co. and Chase Brass Co., Connecticut and New York.	Mine, Mill, and Smelter Workers (CIO)	Wage increase of 18½ cents an hour for employees of both companies. Cash settlement of one-half million dollar compensatory bonus for wartime swing-shift workers of American Brass Co.	16,000
Feb. 11	2	Philadelphia Transit Co	Transport Workers (CIO)	Wage increase of 12 cents an hour and strengthened maintenance of membership clause (preferential shop).	10,000
Mar. 14	(4)	Allis-Chalmers, 7 plants in 6 States	United Automobile Workers (CIO), United Farm Equipment Workers (CIO), United Electrical Workers (CIO), and CIO Industrial Union, 1424.	Agreements signed at various times for different plants provided 13½-cent hourly wage increase and adjustments on such issues as seniority, vacation pay, job evaluation, and grievance procedure.	25,000

See footnotes at end of table.

TABLE 11.—*Work stoppages beginning in 1946 in which 10,000 or more workers were involved*—Continued

Beginning date	Approximate duration (calendar days)	Establishment(s) and location	Union(s) involved	Major terms of settlement	Approximate number of workers involved
Apr. 1	59	Bituminous Coal Mines, industry-wide	United Mine Workers (AFL after Jan. 1946)	Basic wage increase of 18½ cents an hour; welfare fund established based upon 5-cents a ton levy on each ton produced for use or sale.	340,000
Apr. 5	6	Port of Philadelphia	CIO and AFL unions in support of the United Harbor Workers (District 50, United Mine Workers, AFL).	CIO and AFL sympathy strikers, who refused to cross picket lines of the United Harbor Workers, returned to work when pickets were withdrawn.	18,000
May 3	1	Briggs Manufacturing Co., Detroit, Mich	United Automobile Workers (CIO)	Work resumed following a 1-day stoppage in protest against the discharge of 4 employees over production standard issue.	11,000
May 23	2	Railroad Industry, Nation-wide	Brotherhood of Locomotive Engineers and Brotherhood of Railroad Trainmen (Ind.).	Wage increase of 18½ cents an hour	350,000
May 28	1	City of Rochester, N. Y	AFL and CIO Unions—general sympathy strike.	City officials issued statement that municipal employees might join any union of their choice which did not claim the right to strike against the public.	20,000
May 31	8	Anthracite Mines, Pa	United Mine Workers (AFL)	Wage increase of 18½ cents an hour and welfare fund established based upon 5-cents a ton levy on each ton produced for use or sale.	75,000
June 3	2	Association of General Contractors of America, Cincinnati, Ohio.	Hod Carriers, Building and Common Laborers (AFL).	Wage increase of 15 cents an hour	10,000
June 27	5	Railway Express Co., New York City and Hudson County, N. J.	Railway and Steamship Clerks (AFL)	Rules governing seniority and work assignments revised.	12,000
July 1	2	Motion Picture Studios, Los Angeles (Hollywood), Calif.	Conference of Studio Unions (Comprised primarily of AFL craft affiliates).	Contract effective through Dec. 31, 1947, granted increase of 25 percent in basic wage scales with provision for renegotiations of wages if area living costs, as measured by the Bureau of Labor Statistics, increase by 5 percent or more between July 1, 1946, and Jan. 1, 1947. It was stipulated that there would be a 36-hour week for "off production" workers who were previously on a day-to-day basis and that they would be given at least a week's work each time they were hired.	14,000
July 10	4	New York City and other Atlantic ports	Seafarers' International Union (AFL) and its affiliated Sailors Union of the Pacific (supported by other AFL unions). National Maritime Union (CIO).	Piers servicing CIO-manned ships picketed by AFL unions in protest against CIO boycott of AFL-manned ships on West Coast. Pickets withdrawn on East Coast when SIU and SUP accepted a Government proposal for arbitration of West Coast dispute.	11,500

July 31	(5)	Waterfront Employers' Association, San Francisco, Long Beach, and Los Angeles, Calif.	International Longshoremen's Union (CIO).	Stoppage occurred as result of the Waterfront Employers' Association's refusal to recognize the International Longshoremen's and Warehousemen's Union as bargaining agent for the longshore "walking bosses" without NLRB certification. Work resumed following announcement by NLRB that it would open oral arguments Aug. 2 on the foremen's demands for certification of the ILWU as their bargaining agent.	12,000
Aug. 12	11	Building and Construction Industry, Buffalo, N. Y.	Allied Building Trades Council (AFL)	Unions protested order of National Wage Adjustment Board to return to wage levels prevailing before July 1, thereby reducing 25-cent hourly wage increase previously denied by Board and put into effect in July during temporary expiration of wage stabilization controls. Work resumed on Board's promise to reconsider case.	18,000
Aug. 14	1	General Motors Corp.—Fisher Body Plant, Truck and Coach Division, and Pontiac Motor Division.	United Automobile Workers (CIO)	Work resumed after 1-day demonstration by war veterans who demanded vacation pay for 1946.	11,000
Aug. 29	2	Commercial and Industrial Construction, Cuyahoga, Goauga, and Lake Counties, Ohio.	Building Trades (AFL)	Building-trades employees halted work in protest against the action of the carpenters who left jobs in commercial and industrial building, objecting to decision of National Wage Adjustment Board approving rate of $1.87½ instead of $1.90 an hour. Building-trades employees terminated their stoppage when carpenters resumed work on instructions from their international union.	24,000
Sept. 1	(6)	Trucking companies, New York City area and N. J.	Brotherhood of Teamsters (AFL)	Settlements reached with some employers, led by H. C. Bohack Co., Inc., on Sept. 17, providing for $7.40 weekly raise with a 40 instead of 44-hour week. Settlements reached with practically all other employers on generally similar basis during following 6 weeks.	31,000
Sept. 5	17	Maritime Industry, unlicensed personnel—Atlantic, Gulf, and Pacific Coast ports.	Seafarers' International Union (AFL) and its affiliated Sailors Union of the Pacific (supported by other AFL and CIO unions).	Union protested against National Wage Stabilization Board disapproval of negotiated increases of $27.50 and $22.50 a month for East and West Coast seamen, respectively, which exceeded previously approved increases of $17.50 for same classes of personnel. AFL stoppage terminated when Government amended wage regulations, thus approving bargained rates.	132,000
			Upon settlement of above dispute on Sept. 12, the National Maritime Union (CIO), Marine Cooks and Stewards (CIO), and Marine Firemen, Oilers, Watertenders and Wipers Association (Ind.) renewed demands for wage adjustments equal to those obtained by AFL maritime workers.	Arbitration (Fly) award of Sept. 19 raised rates of substantially all NMU personnel to those paid AFL unions. Award of Sept. 24 extended parity increases to Marine Cooks and Stewards. Maritime Commission instructed West Coast operators to apply principles of the award to Government-owned vessels. Parity increases subsequently applied to Pacific Coast Marine Firemen and Oilers.	
		See footnotes at end of table.			

Table 11.—*Work stoppages beginning in 1946 in which 10,000 or more workers were involved*—Continued

Beginning date	Approximate duration (calendar days)	Establishment(s) and location	Union(s) involved	Major terms of settlement	Approximate number of workers involved
Sept. 11	1	Hudson Motor Car Co., Detroit, Mich.	United Automobile Workers (CIO)	Plant inspectors demanded new job classification involving increase of 5 cents an hour. Work resumed with no change in conditions.	12,000
Oct. 1	(7)	Maritime Industry, licensed personnel—Atlantic, Gulf, and Pacific Coast ports; longshoremen on Pacific Coast.	Marine Engineers' Beneficial Association (CIO), Masters, Mates & Pilots (AFL), and International Longshoremen's Union (CIO).	Strike of MEBA and MMP licensed personnel on East and Gulf Coasts terminated by end of October. Settlement provided 15-percent increase in monthly rate and 35-cent increase in overtime rate, to $1.60 an hour. Union preference in hiring secured by MEBA and for MMP except certain groups of captains. Maintenance of membership secured by MEBA and MMP exclusive of captains. West Coast stoppage terminated on Nov. 23. MEBA and MMP agreements provided for 15-percent increase in monthly rate, overtime of $1.60 an hour, and continuance of sole bargaining rights. Longshoremen secured an 11-percent wage increase.	142,000
Oct. 21	26	Transcontinental & Western Air, Inc. (Trans World Airline).	Air Line Pilots Association (AFL)	Parties agreed to submit wage and other issues to arbitration.	13,000
Nov. 21	17	Bituminous Coal Mines, industry-wide [8]	United Mine Workers (AFL)	Work resumed on basis of Krug-Lewis agreement of May 29, 1946, following court action and back-to-work order of union president.	[8] 335,000
Dec. 3	2	General strike, Oakland, Calif.	Retail Clerk's Int'l Association (AFL) in original dispute. AFL unions participated in general sympathy strike.	Strike terminated upon promise of city officials not to use police to guard "professional strikebreakers" and to refrain from "taking sides" in labor-management disputes.	50,000

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[1] General Motors Corp. (Electrical Division) settled on Feb. 9, General Electric Co. on Mar. 14, and Westinghouse Electric & Manufacturing Co. on May 10.

[2] Settlement on Feb. 15 with U. S. Steel Corp., followed by agreements with other large basic steel companies within 4 days, resulted in the return to work of approximately 450,000 employees. Virtually all the remaining 300,000 workers went back to their jobs at various dates during the next 2 months as additional settlements were reached.

[3] Chase Brass Co. settled on Apr. 6 and American Brass Co. on May 19.

[4] Duration of stoppages at various plants as follows: La Porte, Ind., Mar. 14-Oct. 12; Norwood, Ohio, Mar. 19-Sept. 28; Pittsburgh, Pa., Mar. 22-Sept. 16; Springfield, Ill., Apr. 16-Sept. 18; Hyde Park (Boston), Mass., Apr. 30-Dec. 8; La Crosse, Wis., Apr. 30-Oct. 24; West Allis, Wis., Apr. 30, 1946-Mar. 23, 1947.

[5] Majority of employees resumed work Aug. 1; some idleness continued through Aug. 1 in Los Angeles area.

[6] Some settlements were reached on Sept. 17. Virtually all other employers settled in the following 6 weeks.

[7] MEBA and MMP on East and Gulf Coasts signed agreements on Oct. 22 and Oct. 26, respectively. West Coast stoppage continued until Nov. 23.

[8] This figure does not include some 7,500 anthracite miners who were idle for 2 days during this period following an erroneous report that their president had been jailed.

METHODS OF TERMINATING WORK STOPPAGES

Despite the postwar emphasis upon a return to "free" collective bargaining, the assistance of Government agencies in terminating work stoppages was required in slightly more than half of the disputes ending in 1946 (table 12). These controversies, in the settlement of which Government conciliators and mediators participated, involved about three-fourths of all the workers. By contrast, 1 stoppage out of every 3 was settled directly by the parties affected without any outside assistance.

The United States Conciliation Service closed 3,435 work stoppage cases during 1946, a total greater than the number of work stoppages reported settled with the assistance of Government agencies (table 12). The Bureau of Labor Statistics includes in a single stoppage all employers involved in a controversy or issue that simultaneously affects a group of employers jointly, or the industry as a whole, irrespective of the number of individual employers or the number of local unions involved, and irrespective of the number of separate contract negotiations which may have taken place before the work stoppage was settled. The Conciliation Service counts as a separate work stoppage case each such negotiation to which a conciliator is assigned to aid the parties in their efforts to reach an agreement.

Frequently, in disputes involving a number of employers, agreements are reached through a series of separate negotiations between employers and local unions which result in separate and sometimes different contracts. The 1946 industry-wide steel strike involving over 1,200 separate employers was counted by the Bureau as a single stoppage. The complete termination of this work stoppage, however, required several months of separate negotiations between employers and local unions in widely scattered areas of the country. The Conciliation Service in all of its 7 regions participated in more than 140 negotiations between employers and local unions of the United Steelworkers. The Conciliation Service therefore recorded over 140 cases in this situation. The same circumstances existed, in varying degrees, in a number of other multiplant or multiemployer stoppages that occurred in 1946 where separate labor-management negotiations took place.

The activities of the Federal Government in providing aid in conciliating labor-management disputes were supplemented in many instances by the work of similar State agencies. Various municipalities also manifested an increasing interest in developing machinery to solve their local labor-management controversies, and in this connection the Toledo (Ohio) Labor-Management Citizens-Committee plan for industrial peace received widespread attention. Other municipalities, such as New York, established new or additional machinery to facilitate the peaceful adjustment of labor disputes.

About 1 out of every 9 stoppages ended without any formal settlement. Most of these cases involved relatively small groups of workers. In a few instances (36) the employer was reported to have discontinued business allegedly because of labor difficulties.

Government seizure of plants or an industry because of a labor-management controversy occurred in 5 instances in 1946. These cases involved the large meat-packing companies, New York harbor tugboats, bituminous-coal mines, and the railroads on two separate occasions, one of which involved virtually all of the Nation's railroads and the other a single industrial carrier. This was in marked contrast with the two preceding years, when seizure by the Federal Government was resorted to on 24 occasions in 1945 and 19 in 1944.

TABLE 12.—*Methods of terminating work stoppages ending in 1946*

Method of termination	Stoppages		Workers involved		Man-days idle	
	Number	Percent of total	Number	Percent of total	Number	Percent of total
All methods of termination	4,990	100.0	4,940,000	100.0	124,000,000	100.0
Agreement of parties reached—						
Directly	1,675	33.6	1,030,000	20.8	23,900,000	19.3
With assistance of impartial chairmen	12	.2	2,060	(1)	30,100	(1)
With assistance of Government agencies	2,656	53.3	3,670,000	74.3	97,900,000	79.1
Terminated without formal settlement	579	11.6	236,000	4.8	1,730,000	1.4
Employers discontinued business	36	.7	2,280	(1)	150,000	.1
Not reported	32	.6	4,800	.1	91,800	.1

[1] Less than a tenth of 1 percent.

RESULTS OF WORK STOPPAGES

Tables 13, 14, and 15 present data indicating the extent of success or failure of the stoppages ending in 1946 insofar as such results can be ascertained or measured. In four out of five stoppages the issues were resolved or disposed of at the time the stoppages terminated. In about 40 percent of the stoppages the workers involved obtained substantially what they had demanded; in 22 percent they settled on a compromise basis, obtaining part of their demands; in 13 percent they gained little or nothing; and in 18 percent the issues were to be negotiated further and settled after termination of the stoppages. Wage strikes were the most successful from the workers' viewpoint. The issues in most of the smaller stoppages and the extremely large strikes were definitely settled or disposed of when the stoppages terminated whereas about a fourth of the stoppages involving 500 and up to 10,000 workers were terminated with the issues to be further negotiated or settled later.

TABLE 13.—*Results of work stoppages ending in 1946*

Result	Stoppages		Workers involved		Man-days idle	
	Number	Percent of total	Number	Percent of total	Number	Percent of total
Total	4, 990	100. 0	4, 940, 000	100. 0	124, 000, 000	100. 0
Issues settled at strike termination	4, 036	80. 9	4, 180, 000	84. 6	117, 000, 000	94. 9
Substantial gains to workers	2, 017	40. 4	2, 350. 000	47. 7	84, 800, 000	68. 5
Partial gains or compromises	1, 091	21. 9	1, 030, 000	20. 8	21, 400, 000	17. 3
Little or no gains	630	12. 6	559, 000	11. 3	9, 550, 000	7. 7
Indeterminate	298	6. 0	239, 000	4. 8	1, 740, 000	1. 4
Issues to be negotiated	910	18. 2	757, 000	15. 3	6, 070, 000	4. 9
By parties concerned	379	7. 6	364, 000	7. 4	1, 830, 000	1. 5
By Government agencies	434	8. 7	338, 000	6. 8	3, 800, 000	3. 1
By private arbitrators	97	1. 9	55, 000	1. 1	433, 000	. 3
Not reported	44	. 9	7, 120	. 1	210, 000	. 2

TABLE 14.—*Results of work stoppages in 1946 in relation to major issues involved*

Major issue	Total		Issues settled at termination of stoppages				Issues to be negotiated or settled by or with the help of—			Results not reported
	Number	Percent	Substantial gains to workers	Partial gains or compromises	Little or no gains	Indeterminate	Parties concerned	Government agencies	Private arbitrators	
	Stoppages		Percent of stoppages							
All issues	4, 990	100. 0	40. 4	21. 9	12. 6	6. 0	7. 6	8. 7	1. 9	0. 9
Wages and hours	2, 238	100. 0	47. 8	27. 0	7. 1	1. 8	6. 9	6. 9	1. 7	. 8
Union organization, wages, and hours	914	100. 0	45. 6	33. 9	7. 9	1. 8	3. 3	6. 1	1. 0	. 4
Union organization	703	100. 0	37. 1	8. 4	24. 3	3. 4	5. 3	19. 1	1. 8	. 6
Other working conditions	879	100. 0	28. 7	13. 1	23. 2	7. 8	16. 6	5. 0	4. 0	1. 6
Inter- or intra-union matters	246	100. 0	6. 9	1. 2	8. 9	59. 8	4. 1	18. 7	. 4	-------
Not reported	10	100. 0	------	------	30. 0	20. 0	10. 0	------	------	40. 0
	Workers involved		Percent of workers involved							
All issues	4, 940, 000	100. 0	47. 7	20. 8	11. 3	4. 8	7. 4	6. 8	1. 1	. 1
Wages and hours	3, 710, 000	100. 0	57. 9	16. 5	11. 9	. 4	6. 0	6. 4	. 8	. 1
Union organization, wages, and hours	439, 000	100. 0	16. 9	72. 2	2. 0	1. 1	3. 0	3. 9	. 7	. 2
Union organization	129, 000	100. 0	19. 8	12. 3	17. 8	4. 7	16. 2	26. 3	2. 2	. 7
Other working conditions	425, 000	100. 0	23. 3	14. 6	17. 4	8. 7	24. 7	6. 5	4. 5	. 3
Inter- or intra-union matters	236, 000	100. 0	3. 2	8. 6	5. 0	73. 9	. 8	8. 5	[1]	-------
Not reported	1, 530	100. 0	------	------	10. 6	41. 9	1. 7	------	------	45. 8

[1] Less than a tenth of 1 percent.

TABLE 15.—*Results of work stoppages ending in 1946 in relation to number of workers involved*

Size of stoppages in terms of number of workers involved	Total	Issues settled at strike termination				Issues to be negotiated by—			Results not reported
		Substantial gains to workers	Partial gains or compromises	Little or no gains to workers	Indeterminate	Parties concerned	Government agencies	Private arbitrators	
	Number of stoppages								
All stoppages	4,990	2,017	1,091	630	298	379	434	97	44
6 and under 20	620	287	96	114	41	28	46	4	4
20 and under 100	1,798	773	391	224	96	106	164	24	20
100 and under 250	1,142	477	253	129	69	73	99	28	14
250 and under 500	632	239	150	78	31	63	56	14	1
500 and under 1,000	378	119	96	39	27	52	30	10	5
1,000 and under 5,000	343	99	85	42	24	49	27	17	--------
5,000 and under 10,000	40	10	12	1	6	6	5	--------	--------
10,000 and over	37	13	8	3	4	2	7	--------	--------
	Percent of stoppages								
All stoppages	100.0	40.4	21.9	12.6	6.0	7.6	8.7	1.9	0.9
6 and under 20	100.0	46.4	15.5	18.4	6.6	4.5	7.4	.6	.6
20 and under 100	100.0	43.1	21.7	12.5	5.3	5.9	9.1	1.3	1.1
100 and under 250	100.0	41.7	22.2	11.3	6.0	6.4	8.7	2.5	1.2
250 and under 500	100.0	37.8	23.7	12.3	4.9	10.0	8.9	2.2	.2
500 and under 1,000	100.0	31.6	25.4	10.3	7.1	13.8	7.9	2.6	1.3
1,000 and under 5,000	100.0	28.8	24.8	12.2	7.0	14.3	7.9	5.0	--------
5,000 and under 10,000	100.0	25.0	30.0	2.5	15.0	15.0	12.5	--------	--------
10,000 and over	100.0	35.2	21.6	8.1	10.8	5.4	18.9	--------	--------

STOPPAGES, BY UNION AFFILIATION

Slightly more than half of all work stoppages ending in 1946 involved affiliates of the American Federation of Labor (table 16). Unions affiliated with the Congress of Industrial Organizations participated in a third of the year's stoppages. Reflecting the type of organization characteristic of CIO unions, somewhat more workers were involved in CIO than AFL stoppages, and the resultant idleness, owing principally to a relatively few large strikes, was substantially greater for the CIO than for the AFL.

In a small number of controversies (2.4 percent), two or more unions of different affiliation—AFL, CIO, or independent (unaffiliated)—were rival participants. Most of these cases centered about organizational or jurisdictional claims. In a few cases (0.6 percent), two or more different union groups participated jointly in strike action. Such cooperative relationships between AFL and CIO, or between either or both of these groups and one or more unaffiliated unions, prevailed in some of the maritime controversies and in various sympathy demonstrations.

About 1 out of every 16 stoppages ending in 1946 involved an independent labor organization, i. e., a union not affiliated with a larger federated group such as the AFL or CIO. The number of strikes occurring in this group has fluctuated considerably in recent years with the shifting status of such large unions as the United Mine Workers and the International Association of Machinists. More than half of the workers involved in the unaffiliated group of unions were affected by stoppages involving the railroad brotherhoods, principally the Nation-wide rail strike of May 1946.

Single-firm unions—organizations confined to employees of one company—participated in 18 relatively small stoppages. By contrast, there were 97 strikes in which no union was identified as a party to the controversy.

Table 16.—*Work stoppages ending in 1946, by affiliation of labor organizations involved*

Labor organizations involved	Stoppages		Workers involved		Man-days idle	
	Number	Percent of total	Number	Percent of total	Number	Percent of total
All affiliations	4,990	100.0	4,940,000	100.0	124,000,000	100.0
American Federation of Labor	2,735	54.8	1,680,000	33.9	35,300,000	28.5
Congress of Industrial Organizations	1,663	33.3	2,070,000	41.8	73,100,000	59.1
Unaffiliated unions	317	6.4	649,000	13.1	4,670,000	3.8
Rival unions (different affiliations)	119	2.4	42,700	.9	535,000	.4
Cooperating unions (different affiliations)	29	.6	484,000	9.8	10,000,000	8.1
Single-firm unions	18	.4	9,190	.2	106,000	.1
No unions	97	1.9	13,500	.3	54,700	(1)
Affiliation not reported	12	.2	930	(1)	4,120	(1)

[1] Less than a tenth of 1 percent.

ESTABLISHMENTS INVOLVED

As in previous years, by far the largest number of stoppages ending n 1946 (74 percent) involved but 1 mill, factory, plant, or establishnent (table 17). Almost 1 million workers were directly affected by hese disputes. On the other hand, the relatively small proportion (7.2 percent) of stoppages involving 11 or more establishments was nore than double that recorded for 1945 and accounted for 70 percent of all workers and 75 percent of the year's time loss. Included in the atter totals were, of course, the large multiplant and multiemployer toppages which dominated the pattern of labor-management stopages in 1946.

Table 17.—*Work stoppages ending in 1946, by number of establishments involved*

Number of establishments involved [1]	Stoppages		Workers involved		Man-days idle	
	Number	Percent of total	Number	Percent of total	Number	Percent of total
All establishments	4,990	100.0	4,940,000	100.0	124,000,000	100.0
establishment	3,698	74.0	998,000	20.2	17,700,000	14.3
to 5 establishments	756	15.2	407,000	8.2	11,000,000	8.9
to 10 establishments	178	3.6	92,000	1.9	2,410,000	1.9
1 establishments and over	358	7.2	3,440,000	69.7	92,700,000	74.9

[1] An establishment, for purposes of this table, is defined as a single physical work place—a factory, mine, onstruction job, etc. Some of the year's stoppages involved several establishments of a single employer; thers involved establishments of different employers.

Work Stoppages in Each State, By Industry Group

Thirty-four of the 48 States had 25 or more work stoppages during 1946. In table 18 the stoppages in each of these 34 States are classified according to industry groups.

TABLE 18.—*Work stoppages in 1946 in States which had 25 or more stoppages during the year, by industry group*

State and industry group	Number of—		
	Stoppages	Workers involved	Man-days idle during 1946
Alabama	[1] 118	121,000	2,060,000
Iron and steel and their products	12	29,800	661,000
Electrical machinery	1	1,010	3,020
Automobiles and automobile equipment	1	350	1,750
Nonferrous metals and their products	1	580	11,700
Lumber and timber basic products	4	210	3,880
Furniture and finished lumber products	6	490	13,800
Stone, clay, and glass products	5	630	10,300
Textile-mill products	10	5,890	12,000
Apparel and other finished products made from fabrics and similar materials	3	1,810	47,100
Food and kindred products	3	1,840	22,400
Printing, publishing, and allied industries	1	20	320
Chemicals and allied products	1	100	1,100
Rubber products	2	6,380	15,200
Mining	36	46,700	1,080,000
Construction	8	8,500	21,200
Trade	4	420	8,220
Transportation, communication, and other public utilities	19	16,000	137,000
Services—personal, business, and other	3	560	16,600
Arkansas	40	14,300	226,000
Iron and steel and their products	3	170	3,760
Machinery (except electrical)	-----	-----	90
Lumber and timber basic products	2	250	11,100
Furniture and finished lumber products	3	1,180	15,400
Stone, clay, and glass products	2	530	12,100
Food and kindred products	1	50	3,630
Chemicals and allied products	1	60	1,650
Mining	8	5,600	141,000
Construction	7	510	5,520
Trade	4	180	9,670
Transportation, communication, and other public utilities	8	5,710	22,000
Services—personal, business, and other	1	10	10
California	[1] 246	258,000	6,090,000
Iron and steel and their products	16	19,300	699,000
Electrical machinery	3	2,550	231,000
Machinery (except electrical)	12	870	244,000
Transportation equipment (except automobiles)	7	4,560	1,420,000
Automobiles and automobile equipment	3	1,150	92,700
Nonferrous metals and their products	5	2,320	80,700
Lumber and timber basic products	9	4,300	517,000
Furniture and finished lumber products	18	5,270	186,000
Stone, clay, and glass products	4	520	6,000
Textile-mill products	4	230	10,400
Apparel and other finished products made from fabrics and similar materials	7	440	23,200
Leather and leather products	6	520	23,300
Food and kindred products	20	15,700	413,000
Tobacco manufactures	-----	-----	20,500
Paper and allied products	2	40	32,300
Printing, publishing, and allied industries	5	1,420	83,000
Chemicals and allied products	3	230	53,900
Products of petroleum and coal	2	140	20,100
Rubber products	2	2,110	38,200
Miscellaneous manufacturing industries	1	90	4,230
Agriculture, forestry, and fishing	10	10,100	73,700
Mining	2	220	7,360
Construction	19	2,990	28,900
Trade	36	11,200	174,000
Transportation, communication, and other public utilities	31	102,000	1,220,000
Services—personal, business, and other	21	19,700	279,000
Other nonmanufacturing industries	3	310	1,310
General strike	1	50,000	100,000

See footnote at end of table.

TABLE 18.—*Work stoppages in 1946 in States which had 25 or more stoppages during the year, by industry group*—Continued

State and industry group	Number of—		
	Stoppages	Workers involved	Man-days idle during 1946
Colorado	[1] 26	26, 200	590, 000
Iron and steel and their products	1	4, 860	103, 000
Machinery (except electrical)	1	80	3, 590
Transportation equipment (except automobiles)	1	40	2, 060
Nonferrous metals and their products	1	340	29, 700
Food and kindred products	2	1, 800	20, 500
Mining	3	10, 500	287, 000
Construction	5	830	2, 090
Trade	4	2, 070	87, 800
Transportation, communication, and other public utilities	6	5, 290	29, 800
Services—personal, business, and other	3	430	24, 300
Connecticut	[1] 86	59, 200	3, 160, 000
Iron and steel and their products	13	4, 360	333, 000
Electrical machinery	1	9, 490	482, 000
Machinery (except electrical)	6	11, 200	421, 000
Transportation equipment (except automobiles)	1	1, 200	46, 500
Automobiles and automobile equipment	1	160	471, 000
Nonferrous metals and their products	6	19, 900	1, 260, 000
Furniture and finished lumber products	2	130	2, 320
Stone, clay, and glass products	2	150	2, 060
Textile-mill products	3	1, 510	7, 410
Apparel and other finished products made from fabrics and similar materials	2	60	1, 310
Food and kindred products	5	110	2, 030
Paper and allied products	1	70	880
Printing, publishing, and allied industries	1	10	190
Chemicals and allied products	1	70	630
Products of petroleum and coal	1	20	100
Rubber products	2	850	10, 300
Miscellaneous manufacturing industries	4	1, 140	38, 700
Construction	7	1, 230	7, 350
Trade	11	990	8, 140
Transportation, communication, and other public utilities	12	6, 100	57, 700
Services—personal, business, and other	6	480	2, 410
Other nonmanufacturing industries	1	80	600
District of Columbia	29	21, 800	180, 000
Food and kindred products	2	1, 430	8, 710
Construction	5	2, 100	4, 560
Trade	8	720	20, 400
Transportation, communication, and other public utilities	9	12, 300	54, 200
Services—personal, business, and other	5	5, 310	92, 000
Florida	42	17, 200	152, 000
Furniture and finished lumber products	----------	----------	2, 100
Apparel and other finished products made from fabrics and similar materials	2	70	2, 730
Food and kindred products	2	80	2, 000
Tobacco manufactures	2	1, 450	14, 500
Paper and allied products	2	400	6, 200
Printing, publishing, and allied industries	----------	----------	940
Agriculture, forestry, and fishing	1	210	2, 460
Mining	2	330	7, 020
Construction	5	790	8, 880
Trade	5	150	2, 020
Transportation, communication, and other public utilities	18	13, 400	102, 000
Services—personal, business, and other	2	200	1, 310
Other nonmanufacturing industries	1	110	210
Georgia	[1] 61	27, 700	540, 000
Iron and steel and their products	8	1, 840	83, 500
Electrical machinery	1	420	40, 400
Machinery (except electrical)	3	90	2, 900
Automobiles and automobile equipment	----------	----------	95, 300
Lumber and timber basic products	1	30	320
Stone, clay, and glass products	2	800	5, 180
Textile-mill products	4	2, 360	166, 000
Food and kindred products	5	2, 420	25, 300
Printing, publishing, and allied industries	4	320	1, 650
Chemicals and allied products	1	40	1, 600
Miscellaneous manufacturing industries	1	550	5, 550
Mining	2	90	2, 770
Construction	6	570	8, 930
Trade	4	120	3, 500
Transportation, communication, and other public utilities	18	17, 900	94, 100
Services—personal, business, and other	1	70	2, 650
Other nonmanufacturing industries	1	60	110

See footnote at end of table.

TABLE 18.—*Work stoppages in 1946 in States which had 25 or more stoppages during the year, by industry group*—Continued

State and industry group	Number of—		
	Stoppages	Workers involved	Man-days idle during 1946
Illinois	[1] 438	339,000	9,040,000
Iron and steel and their products	50	52,600	1,870,000
Electrical machinery	18	4,180	125,000
Machinery (except electrical)	60	68,600	2,820,000
Transportation equipment (except automobiles)	5	2,780	25,300
Automobiles and automobile equipment	10	2,970	682,000
Nonferrous metals and their products	17	3,820	207,000
Lumber and timber basic products	3	130	4,280
Furniture and finished lumber products	20	2,720	162,000
Stone, clay, and glass products	13	2,330	81,000
Textile-mill products	3	300	6,160
Apparel and other finished products made from fabrics and similar materials	10	1,180	10,900
Leather and leather products	6	1,180	7,800
Food and kindred products	32	36,200	466,000
Tobacco manufactures	1	110	2,640
Paper and allied products	6	3,160	37,900
Printing, publishing, and allied industries	4	550	3,490
Chemicals and allied products	10	4,930	167,000
Products of petroleum and coal	2	610	12,700
Miscellaneous manufacturing industries	8	850	23,000
Mining	66	98,300	1,920,000
Construction	27	1,800	18,900
Trade	25	4,200	25,000
Finance, insurance, and real estate	1	90	640
Transportation, communication, and other public utilities	33	44,000	345,000
Services—personal, business, and other	14	1,000	28,500
Other nonmanufacturing industries	1	90	360
Indiana	[1] 171	178,000	5,470,000
Iron and steel and their products	31	72,600	1,410,000
Electrical machinery	4	14,900	617,000
Machinery (except electrical)	14	13,500	781,000
Transportation equipment (except automobiles)	3	6,900	94,800
Automobiles and automobile equipment	6	5,540	1,540,000
Nonferrous metals and their products	4	980	103,000
Furniture and finished lumber products	10	1,500	52,000
Stone, clay, and glass products	10	5,040	55,000
Textile-mill products	1	100	2,500
Apparel and other finished products made from fabrics and similar materials	1	500	1,000
Leather and leather products	2	4,590	31,300
Food and kindred products	7	4,720	65,300
Paper and allied products	3	230	4,140
Chemicals and allied products	2	330	2,980
Products of petroleum and coal	1	130	3,390
Rubber products	2	420	3,320
Miscellaneous manufacturing industries	3	850	34,900
Mining	22	28,300	614,000
Construction	11	1,970	14,600
Trade	9	320	4,860
Transportation, communication, and other public utilities	25	14,200	41,700
Services—personal, business, and other	3	120	1,140
Other nonmanufacturing industries	2	170	650
Iowa	66	40,700	561,000
Iron and steel and their products	6	410	10,900
Machinery (except electrical)	10	3,610	145,000
Transportation equipment (except automobiles)	1	60	4,180
Automobiles and automobile equipment	----------	----------	5,690
Nonferrous metals and their products	1	150	7,350
Lumber and timber basic products	1	220	13,400
Furniture and finished lumber products	1	130	130
Stone, clay, and glass products	1	40	70
Apparel and other finished products made from fabrics and similar materials	1	50	80
Food and kindred products	11	20,300	153,000
Paper and allied products	1	80	405
Chemicals and allied products	1	20	100
Rubber products	2	1,500	7,090
Miscellaneous manufacturing industries	1	20	600
Mining	2	5,530	154,000
Construction	7	690	6,270
Trade	7	190	4,700
Transportation, communication, and other public utilities	7	7,660	45,600
Services—personal, business, and other	3	50	1,770
Other nonmanufacturing industries	2	40	150

See footnote at end of table.

TABLE 18.—*Work stoppages in 1946 in States which had 25 or more stoppages during the year, by industry group*—Continued

State and industry group	Number of—		
	Stoppages	Workers involved	Man-days idle during 1946
Kansas	33	31, 400	290, 000
Iron and steel and their products	2	40	290
Machinery	3	260	6, 900
Stone, clay, and glass products	1	120	5, 040
Food and kindred products	8	10, 500	88, 300
Printing, publishing, and allied industries	1	20	460
Chemicals and allied products	1	90	860
Rubber products	1	1, 000	2, 400
Mining	5	3, 460	87, 700
Construction	5	1, 850	15, 000
Trade	3	180	1, 150
Transportation, communication, and other public utilities	3	13, 900	81, 700
Kentucky	[1] 165	138, 000	2, 960, 000
Iron and steel and their products	4	8, 900	228, 000
Transportation equipment (except automobiles)	1	20	940
Automobiles and automobile equipment	1	40	840
Nonferrous metals and their products	2	3, 390	9, 760
Lumber and timber basic products	2	200	420
Furniture and finished lumber products	2	180	180
Stone, clay, and glass products	5	770	28, 100
Textile-mill products	2	580	20, 300
Food and kindred products	5	940	12, 500
Miscellaneous manufacturing industries	1	30	210
Mining	104	108, 000	2, 600, 000
Construction	10	1, 730	7, 200
Trade	7	240	8, 080
Transportation, communication, and other public utilities	15	13, 100	49, 400
Services—personal, business, and other	3	140	1, 660
Other nonmanufacturing industries	2	170	830
ouisiana	50	29, 000	372, 000
Machinery (except electrical)	1	30	230
Transportation equipment (except automobiles)	1	1, 900	2, 340
Nonferrous metals and their products	1	40	3, 780
Lumber and timber basic products	4	640	41, 700
Furniture and finished lumber products	1	60	2, 310
Stone, clay, and glass products	1	180	21, 800
Apparel and other finished products made from fabrics and similar materials	2	280	12, 800
Food and kindred products	10	1, 430	21, 100
Tobacco manufactures	1	200	4, 200
Chemicals and allied products	3	370	2, 820
Products of petroleum and coal	2	1, 800	28, 400
Mining	2	220	33, 500
Construction	5	1, 420	8, 840
Trade	2	20	250
Finance, insurance, and real estate	1	70	4, 230
Transportation, communication, and other public utilities	10	19, 900	181, 000
Services—personal, business, and other	1	90	180
Other nonmanufacturing industries	2	330	2, 200
Maryland	53	80, 700	1, 400, 000
Iron and steel and their products	3	25, 000	584, 000
Electrical machinery	2	5, 540	139, 000
Machinery (except electrical)	3	740	24, 400
Transportation equipment (except automobiles)	1	2, 500	4, 600
Automobiles and automobile equipment			59, 500
Nonferrous metals and their products	3	1, 780	83, 000
Furniture and finished lumber products	1	10	6, 090
Textile-mill products	1	160	5, 650
Apparel and other finished products made from fabrics and similar materials	2	140	260
Food and kindred products	3	470	5, 140
Printing, publishing, and allied industries	2	100	1, 150
Chemicals and allied products	1	20	240
Rubber goods	3	5, 000	14, 600
Miscellaneous manufacturing industries	2	380	26, 000
Agriculture, forestry, and fishing	1	450	6, 750
Mining	2	3, 140	86, 400
Construction	2	10	150
Trade	6	620	6, 530
Finance, insurance, and real estate	1	40	670
Transportation, communication, and other public utilities	13	34, 600	343, 000
Other nonmanufacturing industries	1	10	50

See footnote at end of table.

TABLE 18.—*Work stoppages in 1946 in States which had 25 or more stoppages during the year, by industry group*—Continued

State and industry group	Number of— Stoppages	Workers involved	Man-days idle during 1946
Massachusetts	[1]266	111,000	3,230,000
Iron and steel and their products	13	14,300	386,000
Electrical machinery	13	33,600	1,630,000
Machinery (except electrical)	12	8,880	344,000
Transportation equipment (except automobiles)	5	5,090	37,300
Automobiles and automobile equipment	3	180	5,850
Nonferrous metals and their products	4	1,380	29,300
Furniture and finished lumber products	22	730	11,700
Stone, clay, and glass products	1	30	90
Textile-mill products	27	4,610	79,000
Apparel and other finished products made from fabrics and similar materials	11	1,220	12,200
Leather and leather products	39	6,140	86,600
Food and kindred products	10	3,200	47,100
Tobacco manufactures	----	----	2,510
Paper and allied products	2	810	4,110
Printing, publishing, and allied industries	6	820	42,100
Chemicals and allied products	6	920	50,300
Products of petroleum and coal	1	30	1,330
Rubber products	6	2,450	45,500
Miscellaneous manufacturing industries	8	1,380	50,600
Agriculture, forestry, and fishing	1	2,200	62,300
Mining	1	2,320	99,900
Construction	13	2,240	42,700
Trade	23	2,100	22,100
Transportation, communication, and other public utilities	31	15,300	129,000
Services—personal, business, and other	14	1,160	7,100
Other nonmanufacturing industries	1	20	320
Michigan	[1]311	248,000	10,600,000
Iron and steel and their products	43	32,800	706,000
Electrical machinery	3	240	9,110
Machinery (except electrical)	37	17,300	779,000
Transportation equipment (except automobiles)	11	7,230	61,200
Automobiles and automobile equipment	64	113,000	8,010,000
Nonferrous metals and their products	11	5,900	270,000
Lumber and timber basic products	3	280	7,330
Furniture and finished lumber products	14	2,410	50,400
Stone, clay, and glass products	2	330	12,400
Textile-mill products	2	470	5,900
Apparel and other finished products made from fabrics and similar materials	2	220	1,800
Leather and leather products	1	120	490
Food and kindred products	11	2,280	11,100
Paper and allied products	4	850	10,100
Printing, publishing, and allied industries	2	760	760
Chemicals and allied products	8	2,480	36,500
Products of petroleum and coal	1	50	6,140
Rubber products	7	14,200	68,800
Miscellaneous manufacturing industries	5	260	14,900
Mining	6	5,190	353,000
Construction	13	3,240	20,100
Trade	19	3,986	41,600
Finance, insurance, and real estate	2	1,050	3,920
Transportation, communication, and other public utilities	33	30,900	126,000
Services—personal, business, and other	11	540	4,640
Other nonmanufacturing industries	5	1,450	16,500
Minnesota	[1]55	45,100	873,000
Iron and steel and their products	8	4,810	66,200
Electrical machinery	2	200	4,560
Machinery (except electrical)	4	3,270	84,800
Automobiles and automobile equipment	1	420	5,040
Furniture and finished lumber products	2	880	43,200
Stone, clay, and glass products	1	170	2,030
Textile-mill products	2	160	7,860
Apparel and other finished products made from fabrics and similar materials	2	480	41,500
Food and kindred products	3	5,940	60,100
Paper and allied products	1	1,700	133,000
Printing, publishing, and allied industries	2	5,000	70,100
Chemicals and allied products	----	----	710
Rubber products	1	450	450
Mining	2	5,190	180,000
Construction	6	1,090	43,100
Trade	10	910	15,600
Transportation, communication, and other public utilities	10	13,300	87,200
Services—personal, business, and other	2	1,170	28,100

See footnote at end of table.

Table 18.—*Work stoppages in 1946 in States which had 25 or more stoppages during the year, by industry group*—Continued

State and industry group	Number of—		
	Stoppages	Workers involved	Man-days idle during 1946
Mississippi	26	14,600	147,000
Iron and steel and their products	1	70	1,020
Transportation equipment (except automobiles)	1	3,000	3,180
Lumber and timber basic products	1	20	40
Furniture and finished lumber products	1	50	1,080
Stone, clay, and glass products	1	80	160
Apparel and other finished products made from fabrics and similar materials	1	30	980
Food and kindred products	1	130	380
Paper and allied products	1	2,110	90,600
Chemicals and allied products	3	810	8,540
Agriculture, forestry, and fishing	1	600	6,000
Mining	1	30	800
Construction	4	1,850	11,800
Transportation, communication, and other public utilities	9	5,800	22,800
Missouri	168	63,800	1,700,000
Iron and steel and their products	11	5,040	148,000
Electrical machinery	8	800	35,200
Machinery (except electrical)	16	2,390	64,000
Transportation equipment (except automobiles)	2	1,140	68,000
Automobiles and automobile equipment	----------	----------	484,000
Nonferrous metals and their products	4	800	13,600
Lumber and timber basic products	1	60	1,130
Furniture and finished lumber products	8	1,670	72,100
Stone, clay, and glass products	3	130	31,200
Apparel and other finished products made from fabrics and similar materials	10	2,410	135,000
Leather and leather products	10	7,000	88,900
Food and kindred products	20	6,380	84,800
Paper and allied products	5	1,270	50,900
Printing, publishing, and allied industries	2	370	2,160
Chemicals and allied products	7	2,240	139,000
Rubber products	1	550	7,200
Miscellaneous manufacturing industries	2	220	4,770
Mining	6	3,000	28,400
Construction	2	70	2,500
Trade	16	2,000	42,500
Finance, insurance, and real estate	2	30	70
Transportation, communication, and other public utilities	22	24,000	173,000
Services—personal, business, and other	10	2,280	20,500
New Jersey	[1]247	193,000	6,530,000
Iron and steel and their products	20	18,200	834,000
Electrical machinery	12	38,300	1,960,000
Machinery (except electrical)	21	7,870	318,000
Transportation equipment (except automobiles)	4	8,150	16,700
Automobiles and automobile equipment	3	5,640	1,020,000
Nonferrous metals and their products	11	5,400	605,000
Furniture and finished lumber products	8	780	24,200
Stone, clay, and glass products	8	860	16,900
Textile-mill products	15	4,760	103,000
Apparel and other finished products made from fabrics and similar materials	4	180	1,040
Leather and leather products	7	1,310	29,300
Food and kindred products	10	5,200	48,000
Tobacco manufactures	2	670	61,200
Paper and allied products	12	2,690	87,100
Printing, publishing, and allied industries	5	1,000	11,300
Chemicals and allied products	19	7,970	225,000
Products of petroleum and coal	1	200	4,400
Rubber products	8	9,660	122,000
Miscellaneous manufacturing industries	10	7,950	163,000
Mining	2	1,160	50,100
Construction	23	7,340	97,300
Trade	13	870	7,640
Finance, insurance, and real estate	2	40	500
Transportation, communication, and other public utilities	27	55,800	719,000
Services—personal, business, and other	6	720	1,890
Other nonmanufacturing industries	2	120	360

See footnote at end of table.

TABLE 18.—*Work stoppages in 1946 in States which had 25 or more stoppages during the year, by industry group*—Continued

State and industry group	Number of—		
	Stoppages	Workers involved	Man-days idle during 1946
New York	[1] 679	432,000	9,350,000
Iron and steel and their products	56	66,900	2,200,000
Electrical machinery	34	25,000	995,000
Machinery (except electrical)	38	12,000	833,000
Transportation equipment (except automobiles)	8	1,310	26,400
Automobiles and automobile equipment	12	2,470	634,000
Nonferrous metals and their products	38	6,640	492,000
Lumber and timber basic products	1	30	200
Furniture and finished lumber products	42	8,160	244,000
Stone, clay, and glass products	14	1,670	67,000
Textile-mill products	31	2,360	39,400
Apparel and other finished products made from fabrics and similar materials	54	5,430	89,500
Leather and leather products	15	5,030	104,000
Food and kindred products	38	13,000	198,000
Tobacco manufactures	3	500	24,300
Paper and allied products	13	1,010	33,300
Printing, publishing, and allied industries	9	1,190	38,600
Chemicals and allied products	22	3,060	118,000
Rubber products	2	500	4,760
Miscellaneous manufacturing industries	47	3,240	54,400
Mining	2	40	1,070
Construction	36	32,000	354,000
Trade	61	15,400	164,000
Finance, insurance, and real estate	14	410	2,010
Transportation, communication, and other public utilities	55	193,000	2,440,000
Services—personal, business, and other	38	9,560	160,000
Other nonmanufacturing industries	4	2,400	8,710
General strike	1	20,000	20,000
North Carolina	56	14,400	452,000
Iron and steel and their products	1	20	1,940
Electrical machinery	1	30	90
Automobiles and automobile equipment	2	210	7,080
Lumber and timber basic products	2	190	11,300
Furniture and finished lumber products	2	1,470	119,000
Stone, clay, and glass products	1	210	820
Textile-mill products	20	4,890	268,000
Leather and leather products	1	40	1,010
Food and kindred products	3	150	3,730
Tobacco manufactures	1	100	3,920
Paper and allied products	1	150	150
Mining	2	40	970
Construction	1	360	2,130
Trade	2	190	1,430
Transportation, communication, and other public utilities	13	6,130	27,400
Services—personal, business, and other	3	290	3,930
Ohio	[1] 396	450,000	10,600,000
Iron and steel and their products	68	156,000	4,330,000
Electrical machinery	27	48,000	1,520,000
Machinery (except electrical)	40	31,400	962,000
Transportation equipment (except automobiles)	1	550	87,900
Automobiles and automobile equipment	11	12,800	1,010,000
Nonferrous metals and their products	10	3,720	124,000
Furniture and finished lumber products	11	4,250	220,000
Stone, clay, and glass products	22	6,940	340,000
Textile-mill products	2	200	4,190
Apparel and other finished products made from fabrics and similar materials	3	130	370
Leather and leather products	1	410	44,500
Food and kindred products	16	6,290	112,000
Tobacco manufactures	1	180	2,270
Paper and allied products	4	1,000	25,600
Printing, publishing, and allied industries	7	500	24,000
Chemicals and allied products	12	6,000	92,500
Products of petroleum and coal	2	480	10,100
Rubber products	33	39,500	260,000
Miscellaneous manufacturing industries	10	2,010	91,800
Mining	20	38,100	954,000
Construction	21	47,100	199,000
Trade	24	2,440	43,700
Finance, insurance, and real estate	4	320	2,030
Transportation, communication, and other public utilities	31	38,500	138,000
Services—personal, business, and other	14	1,750	16,000
Other nonmanufacturing industries	10	1,470	3,610

See footnote at end of table.

Table 18.—*Work stoppages in 1946 in States which had 25 or more stoppages during the year, by industry group*—Continued

State and industry group	Number of—		
	Stoppages	Workers involved	Man-days idle during 1946
Oklahoma	42	16,800	329,000
Iron and steel and their products	3	890	45,900
Nonferrous metals and their products	2	620	77,400
Lumber and timber basic products	1	50	230
Stone, clay, and glass products	1	20	9,300
Apparel and other finished products made from fabrics and similar materials	1	220	14,500
Food and kindred products	5	1,700	21,600
Products of petroleum and coal	1	40	240
Mining	9	4,930	130,000
Construction	3	260	1,090
Trade	2	30	560
Transportation, communication, and other public utilities	6	7,060	21,800
Services—personal, business, and other	4	630	4,360
Other nonmanufacturing industries	4	380	2,000
Oregon	45	21,400	272,000
Lumber and timber basic products	10	4,490	66,800
Furniture and finished lumber products	3	2,020	6,180
Stone, clay, and glass products	1	190	4,130
Chemicals and allied products	1	290	1,710
Miscellaneous manufacturing industries	1	340	340
Agriculture, forestry, and fishing	3	790	5,360
Mining	2	80	2,600
Construction	4	290	4,640
Trade	2	80	1,350
Transportation, communication, and other public utilities	18	12,800	179,000
Pennsylvania	[1] 639	877,000	20,100,000
Iron and steel and their products	73	299,000	7,370,000
Electrical machinery	15	44,000	2,770,000
Machinery (except electrical)	34	24,200	1,280,000
Transportation equipment (except automobiles)	6	6,060	159,000
Automobiles and automobile equipment	7	6,850	641,000
Nonferrous metals and their products	14	8,970	137,000
Lumber and timber basic products	1	60	120
Furniture and finished lumber products	18	3,500	166,000
Stone, clay, and glass products	19	5,420	294,000
Textile-mill products	26	12,000	226,000
Apparel and other finished products made from fabrics and similar materials	47	5,840	74,900
Leather and leather products	5	680	4,810
Food and kindred products	27	7,390	146,000
Tobacco manufactures	2	960	63,800
Paper and allied products	10	1,030	13,400
Printing, publishing, and allied industries	8	1,640	31,900
Chemicals and allied products	12	7,170	75,900
Products of petroleum and coal	2	180	2,900
Rubber products	4	2,490	127,000
Miscellaneous manufacturing industries	12	2,210	67,400
Agriculture, forestry, and fishing	2	290	19,800
Mining	154	320,000	5,440,000
Construction	28	7,140	130,000
Trade	32	5,070	49,900
Finance, insurance, and real estate	1	50	320
Transportation, communication, and other public utilities	72	99,400	595,000
Services—personal, business, and other	20	5,180	171,000
Other nonmanufacturing industries	7	570	1,750
Rhode Island	45	11,400	257,000
Iron and steel and their products	5	1,100	58,000
Electrical machinery	1	480	20,800
Machinery (except electrical)	1	160	310
Nonferrous metals and their products	2	540	60,000
Textile-mill products	12	1,040	56,200
Food and kindred products	1	10	40
Rubber products	5	3,730	14,600
Miscellaneous manufacturing industries	2	220	2,350
Agriculture, forestry, and fishing	3	810	14,400
Construction	2	230	2,640
Trade	2	40	1,200
Transportation, communication, and other public utilities	6	2,060	25,000
Services—personal, business, and other	3	1,030	1,910

See footnote at end of table.

TABLE 18.—*Work stoppages in 1946 in States which had 25 or more stoppages during the year, by industry group*—Continued

State and industry group	Number of—		
	Stoppages	Workers involved	Man-days idle during 1946
Tennessee	[1] 131	64,900	1,110,000
Iron and steel and their products	9	10,600	369,000
Electrical machinery	1	70	2,450
Machinery (except electrical)	2	200	2,330
Automobiles and automobile equipment	1	1,200	1,200
Nonferrous metals and their products	1	120	1,380
Lumber and timber basic products	2	260	560
Furniture and finished lumber products	6	1,500	15,100
Stone, clay, and glass products	9	2,310	60,800
Textile-mill products	6	1,400	12,800
Apparel and other finished products made from fabrics and similar materials	5	2,440	55,200
Leather and leather products	1	610	4,340
Food and kindred products	13	1,480	6,480
Paper and allied products	2	350	11,000
Printing, publishing, and allied industries	1	10	820
Chemicals and allied products	5	1,580	37,900
Rubber products	6	6,880	32,200
Miscellaneous manufacturing industries	1	160	1,260
Mining	36	19,300	421,000
Construction	6	990	6,730
Trade	5	660	4,000
Finance, insurance, and real estate	1	20	130
Transportation, communication, and other public utilities	10	12,100	58,800
Services—personal, business, and other	3	270	2,280
Other nonmanufacturing industries	1	390	1,510
Texas	[1] 97	94,800	2,010,000
Iron and steel and their products	7	4,470	121,000
Electrical machinery	1	100	1,440
Machinery (except electrical)	7	8,390	500,000
Transportation equipment (except automobiles)	4	4,510	227,000
Automobiles and automobile equipment	1	40	2,720
Nonferrous metals and their products	3	1,230	93,100
Furniture and finished lumber products	2	590	34,900
Stone, clay, and glass products	5	830	23,800
Textile-mill products	2	500	32,500
Apparel and other finished products made from fabrics and similar materials	2	380	26,900
Food and kindred products	5	2,680	27,600
Paper and allied products	2	390	1,940
Printing, publishing, and allied industries	2	90	1,070
Chemicals and allied products	3	6,080	103,000
Products of petroleum and coal	4	580	17,800
Rubber products	1	700	36,400
Mining	3	340	9,250
Construction	10	8,310	293,000
Trade	8	550	9,380
Transportation, communication, and other public utilities	26	53,400	447,000
Other nonmanufacturing industries	2	650	2,900
Virginia	108	72,200	1,240,000
Iron and steel and their products	8	1,460	12,300
Electrical machinery	1	280	9,840
Automobiles and automobile equipment	1	40	1,060
Lumber and timber basic products	1	70	200
Furniture and finished lumber products	3	800	16,300
Stone, clay, and glass products	4	500	2,480
Textile-mill products	6	1,130	6,020
Apparel and other finished products made from fabrics and similar materials	3	240	4,770
Food and kindred products	4	640	5,820
Paper and allied products	3	970	20,000
Chemicals and allied products	2	190	2,600
Mining	37	38,900	863,000
Construction	10	710	6,400
Trade	5	180	5,790
Transportation, communication, and other public utilities	19	25,800	270,000
Services—personal, business, and other	1	320	12,600

See footnote at end of table.

TABLE 18.—*Work stoppages in 1946 in States which had 25 or more stoppages during the year, by industry group*—Continued

State and industry group	Number of— Stoppages	Number of— Workers involved	Number of— Man-days idle during 1946
Washington	79	49,600	884,000
Iron and steel and their products	7	1,140	26,000
Automobiles and automobile equipment	2	750	15,400
Nonferrous metals and their products	4	1,400	84,300
Lumber and timber basic products	5	3,270	121,000
Furniture and finished lumber products	3	2,010	4,830
Stone, clay, and glass products	5	870	8,120
Leather and leather products	1	50	570
Food and kindred products	4	1,150	23,100
Paper and allied products	1	70	340
Printing, publishing, and allied industries	1	200	11,000
Agriculture, forestry, and fishing	2	1,450	4,150
Mining	3	3,000	72,900
Construction	3	290	2,250
Trade	11	1,620	46,300
Transportation, communication, and other public utilities	23	32,000	462,000
Services—personal, business, and other	4	320	2,670
West Virginia	[1] 150	229,000	5,600,000
Iron and steel and their products	7	13,000	416,000
Electrical machinery	2	1,940	145,000
Machinery (except electrical)	2	590	25,200
Transportation equipment (except automobiles)	1	680	1,840
Automobiles and automobile equipment	1	200	9,240
Nonferrous metals and their products	3	3,000	37,500
Lumber and timber basic products	2	100	2,790
Furniture and finished lumber products	3	300	2,280
Stone, clay, and glass products	4	320	75,900
Apparel and other finished products made from fabrics and similar materials	3	290	3,620
Food and kindred products	3	290	1,600
Paper and allied products	3	210	7,480
Printing, publishing, and allied industries	1	30	250
Chemicals and allied products	4	3,020	53,900
Products of petroleum and coal	1	20	170
Rubber products	1	50	150
Miscellaneous manufacturing industries	2	770	26,500
Agriculture, forestry, and fishing	1	80	680
Mining	73	193,000	4,740,000
Construction	10	960	4,380
Trade	8	470	5,550
Finance, insurance, and real estate	1	20	110
Transportation, communication, and other public utilities	12	9,500	28,200
Services—personal, business, and other	4	480	10,500
Other nonmanufacturing industries	2	50	180
Wisconsin	[1] 91	73,700	4,820,000
Iron and steel and their products	12	6,930	374,000
Electrical machinery	3	1,010	39,000
Machinery (except electrical)	13	26,500	3,910,000
Transportation equipment (except automobiles)	2	40	1,300
Automobiles and automobile equipment	5	8,780	183,000
Lumber and timber basic products	5	1,420	66,300
Furniture and finished lumber products	7	1,400	64,300
Leather and leather products	3	190	3,990
Food and kindred products	7	2,590	16,900
Printing, publishing, and allied industries	1	30	80
Rubber products	1	860	2,500
Miscellaneous manufacturing industries	1	140	1,230
Mining	2	640	51,900
Construction	11	2,710	19,700
Trade	7	4,600	38,900
Transportation, communication, and other public utilities	9	15,400	44,300
Services—personal, business, and other	2	30	350
Other nonmanufacturing industries	4	520	3,300

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[1] This figure is less than the sum of the figures which follow. This is because one or more strikes, each ffecting more than one industry, have been counted as separate strikes in each industry affected, with the roper allocation of workers and man-days idle to each industry.

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UNITED STATES DEPARTMENT OF LABOR
L. B. Schwellenbach, *Secretary*
BUREAU OF LABOR STATISTICS
Ewan Clague, *Commissioner*

Labor Requirements to Produce Home Insulation

Bulletin No. 919

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Letter of Transmittal

United States Department of Labor,
Bureau of Labor Statistics,
Washington, D. C., July 28, 1947.

The Secretary of Labor:

I have the honor to transmit herewith a study on labor requirements in the production of certain types of nonrigid home insulation. This study is the fifth in a series conducted by the Bureau's Construction Statistics Division to determine the amount of labor needed to produce the more important construction materials; it was prepared by Carl R. Taylor and Benjamin Levine, under the direction of Thomas M. Flanagan. The Bureau wishes to acknowledge the cooperation of the companies which provided data for the survey, and of their trade associations.

Ewan Clague, *Commisioner.*

Hon. L. B. Schwellenbach,
Secretary of Labor.

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Bulletin No. 919 of the

United States Bureau of Labor Statistics

Labor Requirements to Produce Home Insulation

Mineral Wool, Cotton and Expanded Vermiculite

Characteristics of Industry's Products

This study is the fifth in a series[1] which the Bureau of Labor Sta-istics has been conducting to determine the amount of labor needed o produce the more important construction materials for the present iousing program or for other construction activity.

The present survey analyzes the amount of labor required to produce 3 important types of nonrigid home insulation material: mineral vool, cotton, and expanded vermiculite. It describes the processes involved in the manufacture of these materials, and analyzes the man-iours required per unit of product at each production level, from nining or growing the raw material to transporting the finished roduct.

The use of insulation in new residential construction has increased apidly in recent years and, during the war, insulation of existing uildings became especially important as a fuel-conservation measure. Savings in fuel costs are estimated at around 30 percent for insulated, s compared with uninsulated homes.[2]

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[1] This survey, covering three important nonrigid insulation materials, is the first of two tudies of the labor required to produce home insulation. The second will cover labor equirements for fiber insulating board, a rigid type of insulation material. Building aterials for which results will be reported in future articles include hardwood and ardwood flooring, and plumbing and heating supplies. Previous studies covered labor equirements in cement production, summarized in the September 1946 Monthly Labor eview (p. 355); labor requirements in the production and distribution of concrete asonry products and concrete pipe, summarized in the November 1946 Monthly Labor eview (p. 681); in southern pine lumber production, summarized in the December 1946 onthly Labor Review (p. 941); and in softwood plywood production, summarized in he January 1947 Monthly Labor Review (p. 67).

[2] Bowles, Oliver; Home Insulation With Mineral Products, in Information Circular umber 7388 (U. S. Department of Interior), October 1946, p. 7.

Nonrigid insulating materials usually consist of interlaced wool-like fibers or hollow or stratified granules, providing millions of minute spaces in which dead air is enclosed and, thus, having especially low heat conductivity. Their function is to reduce the transfer of heat from one side of a wall, ceiling, or roof to the other, irrespective of the side on which the heat is generated. In winter, the use of insulation reduces the escape of heat from the inside of a dwelling, maintaining a higher indoor temperature with decreased fuel consumption. In summer, the reverse occurs, and insulation reduces the penetration of the heat of the sun through walls and ceilings to the interior of the house.

There are many types of insulating materials, but in general they fall into two categories: the rigid, such as fiber board, used in new construction or in remodeling in place of lathing or wall sheathing; and the nonrigid, varieties of which are discussed in this report. Nonrigid insulation has no structural value, but is placed in the hollow spaces of walls, between floor joists, or between roof and rafters. It is used effectively to insulate existing buildings and is also installed in new construction. Most types are fire resistant or flameproofed, and it has been found that even in frame dwellings the spread of fires is hindered by the use of insulation in ceiling and roof, as well as by filling the hollow spaces of walls and partitions.

Of the three types of nonrigid insulation covered in this survey, mineral wool is the most important in terms of tons produced and sold each year. (See table 1.) The processed mineral wool is a fibrous, intermeshing material, resembling natural wool. It is composed principally of silicates of calcium and aluminum and is produced from three principal types of raw material: natural rock or combinations of various natural minerals or rocks, such as limestone and shale; iron, copper, or lead blast-furnace slag; and such glass materials as silica sand, soda ash, and limestone. The mineral wool is named rock wool, slag wool, or glass wool, according to the raw materials from which it is made. Mineral wool is sold commercially for home insulation in three forms: loose, granulated, or as batts and blankets.

Loose wool is the initial product after the first processing operation and it is from loose wool that the other mineral wool products are prepared. Loose wool is sold by the bag and installed by hand.

Granulated wool is by far the most widely used of the three forms. It is the only product from which the shot, or grains of slag have been removed. Because the granules are formed into small pellets and can be blown between the framing of buildings with an air hose, granulated wool is used chiefly for the insulation of existing buildings. Like loose wool, it is usually sold by the bag.

Blankets and batts of mineral wool have been fashioned into soft flexible quilts, usually surfaced on one or both sides by specially eated vapor-proof paper. Batts are similar to blankets except that ey are usually smaller in size. Batt and blanket wool are sold by e roll or carton and installed by hand.

Processed flameproofed cotton is a comparatively new product, dat- g from 1940. It is sold only in the batt or blanket form, by the roll r carton. Expanded vermiculite, granular in form, is marketed by e bag, as a fill type of home insulation material. It is prepared om vermiculite ore, which closely resembles mica in appearance and characterized by its extraordinary quality of expansion when heated.

ABLE 1.—*Estimated production of mineral wool, cotton, and expanded vermiculite home insulation, 1942 and 1946*

Type of insulation	Tons produced	
	1942	1946
Total (all types)	411,450	681,295
Mineral wool [1]	377,603	631,611
Loose wool	58,586	56,213
Granulated wool	183,107	408,021
Blanket or batt wool	135,910	167,377
Cotton [2]	873	9,050
Expanded vermiculite [3]	32,974	40,634

[1] For 1942 production figures, see Minerals Yearbook, 1943, p. 1583. Production figures for 1946 for all ineral wool of the types shown are based on the production estimate for 1945 furnished the U. S. Bureau Mines by the Mineral Wool Association, and increased by 12 percent—the Bureau of Mines estimate the rise in mineral wool production in 1946 compared with 1945. Production in 1946 was distributed by pe of mineral wool in the same ratio as found in the production of the plants covered in the Bureau of bor Statistics' survey during 1946.

[2] For 1942 production figures, see E. H. Omohundro and N. B. Salant, Cotton Insulation. Washington, C., U. S. Department of Agriculture, et al., December 1944, p. 2. The 1946 figure is an estimate fur- shed by the U. S. Department of Agriculture. Production of cotton insulation not covered in the De- rtment of Agriculture incentive program is excluded, but this is believed to be very small.

[3] For 1942 production figure, see Minerals Yearbook, 1943 p. 1588. It is estimated that 60 percent of e total production is used in home insulation. The 1946 figure is an estimate provided by the U. S. ureau of Mines.

Scope and Method of Survey

The mineral wool survey covers 10 plants representing about one- ird of 1946 production. The studies of labor requirements to pro- uce flameproofed cotton and expanded vermiculite were made by nalyzing the records of four and six plants, respectively, accounting r something over 50 percent of 1946 production in each of these dustries.

The companies and plants to be included in the survey were selected fter consultation with appropriate trade associations, government fficials, and industry members. Small, medium, and large plants in ich branch of the insulation field, were selected in approximately the me ratio in which they are distributed in the industry. Figures on nit man-hours for each plant were weighted by the plant's estimated 946 production in order to arrive at estimated average man-hours re- uired per unit of output in each of the three insulation industries rveyed.

Data were collected in the latter part of 1946 and, in each case, a period was selected for survey that plant officials considered typical of their 1946 operations. Field representatives of the Bureau of Labor Statistics, working with plant officials, derived the information on total man-hours spent on each manufacturing process and in administration, from plant records. Man-hour requirements were estimated for extracting and transporting the raw materials, for power, and for transporting the finished product to local dealers and users on the basis of the following: (1) plant information on quantities consumed and produced; (2) labor requirements information obtained from various sources, including the extraction and utility industries represented; and (3) earlier surveys of the Bureau of Labor Statistics. No attempt has been made in this study to include the man-hours expended by distributors, jobbers, or retailers in selling the finished product.

Summary of Man-Hour Requirements

An average of 9.1 man-hours was required in 1946 to manufacture a ton of mineral wool home insulation, according to the Bureau's survey. Loose wool, because of the simplicity of its manufacture, required only 6.7 man-hours per ton to produce in the factory; granulated wool required somewhat more labor (8.2 man-hours) as a result of an added processing step, and batt or blanket wool still more (12.2 man-hours) reflecting primarily the process of fashioning the wool into the blanket-type product and affixing the vapor-proof backing. About 5.6 man-hours may be added on the average for producing and transporting the raw materials, fuel, and other products used in making mineral wool, and for transporting the finished wool to dealers.

Flameproofed cotton insulation is measured by the thousand square feet. The Bureau's survey shows that while only 4.2 man-hours were required to produce a thousand square feet of cotton insulation in the plant in 1946, 85.8 per thousand square feet were needed for the outside activities of making the cotton and other materials available, and shipping the finished product. Of the 85.8 man-hours, 84 were required just for growing and preparing the cotton for delivery to the insulation plant, according to estimates of the Department of Agriculture.

In the case of expanded vermiculite, also, man-hour requirements for processing are not as high as those for producing and transporting the raw materials, fuel, and other products used and for shipping the finished insulation. Expanded vermiculite is measured by the thousand cubic feet. An average of 25.2 man-hours was found to be needed in 1946 to manufacture a thousand cubic feet of expanded vermiculite, compared with 35.9 man-hours for the out-of-plant activities, making a total of 61.1 man-hours per thousand cubic feet from mine to dealer. A large part of the man-hour requirements for producing vermiculite insulation (19.4 man-hours) was expended in transporting the vermiculite ore from the mines, which are situated in a very few States, to the scattered processing plants. Since the cubic footage of vermiculite expands considerably during processing, the manufacturing plants are located near distributing centers and often quite distant from the source of raw materials, to save transportation costs.

It is clear from the above discussion that the production man-hour requirements vary considerably per unit of product between the three home-insulation materials discussed in this report, when each industry's customary unit of measurement is used. Using a common unit of measurement with reference to the use to which the material is put (i. e., the amount of insulation material 3 inches thick required to cover a thousand square feet of space), the Bureau has computed roughly that labor requirements in the factory vary little by type of product, ranging from a little over 4 to something over 6 man-hours per unit. Variations are much greater when nonmanufacturing labor needs are considered, because of the differences in raw materials used and in transportation problems, as described briefly above.

Mineral Wool

HISTORY AND ANNUAL PRODUCTION

Production of mineral or rock wool was first reported in 1840 in Wales.[3] Commercial production in this country is believed to have tarted at Alexandria, Ind., in 1897 when C. C. Hall established a plant for the production of rock wool to utilize the slag produced as waste in the operation of a steel plant. Annual production in 1900 was estimated to be 6,002 short tons, increasing to 11,626 tons in 1909 and dropping to 7,514 tons in 1911. Production in 1928 was estimated at around 50,000 tons [4] increasing to 500,000 tons in 1936 and decreasing to approximately 400,000 tons in 1938.[5]

The centennial celebration of the mineral wool industry was held in Chicago in 1940.[6] Only estimates rather than actual production figures are available for most other years prior to 1942, although the Bureau of Census has released some data on dollar value of mineral wool produced for certain earlier years. Recent data on mineral wool production are shown in table 2.

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[3] The Origin of Rock Wool, in Stone, vol. 57. No. 12, December 1936, p. 448.

[4] Mineral Wool, by J. R. Thoenen, Bureau of Mines Information Circular 6142, June 929, pp. 2 and 13.

[5] Mineral Wool, by J. R. Thoenen, Bureau of Mines Information Circular 6948R, June 939, p. 4.

[6] Minerals Yearbook, 1940, p. 1420.

TABLE 2.—*Annual production of loose, granulated, and batt or blanket mineral wool used in home insulation, 1942–46*

Year	Short tons of mineral wool produced			
	Total	Loose	Granulated	Batt or blanket
1942 [1]	377,603	58,586	183,107	135,910
1943 [1]	409,067	63,978	277,833	67,256
1944 [2]	426,600	59,787	308,411	58,402
1945 [3]	563,939	78,952	406,036	78,951
1946 [4]	631,611	56,213	408,021	167,377

[1] Minerals Yearbook 1943, p. 1583.

[2] Op. cit. 1944, p. 1541.

[3] Estimate for the total was provided to the U. S. Bureau of Mines by the Mineral Wool Association. Production by type of mineral wool was estimated by the Bureau of Labor Statistics, using the same ratio to the total as in 1944.

[4] Figure for the total was based on the production estimate for 1945, increased by 12 percent—the Bureau of Mines estimate of the rise in mineral wool production in 1946 compared with 1945. Production by type of mineral wool was distributed in the same ratio as found in the production of the plants covered in the Bureau of Labor Statistics' survey during 1946.

PRODUCTION PROCESS

Though variations in the technique of manufacturing mineral wool occur from plant to plant, the process may be described generally as follows: Different combinations of coke with slag, rock, shale, dolomite or limestone, among others, are fed into a cupola—a furnace used in melting minerals. Automatic scales are usually used to weigh the amount of each raw material to be put into each charge. The charge is heated to a melting temperature of from 2,500° F. to around 3,500° F. and is then drawn off from the cupola in a thin stream. The stream of melted slag, about the size of a lead pencil, drops from a few inches to something over a foot. It is then intercepted by a blast of steam which catches it and blows it into the adjacent blowing or wool room. The blowing temperature is usually 300 to 500° F. lower than the melting temperature.

As the slag droplets are traveling at high speed through the air, each tails out into fibers or strands. The minute amount of each droplet of slag that does not strand out or form fibers, but remains as a tiny ball or knot of slag, is called "shot." A single piece of shot is about the size of a grain of sand. As shot has no insulation value, its elimination in the production process is highly desirable, and the degree of efficiency of the blowing process is in part measured by the small shot content of the loose wool. To reduce the dust, an oil spray is mixed with the steam, or strikes the wool after it has been blown a few inches.

The blowing rooms are enclosed and are narrow and high and usually from 20 to 50 feet in length. A conveyer belt ordinarily forms the floor and removes the blown wool from the wool room through a small opening. In some plants the wool is removed by hand. At this point the processing of loose wool is completed and it may be bagged and shipped.

In the case of granulated wool, the conveyer may move the wool out of the wool room onto a belt through a series of grinders that break up the fibers. The wool then passes into a rotary screen which causes the formation of small round pellets or nodules, producing granulated, often called nodulated wool. The shot drops through the screening to be returned to the furnace and remelted. There is about a 17-percent loss in pounds between the raw slag used and the loose wool produced. If the loose wool is further processed into granulated wool, an additional loss of 25 percent is incurred, making an average loss of about 42 percent in processing granulated wool.

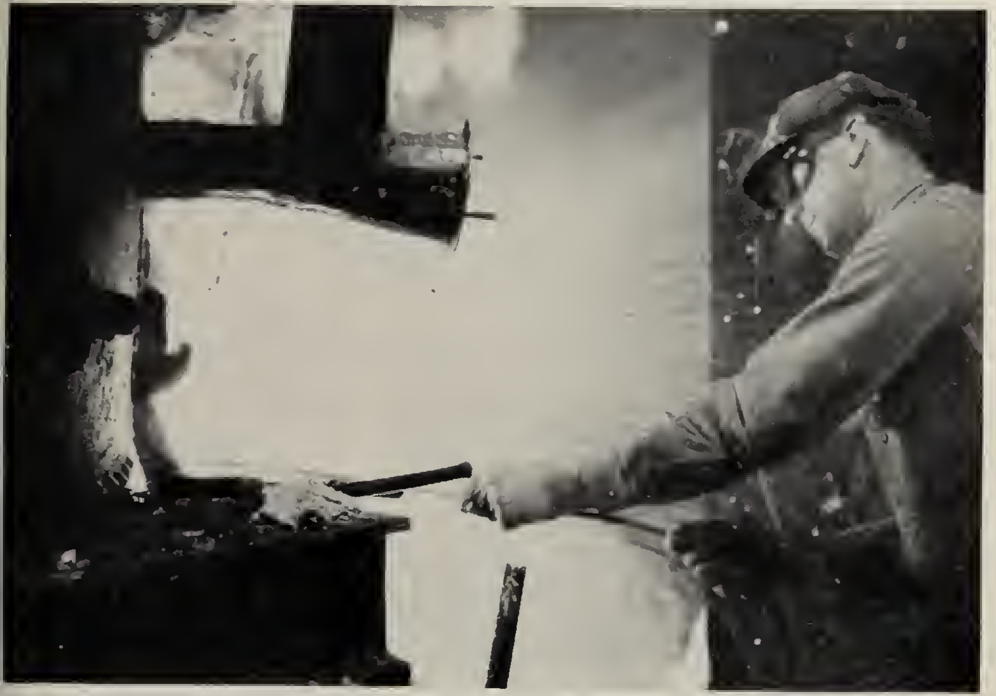

FIGURE 1. Blowing mineral wool: As the molten slag leaves the cupola in a thin stream, it is intercepted by a blast of steam and blown into the wool room, thus forming loose mineral wool.

To make batt or blanket wool, the loose wool is removed from the wool room, usually on a conveyer belt, and sprayed with resin or some other binder. It then passes through rollers which compress the wool with the binder and set it into a continuous mineral wool blanket. Following this, the blanket passes through ovens which complete the process of binding and setting the blanket in permanent form. Blankets are made from 1 to 4 inches thick to suit various insulation purposes. The conveyer moves the newly formed blanket along to the point where the moisture-proof vapor-barrier paper is added as backing, though batt or blanket wool is sometimes made without paper backing. The mineral blanket is then cut and trimmed automatically to batt or blanket sizes, automatically rolled, and then hand packed for shipment. The wool clippings from the trimming operation are salvaged and made into granulated wool.

In some of the larger plants, there is a separate production line for each type of wool, but in smaller plants one cupola produces the loose wool used to make granulated and batt or blanket wool.

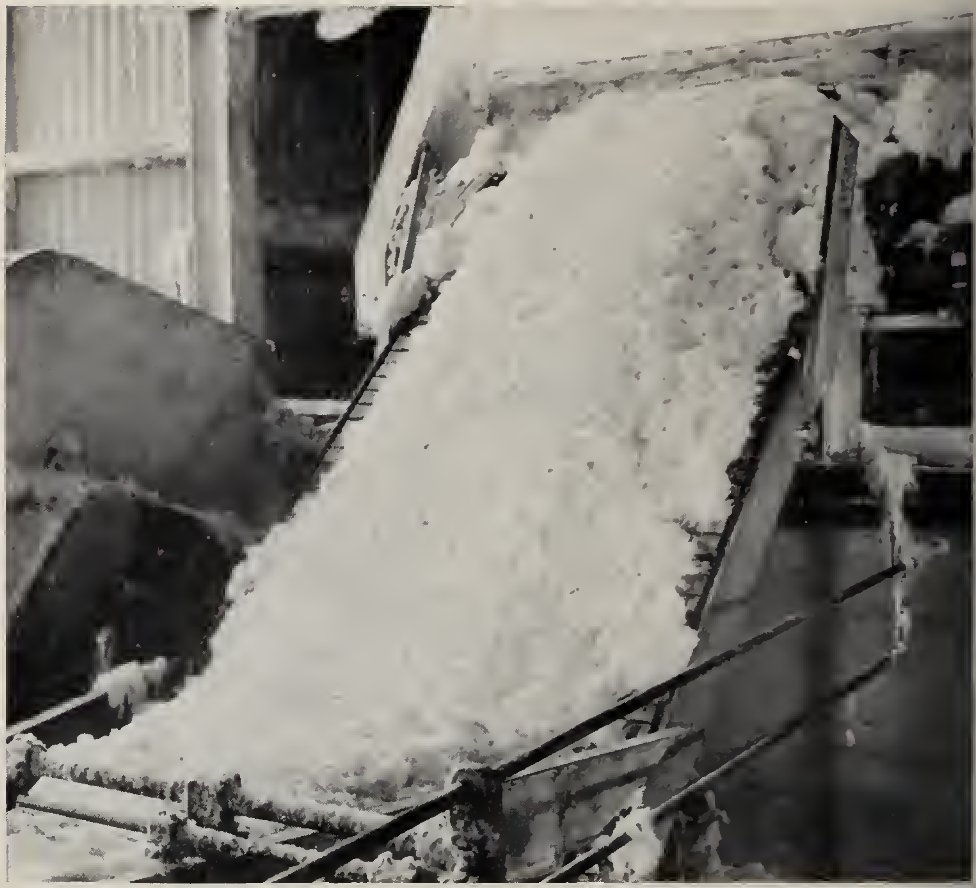

FIGURE 2. Loose mineral wool: An endless belt conveys the blown wool from the wool room for bagging or further processing into granulated or batt and blanket wool.

LABOR REQUIREMENTS IN MANUFACTURING

The labor requirements to manufacture a ton of mineral wool for all processes combined have already been quoted (p. 6). Figures showing detail by department or process are presented in table 3.

It will be noted that the processing of granulated wool requires more labor than loose wool chiefly in the maintenance department, as a result of the additional machinery required for nodulating or granulating the wool, removing the shot, and then bagging the wool automatically.

Also, more labor is required to make granulated wool than loose wool, because of the loss or waste in raw materials caused by removal of the shot. This necessitates handling and heating more raw material to produce a ton of the granulated mineral-wool product.

While granulated wool is bagged automatically, loose wool must be bagged by hand, as the fibers tend to cling together to form large masses or lumps. Man-hours required for packing loose wool, in fact, exceed those for processing. In contrast, the pellets of granulated wool are easily bagged by machine.

Most of the additional labor required to produce batt or blanket wool as compared with granulated wool is employed in the manufacturing and packing department where additional machine operations require a larger number of machine tenders. In addition, batt or blanket wool is hand packed in contrast with the automatic bagging of granulated wool. Machine maintenance and labor supervision also are more extensive in making batts or blankets.

TABLE 3.—*Man-hour requirements per ton to manufacture mineral wool home insulation in 1946, by type of mineral wool product*

Major department or process	Average man-hours required per ton of mineral wool for—			
	All types (weighted average)	Loose wool	Granulated wool	Batt or blanket wool
All departments	9.1	6.7	8.2	12.2
Handling raw materials	.3	.1	.3	.4
Cupola	2.4	2.2	2.4	2.4
Manufacturing and packing	3.4	2.5	2.5	5.6
Loading and shipping	.7	.7	.8	.7
Administration, clerical, and sales	.6	.3	.6	.7
Maintenance	1.3	.6	1.3	1.9
Superintendent and foreman	.4	.3	.3	.5

A relationship can be seen between production level and average man-hour requirements per ton in the mineral wool plants surveyed. The greater the plant's production, the lower the average man-hour requirements to produce each ton. The relationship appears to affect practically every processing department, as shown in table 4.

TABLE 4.—*Average labor requirements per ton of mineral wool produced in 10 plants in 1946, by estimated monthly production and by major department*

Major department	Man-hours required per ton in plants with monthly production of—		
	Less than 1,000 tons	1,000 to 2,000 tons	More than 2,000 tons
All departments	17.6	10.8	8.3
Handling raw materials	.6	.5	.2
Cupola	4.1	2.7	2.2
Manufacturing and packing	4.7	3.9	3.1
Loading and shipping	2.1	1.3	.6
Administration, clerical, and sales	1.5	.7	.5
Maintenance	2.2	1.2	1.5
Superintendent and foreman	2.4	.5	.2

OUTSIDE LABOR REQUIREMENTS

To follow the employment needs for producing mineral wool from mine to dealer, it was necessary to study how much labor was required to produce and transport the raw materials, fuel, and other major products needed to make this type of home insulation and it was necessary to compute, also, the labor required to transport the finished product from the plant. Estimates of these labor needs are, at most, approximate and could be prepared only for loose wool.

Labor needs for all these activities averaged 5.6 man-hours per ton of loose wool produced. When added to manufacturing man-hours (6.7 per ton), a total of 12.3 man-hours per ton is derived for the labor needs from extraction of the raw materials to delivery of the finished product. The nonmanufacturing labor requirements undoubtedly vary somewhat for the granulated and batt or blanket types as compared with loose wool. On the average, however, it is safe to say that about 15 man-hours (9.1 for manufacturing and 5.6 to produce the material used, etc.) are required to produce one ton of all type mineral wool home insulation, from mine or slag pile to dealer.

The method by which these totals were derived may be described briefly as follows: An average cupola charge contains about 2,400 pounds of blast furnace slag, 40 pounds of gravel, and 400 pounds of coke. It is estimated from information of the National Slag Association and previous studies of the Bureau of Labor Statistics,[7] that an average of 1.3 man-hours is needed to produce these raw materials at their source, distributed as follows: 0.24 man-hour for the slag, 0.01 for the gravel, and 1.07 for the coke. Using earlier Bureau figures on labor needs in transporting raw materials to the site of manufacture,[8] it is estimated that a total of 0.5 man-hour was required to deliver the raw materials to the mineral wool plants—0.26 man-hour for the slag, 0.01 for the gravel, and 0.20 for the coke.

The fuel used at the plant—about 280 lbs. of coal and 39 kw.-hr. of electricity per ton of loose wool—is estimated to require 0.18 [9] and 0.10 [10] man-hour, respectively, and other materials (principally the

---

[7] For studies covering man-hour requirements to produce coke and gravel, see Monthly Labor Review, May 1935, Man-Hours of Labor per Unit of Output in Steel Manufacture (also reprinted as Serial No. R. 240), and Monthly Labor Review, July 1939, Labor Requirements in Production and Distribution of Sand and Gravel (also reprinted as Serial No. R. 944).

[8] See Monthly Labor Review, October 1937, Labor Requirements in Rail Transportation of Construction Materials (also reprinted as Serial No. R. 637), and see also Monthly Labor Review, June 1938 (p. 11), Labor Requirements in Production and Distribution of Plumbing and Heating Supplies (also reprinted as Serial No. R. 733).

[9] See U. S. Bureau of Census, Mineral Industries, Vol. 1, 1939, p. 224.

[10] See Bureau of Labor Statistics Bulletin No. 888–1, Labor Requirements in Cement Production, pp. 16–18.

57 bags required for a ton of loose wool) about 0.5 man-hour. The transportation of the coal requires 0.21 man-hour, making an approximate total of 1 man-hour for fuel and materials used.

The rail haul of the finished wool is estimated to average 375 miles. requiring 2.8 man-hours per ton of wool transported.[11] An estimated average of 13 tons of mineral wool is carried per car.

Cotton Insulation

Cotton insulation is made from sound, staple, well-cleaned, and firmly matted material. The matting of the individual hollow tubular fibers, each of which contains tiny dead air spaces, forms additional air spaces, thus providing an exceedingly effective natural barrier to the passage of heat.[12]

Cotton insulation was first produced commercially in 1940. It was developed under a United States Department of Agriculture program to create a new outlet for the grades of cotton which are usually surplus. This surplus cotton is made available under incentive payments enabling the producers of cotton insulation to compete successfully with other types of nonrigid home insulation. The acceptance of cotton insulation and the commercial development of the industry since 1940 has been rapid. (See table 5.)

In general, the machinery used to make cotton insulation was adapted from existing types of textile machinery. With the assistance of the Department of Agriculture, methods of flameproofing and mildew-proofing the raw cotton were devised. The firms in the industry now have individual formulas for flameproofing, which they regard as trade secrets.

TABLE 5.—*Production of cotton insulation under the U. S. Department of Agriculture incentive program 1940–46* [1]

Year	Annual production in thousands of pounds
1940	55
1941	769
1942	1, 746
1943	7, 447
1944	8, 544
1945	9, 351
1946	18, 100

[1] U. S. Department of Agriculture. Excludes small amount of production outside the Department of Agriculture program for which data are not available.

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[11] See Monthly Labor Review, October 1937 (pp. 846–853), Labor Requirements in Rail Transportation of Construction Materials.

[12] Cotton Insulation by E. H. Omohundro and N. B. Salant, Washington (U. S. Department of Agriculture), December 1944, p. 5.

PRODUCTION PROCESS

Although the methods and machinery for making cotton insulation vary somewhat from plant to plant, the operations are basically the same in all plants.

The baled raw cotton is unloaded from the freight cars or trucks and stored in a warehouse. As the cotton is needed it is moved by conveyor or hand cart to the beginning of the production line.

The raw cotton is fed into the opener or willower machine which loosens and fluffs it up. The fluffed cotton is then blown through tubes or conveyed on belts to the dipping or soaking vats, which are fed automatically by means of weighing machines. The vats are filled with a combination flameproofing and mildew-proofing chemical.

The cotton moves slowly from one end of the vat to the other, being mechanically agitated all the time so that it is thoroughly soaked with the chemicals. In some cases, the soaking vats are variations of wool washing machines. The soaking process may require as long as 1 hour to complete.

Dry cotton is being continuously fed into one end of the vat while soaked cotton is removed from the other end by a conveyor belt. The belt carries the wet cotton through large rubber squeeze rolls which operate under hydraulic pressure and remove most of the moisture. The conveyor belt continues into a battery of drying ovens where a combination of heat and circulating air thoroughly dries the cotton.

The processed cotton is then fed by blower or conveyor into the blanket-forming machine, sometimes called a batting or spider web machine. Its function is to process the loose cotton into a continuous thin blanket. This is done by a series of carders or combs moving at high speed.

As the cotton leaves the batting machine, it is in the form of a thin blanket. It is then fed layer on layer to the final conveyor belt until the desired thickness of blanket is formed. The blankets are produced in rolls up to 50 feet in length, in widths of 12, 16, 20, and 24 inches, and in thickness from ¾-inch to 4 inches.

The final processes of cutting the cotton blanket to proper width, applying moisture-proof paper backing, and rolling for packing are usually accomplished in one automatic operation. At the end of the batting machine the newly formed blanket is moving along a conveyor belt about 4 feet wide. Slitting knives at the end of the conveyor cut the blanket to the desired 12, 16, 20 or 24-inch width. From under the conveyor belt the special kraft paper, wax coated on one side and asphalt coated on the other, is heated on the asphalt-coated side and fed to the underside of the blanket roll. The entire conveyor moves through a roller which laminates the paper to the blanket and compresses the blanket for packing. At the end of the line the completed blanket is formed automatically into rolls of predetermined size. The rolls are cut automatically to the proper length and are then removed by hand and hand-packed into corrugated boxes. A sample from at least every 2,000 square yards of finished insulation is subjected to certain minimum specification tests as outlined by the Department of Agriculture.

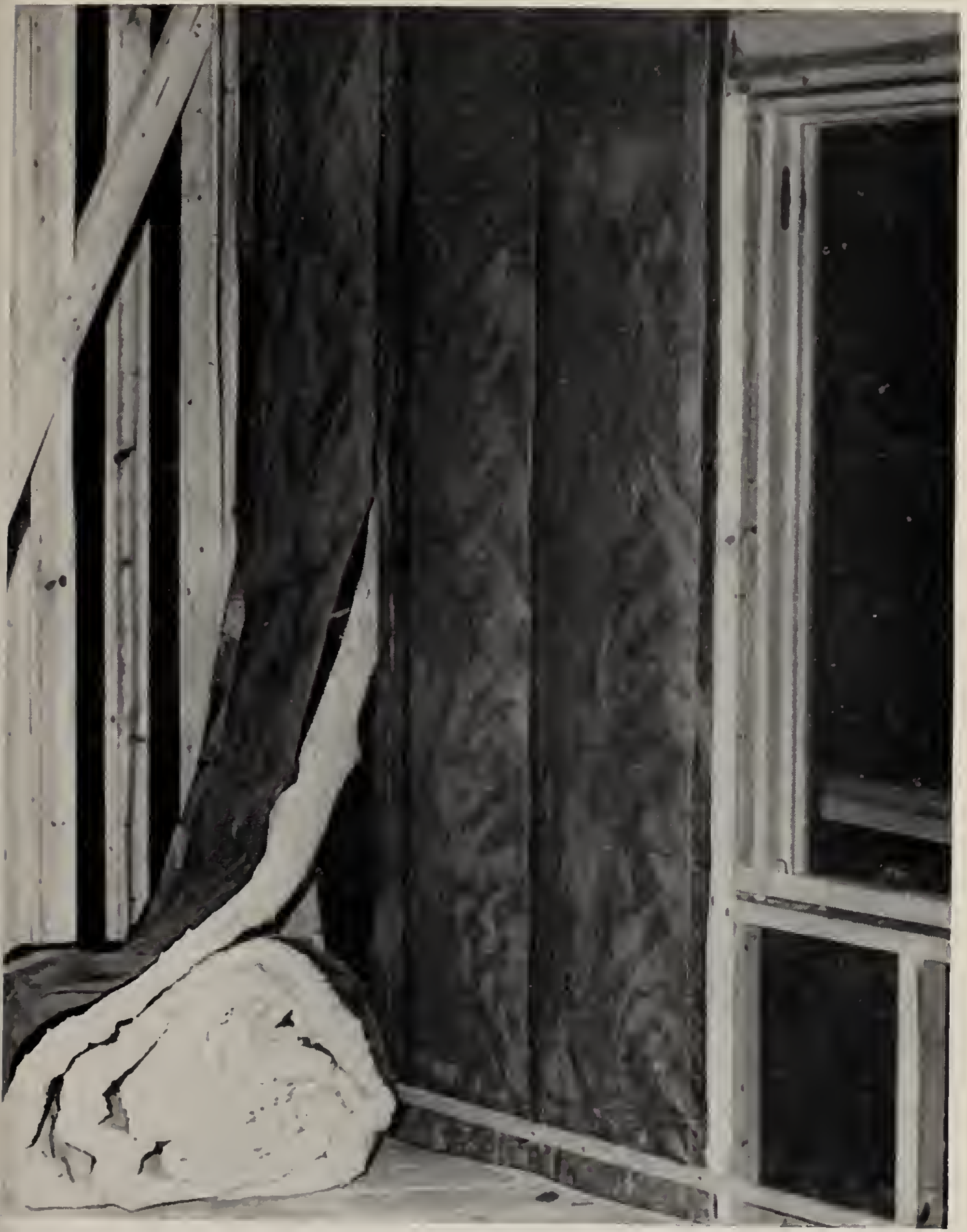

FIGURE 3. Installing cotton insulation: The cotton blankets are installed between the framing structure of the walls in the new house. Other types of batt and blanket insulation are installed in the same manner.

LABOR REQUIREMENTS

Most of the operations performed in processing cotton insulation are automatic. so that manufacturing labor requirements per unit of product are at a minimum. Of the 4.2 man-hours required per 1,000 square feet to process cotton insulation in 1946, half were in the flameproofing and drying, and blanket-forming and cutting departments where most of the processing takes place under the supervision of machine tenders (table 6).

In contrast, the growing, picking, and ginning of the 210 pounds of cotton used per 1,000 square feet is estimated to require 84 man-hours.[13] The material used in producing cotton insulation is lint (virgin) cotton not less than ¾-inch staple and of at least certain minimum quality as required by the Department of Agriculture for participation in the cotton-insulation incentive program. It is shipped to the manufacturers of cotton insulation from various points in the southern cotton belt in 500-pound bales.

TABLE 6.—*Man-hours required to produce and distribute 1,000 square feet of 3-inch-thick cotton insulation in 1946*

Major department or operation	Man-hours per 1,000 square feet of 3″ cotton insulation
Total, all operations	90.0
Production of raw materials	84.5
Transportation of raw materials	.5
Manufacturing	4.2
Handling raw materials	.3
Flameproofing and drying	.7
Blanket forming and cutting	1.7
Packing	.4
Shipping	.5
Administrative, clerical, and sales	.4
Maintenance	.1
Superintendent and foreman	.1
Transportation of finished product	.8

The rail haul from cotton gin to insulation plant is estimated from factory records to average 900 miles for which 0.5 man-hours would be required for the 210 pounds of cotton used per 1,000 square feet of finished product.[14] Another 0.5 man-hours are needed, according to industry sources, to produce the 30.3 pounds of paper used in making 1,000 square feet of insulation. The average rail haul of 300 miles to the plant, as indicated in plant records, is estimated to require only the fractional sum of less than 0.1 man-hours.

Since the amounts and kinds of chemicals used in flameproofing and mildewproofing the cotton are trade secrets, no information on labor requirements could be obtained for these materials, but the labor needed per unit of product is believed to be very small.

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[13] Based on estimates for 1946 furnished by the Bureau of Agricultural Economics of the U. S. Department of Agriculture.

[14] Based on an average haul of 25 tons of cotton per car. See Monthly Labor Review, October 1937, Labor Requirements in Rail Transportation of Construction Materials.

The average rail haul of the finished insulation was estimated at 500 miles in 1946, requiring 0.8 man-hours per 1,000 feet of insulation, compared with 0.5 man-hours for the average of 900 miles that the raw baled cotton was hauled. The difference is in the fact that 25 tons of baled cotton can be carried per car, as compared with but 5 tons of the finished cotton insulation.

Expanded Vermiculite

When vermiculite ore is subjected to heat of 1,400° F. to 2,000° F., it expands 8 to 15 times its original size and the resulting porous substance has especially high insulating properties. Exfoliation is the term used in the industry to describe the expansion process. Dead air cells within the granules, as well as between the granules of the expanded ore, act as nonconductors of heat, thus giving vermiculite its insulating value. Vermiculite is also incombustible.

It is estimated that about 60 percent of all vermiculite ore mined is used for home insulation. In 1946, this resulted in the production of something over 13 million cubic feet of expanded vermiculite with an estimated value of over 3 million dollars.[15] The exfoliated ore leaves the furnace in various sizes of feather light, resilient pellets ranging from powder or dust to granules about three-quarters of an inch square. The medium granular sizes are used as a loose fill type of home insulation. Other sizes of expanded vermiculite are used to make precast concrete slabs for roof, floor, and wall construction. Because of the light weight of vermiculite, these slabs weigh as little as 25 pounds per cubic foot. Compressed vermiculite wall board also is being manufactured, and in increasing quantities. The powder and smallest granule sizes of the expanded vermiculite are used as concrete or plaster aggregate in place of sand. They are also added to garden soil to make the soil more porous and easy to work.

PROCESS OF MINING AND EXFOLIATING

Vermiculite ore was originally discovered in this country in 1824 near Worcester, Mass., by Thomas H. Webb.[16] At present most of the ore comes from Montana, with a few small mines operating in Colorado, North Carolina, South Carolina, and Wyoming. At least one company has also begun to import ore from South Africa. Raw unexpanded vermiculite ore is composed of minute laminations of mineral ore which have a glossy surface similar to isinglass; as mentioned earlier, the ore is like mica in appearance.

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[15] Expanded vermiculite was priced at about $75 per ton, f. o. b. plant, in 1946. See U. S. Bureau of Mines Information Circular 7388, October 1946, p. 11.

[16] G. R. Gwinn, Marketing Vermiculite, Bureau of Mines Information Circular 7270, January 1944, p. 1.

Most vermiculite ore comes from open pit mines. A small percentage of gangue[17] or mineral rock containing the ore is mined along with the vermiculite. The raw ore is first crushed into smaller flakes. The oversize gangue is eliminated by a screening operation and the partly crushed vermiculite goes into a rotary or conical type drier. Here it is subjected for a short time to a heat of 200° F. to 300° F. to eliminate part of the free moisture content of the ore. The vermiculite is then graded by screening it into four sizes. Each size is shipped separately in freight cars of 42 to 50 tons capacity. Exfoliating plants order the raw ore by size depending on the ultimate use to which the expanded ore is to be put. This screening, grading. and drying operation is usually done at the mine site, but may be performed at the exfoliation plant when it is located near the mine. While expanded vermiculite has been in continuous commercial use since the early 1920's. production has increased considerably in recent years, and more than tripled between 1940 and 1946. (See table 7.)

TABLE 7.—*Amount and value of screened and cleaned raw vermiculite ore sold or used in the United States, 1935–46* [1]

Year	Short tons	Value	Year	Short tons	Value
1935	7,068	$88,445	1941	23,438	$125,444
1936	16,933	185,787	1942	57,848	319,931
1937	26,556	260,664	1943	46,645	471,595
1938	20,700	192,000	1944	54,116	541,744
1939	21,174	174,587	1945	64,808	648,077
1940	22,299	137,698	1946	71,289	712,890

[1] Data for 1935–42 from U. S. Bureau of Mines Circular 7270, January 1944, p. 6; data for 1943–45 are from U. S. Bureau of Mines Circular 7388, October 1946, p. 11. Figures for 1946 are estimated on the basis of information from the Bureau of Mines that production increased 10 percent over 1945 with the price per ton of vermiculite remaining about the same. (All data are for unexpanded ore.)

When the freight cars of raw ore arrive at the exfoliation plant siding, they are usually unloaded by hand. The ore is hauled and dumped or shovelled into a bucket-type conveyor which lifts it overhead into storage hoppers, from which it moves automatically by conveyor belt to the top of the furnace.

The various plants use different types of furnaces for the exfoliation process. Each is designed to produce the expanded ore by subjecting it to a heat of 1400° F. to 2000° F. for a few seconds. The furnaces are usually heated by forced-air oil burners. Some plants use baffles to delay the fall of the ore through the furnace, while others have the furnace set at an angle so that the ore flows rather than falls through the furnace. As the expanded flakes come out of the bottom of the furnace they are again picked up by conveyor belt or bucket elevator. The flakes, now expanded some 8 to 15 times, are tough and pliable.

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[17] The mineral or rock material accompanying the ore in a vein.

The expansion process occurs as the result of a minute amount of water between the laminations in the granules of the raw ore, which, when subjected to the heat of the exfoliation furnace, expands and turns to gas, forcing the laminations apart to form expanded vermiculite. Excessive heating drives out all the moisture content and renders the flakes permanently brittle.

When the expanded ore is picked up from the furnace it is ready for grading and bagging. The plants have different methods of grading, depending on the uses to which the product is to be put.

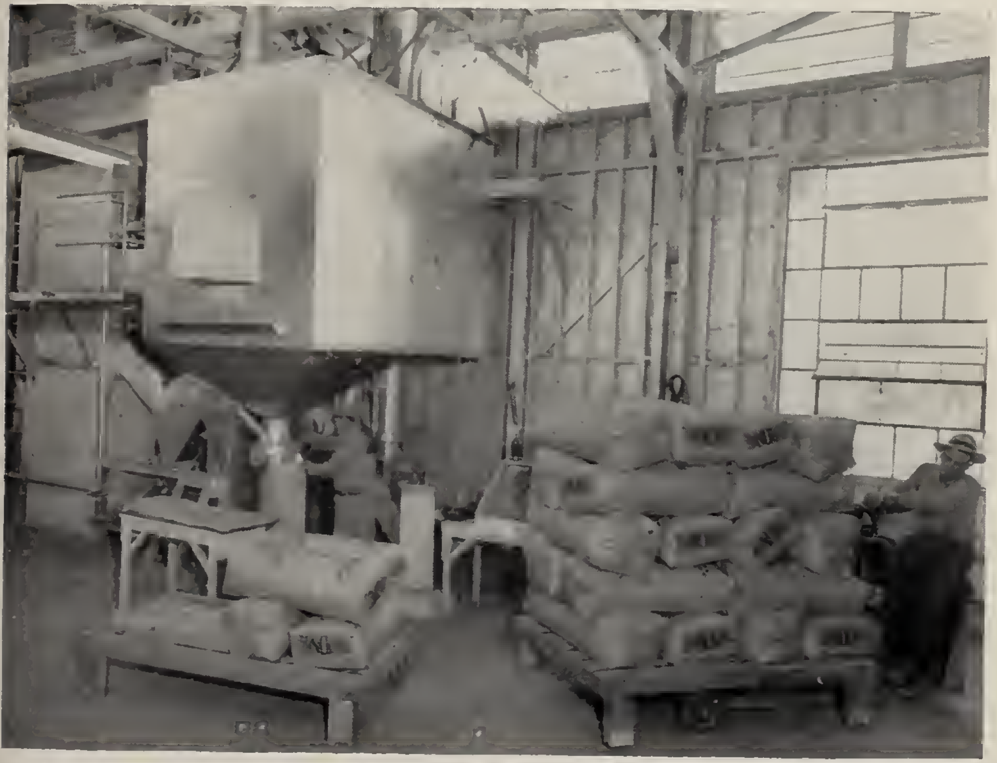

FIGURE 4. Processing and bagging vermiculite: On the left is the furnace used to expand vermiculite ore. The expanded ore is then elevated overhead into the loading hopper (center) below which the bags are filled and sealed.

One method is to lift the expanded ore to a long mesh screen set over the bagging hoppers. As the ore slides down the tilted screen, it passes over meshes of various sizes. The powder or very fine flakes drop through the fine mesh into the first hopper, larger flakes through the second size of mesh into another hopper, etc. Thus the expanded flakes can be graded into several sizes.

A second method of grading is by the use of forced air. As the granules leave the furnace and are elevated overhead, a fan drives the lighter and finer material across an opening into a hopper while the unwanted heavier granules and unexpanded gangue drop through the opening. This method is used when very fine ore is being fed into the furnace, thus producing little of the larger and heavier material after exfoliation. The average loss by this method is estimated to be about 5 percent.

Until the flakes reach the bagging hoppers the process is entirely automatic, except for furnace and machine tenders. Bagging, however, requires some hand labor. A 4-cubic-foot bag is placed under the spout extending from the bagging hopper. When the bag is filled it is removed by hand and sealed with gum tape or tie wires. One 4-cubic-foot bag of home insulation weighs approximately 25 pounds.

Since the exfoliating of vermiculite is a relatively simple operation, one or two foremen generally supervise the entire plant.

LABOR REQUIREMENTS

Three-fifths of the 19.2 man-hours required to process 1,000 cubic feet of expanded vermiculite in 1946 were needed for the most important operations of heating, grading, and bagging. An average of 25.2 man-hours was needed for all production operations, including the 6 man-hours for plant administration, clerical, and selling functions. Between individual plants, man-hour requirements for processing and administration ranged from 20.5 to 29.4 man-hours. This range was found to depend in large part on the degree to which the plants approached capacity operations. For example, plants operating on a three-shift basis required an average of 24 man-hours per 1,000 cubic feet of production, compared with the average of 29 man-hours required by plants operating fewer than three shifts.

It will be noted from table 8, that as much labor was needed to transport from mine to plant the 3.3 tons of ore used per 1,000 cubic feet of expanded vermiculite (19.4 man-hours), as was needed to process the ore (19.2 man-hours) when it arrived. The reason for this is the long haul, averaging 1,500 miles, from mine to the widely scattered plants, which are situated near their markets rather than near the few mine locations. Because of its light weight and consequent bulk, it is impracticable to ship the finished product any great distance. An average of only 13 tons, in fact, constitutes a fully loaded car. The average rail haul for the finished product is 200 miles, for which an estimated 4.7 man-hours[18] are required per 1,000 cubic feet of insulation.

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[18] See footnote 11.

Table 8.—*Labor requirements for all operations in production and distribution of 1,000 cubic feet of vermiculite home insulation in 1946*

Operation	Man-hours per 1,000 cubic feet of the final product
Total—all operations	61.1
Extraction of ore [1]	8.9
Transportation of ore	19.4
Processing	19.2
Unloading raw materials	2.1
Heating, grading, and bagging	11.6
Loading	5.5
Administration, clerical and sales	6.0
Production of fuel used [2]	.7
Production of paper bags used [3]	2.2
Transportation of final product	4.7

[1] About 3.29 tons of ore are needed to produce 1,000 cubic feet of vermiculite home insulation.

[2] About 8.9 gallons of fuel oil at mine, 16.3 gallons of fuel oil at plant, and 25 kilowatt-hours of electric-power were required per 1,000 cubic feet of expanded vermiculite, taking, respectively, an estimated 0.2, 0.4, and 0.1 man-hours to produce.

[3] An estimated 250 paper bags were used per 1,000 cubic feet of expanded vermiculite produced. The estimate shown does not include the labor required to produce the paper used in the bags.

Nearly 9 man-hours are expended in producing 3.3 tons of ore in the mine, covering administration requirements as well as the mining, cleaning, screening, grading, and loading operations. Over a third of the mining man-hours are needed in mining the ore, and in preliminary crushing and sorting. Cleaning, screening, and grading the ore require nearly half the total man-hours. The remaining labor is needed for maintenance, clerical, and supervisory labor.

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Wholesale Prices, 1946

LIBRARY
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Bulletin No. 920

ED STATES DEPARTMENT OF LABOR
L. B. Schwellenbach, *Secretary*

BUREAU OF LABOR STATISTICS
Ewan Clague, *Commissioner*

Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.
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Letter of Transmittal

United States Department of Labor,
Bureau of Labor Statistics,
Washington 25, D. C., May 8, 1948.

The Secretary of Labor:

I have the honor to transmit herewith a bulletin summarizing data on primary market prices during 1946. Preliminary mimeographed reports are released regularly, giving the current indexes and monthly prices from the primary market price series maintained by the Bureau. These reports are available upon request to persons having need for them.

This bulletin was prepared in the Prices and Cost of Living Branch, by Galen B. Price and Doris P. Rothwell, under the direction of Lester S. Kellogg, former Chief. Prices were collected under the supervision of Ethel D. Hoover, Chief. Consumers'Prices Division, and Jesse M. Cutts, Chief, Industrial Prices Division.

Ewan Clague, *Commissioner.*

Hon. L. B. Schwellenbach,
Secretary of Labor.

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Bulletin No. 920 of the
United States Bureau of Labor Statistics

Wholesale Prices, 1946

Description and Use of BLS Primary Market Price Data

The primary market price data of the Bureau of Labor Statistics
epresent prices at primary market levels—that is, at the levels of the
rst commercial transaction for each commodity. A major propor-
on of the prices are selling prices of manufacturers or producers and
o not represent prices charged by wholesalers to retailers. Prices
re for commodities—tangible goods (except for gas and electricity);
ervices, real estate, transportation, and securities are not included.
he word "wholesale" used in connection with this index refers to
les in large lots.

Wherever feasible, prices are obtained f. o. b. point of production
sale unless an industry normally sells on another basis, e. g., de-
vered. For farm products, some foods, and certain industrial raw
aterials, BLS prices are those quoted in organized commodity mar-
ets. The price series maintained by the Bureau are defined in terms
a given specification including detailed description of the com-
odity at stated terms of trade and to a specific type of purchaser.
majority of the price series consist of 1 quotation from 1 seller, since
r many articles prices of major producers tend to move together.
or some commodities, however, quotations from as many as 50
llers may be averaged to give a representative price.

For most fabricated goods, prices are obtained directly from sellers.
or other commodities which have recognized markets, price quota-
ons are taken from trade journals.

THE WHOLESALE PRICE INDEX

The primary market price data collected by the Bureau are used in
aking a number of price indexes, of which the most important is the
holesale price index. This index is based on prices of about 850
ajor commodities combined into 49 subgroups, 10 major groups, and
economic groups. All types of commodities, from raw materials to
ished industrial and consumer goods, are represented. Indexes are
ublished monthly for all groups and subgroups but weekly only
r the 10 major groups and 5 economic groups. Because of differ-
ces in methods of calculation during earlier periods, the monthly

and weekly indexes are not directly comparable as to level. The weekly index, however, serves as an accurate indicator of the direction and magnitude of current price changes.

The wholesale price index is calculated as a fixed base weighted aggregate using prices in 1926 as 100. Quantity weighing factors for the index are based on market sales during the years 1929 and 1931, except for agricultural commodities, for which the average of the years 1929, 1930, and 1931 is used.

In computing the index, the current price for each commodity is multiplied by the quantity weighting factor, to give a value aggregate for that commodity. The sum of the value aggregates at current prices for all the commodities in each group is divided by the sum of the value aggregates at 1926 prices to give the index for each group on the 1926 base. Major changes in specifications of commodities, shifts in the relative importance of sales to different types of purchasers or by different types of sellers, and alterations in the distribution pattern of the industry are handled so as to cause no movement in the index. The relation of the value aggregate for each commodity expressed as a percentage of the value aggregate of all commodities in the index in 1946 is shown in table 12 under the heading "Relative importance, year 1946." The relative importance of each commodity in the index changes as the rate of price change varies among commodities, since it is based on the product of the quantity weighting factor and the current price. Thus, it may be different in the index for each period.

CONSTRUCTION OF SPECIAL INDEXES

Persons wishing to construct indexes for special commodity groups may do so by using the relative importance data in this volume for 1946 and the wholesale price series regularly published by the Bureau in printed or mimeographed reports, and the following procedure, for all periods since January 1939:

1. Convert the entire price series for each commodity to be included in the special group to ratios of the 1946 average prices (1946=100).
2. Multiply the ratio for each commodity for each period by the relative importance for 1946 shown for the commodity in table 12.
3. Total these products for each period.
4. Divide these totals by the sum of the relative importances of the commodities used. The result is a series of weighted indexes for the special commodity group, on the base 1946=100. These indexes may then be shifted to any other base period for which these special indexes have been computed, by the usual procedure.

Certain commodities are included in more than 1 commodity group and these duplications must be kept in mind in using this procedure for calculating special indexes. Thus prices of 23 commodities are ncluded in both the farm products and foods indexes, and prices of 3 other commodities are included in both the metals and metal roducts and building materials groups. The commodities so dupliated are listed in table 12 under the foods and building materials roups, with appropriate reference as to where price data are shown. These 46 commodities are counted only once in the all-commodities ndex. The relative importance figures shown in table 12 for the farm roducts and metals and metal products groups and subgroups nclude these duplicated commodities. The relative importance of he foods and building materials groups and subgroups do not include hese duplicated commodities.

The Bureau prepares several special purpose primary market price ndexes in addition to the wholesale price index. These indexes also re shown in this volume.

PURCHASING POWER OF THE DOLLAR

The purchasing power of the dollar is a concept in common use. It must be defined in terms of the commodities and services which are to be purchased, and clearly related to a stated base. It may be measured for a single commodity or for a large number of commodities taken together. As prices increase, the purchasing power of the dollar decreases, and vice versa.

Any of the indexes in this volume may be used to measure changes in the purchasing power of the dollar in terms of the commodities included in each index.

Changes in the purchasing power of the dollar may be derived from any of these price indexes by dividing the index number for the period selected as the basis for comparison by the index number for each of the other periods which is being compared with this base period. For example, the comprehensive wholesale price index was 107.1 in January 1946 and 140.9 in December 1946 (1926=100). Based on this index, the purchasing power of the January 1946 dollar was $0.76 in December 1946 $\left(\frac{107.1}{140.9}=0.76\right)$.

Summary of Primary Market Price Movements, 1946

Primary market prices advanced 31.6 percent during 1946, the largest increase in a single calendar year since World War I. In December 1946 the all-commodities wholesale[1] price index was 87.9 percent higher than in August 1939 at the beginning of the Second World War, and 33.3 percent above August 1945 when hostilities ceased.

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[1] For a description of the Bureau of Labor Statistics wholesale price data, see p. 1.

The year 1946 was one of change in the pattern of market price activity. Industrial commodity prices, which had remained fairly stable after the United States entered the war, began to move up sharply during the early months of 1946 and showed advances exceeding those for agricultural commodities. Pressures toward higher prices were intensified in 1946 by strong demand, arising from the high level of national income and shortages of many basic materials and finished products. Foreign purchases rose after the war. Domestically, increases in the purchases of producers' durable goods and in the rate of consumer expenditures tended to offset declines in government spending. Although production reached peacetime levels in most industries, demand still exceeded the supply of available goods. Strikes in the steel and coal industries during the first half of the year and other work stoppages, including those arising out of shortages of key materials, hampered production.

During the first 6 months of 1946, ceiling increases were allowed by OPA for many manufactured goods to cover higher costs of materials and labor, to offset the elimination of subsidies, to restore profit margins, and to stimulate production. During this period, there was a great deal of price uncertainty as pressures for defeating impending price control legislation were increased. The Price Control Extension Act of 1946, passed by the Congress on June 28 to replace the act due to expire June 30, was vetoed on June 29 by the President with the statement that it "legalized inflation."

Prices of all goods and services except utilities and other public services were free from control from June 30 to July 25. During this period there were sharp increases in prices of agricultural commodities, but the possibility of resumption of price controls restrained advances for most industrial products.

The Price Control Extension Act of 1946, which became law on July 25, renewed, with certain exceptions, the controls in effect June 30 but specified that price controls and subsidies were to be terminated as soon as practicable and in no event later than June 30, 1947. The act established a Price Decontrol Board with final power to order removal or reestablishment of controls. Responsibility for control of agricultural prices was given to the Secretary of Agriculture, and only agricultural commodities certified by him as in short supply could be continued under control. By December 31, 1946, all commodities not important in relation to business costs or living costs were to be removed from control. In addition, commodities were to be removed from control as soon as supply was in approximate balance with demand.

Under this act, a number of commodities, including a large proportion of agricultural products, were specifically exempted from price control. These included:

1. Poultry, eggs, tobacco, and petroleum and their products, subject until August 21, 1946, to restoration of control by the Price Decontrol Board.

2. Livestock, meats, dairy products, grains, cottonseed, and soybeans and their products, which were exempted at least until August 21, 1946, subject to final decision by the Price Decontrol Board.

All of the commodities in the first group remained uncontrolled, since no action to restore them was ordered by the Board before August 21. On August 20, the Board ordered restoration of controls on livestock and meats, cottonseed, and soybeans and their products but continued to exempt grains and dairy products.

Reinstatment of subsidies in effect on June 29, 1946, was made subject to approval of the Price Decontrol Board. Moreover, all such programs including food subsidies were to be progressively reduced and terminated not later than April 1, 1947. Subsidies on meats were reinstated along with price controls, but those on dairy products, flour, processed vegetables, dried fruits, coffee, soybeans, and flaxseed were discontinued.

Restoration of controls slowed down the abrupt price rise, but the exemption of many important agricultural commodities caused a continued advance in agricultural prices. Following restoration of price controls and subsidies on livestock and meats on September 1, there were some price declines, but the advance was resumed in October as additional agricultural commodities were exempted from control. Prices of both farm products and foods reached peak levels for the year in November. Moreover, special provisions of the new act, which required ceiling increases for many articles, resulted in a steady rise in prices of industrial goods to the end of the year.

Commodities were decontrolled rapidly under the new act. In late September about 29 percent by value of all items in the wholesale price index, excluding gas and electricity, had been removed from OPA control. By mid-October most foods had been exempted from control, and on November 9 all price controls with the exception of those on rents, sugar, sirup, and rice were suspended by Presidential directive.

FARM PRODUCTS AND FOODS

Average prices of farm products and foods jumped 27.8 percent and 47.4 percent, respectively, from December 1945 to December 1946, in sharp contrast with the moderate advances of 4.8 percent for farm products and 2.9 percent for foods during 1945. As the year began, price increases were granted by OPA to compensate for discontinuation of subsidies as on butter and cheese, wage adjustments as on meats, and rising world prices as on sugar and pepper. On February 6 a nine-point program was announced controlling the distribution and use of grains in order to provide supplies for export, and the subsequent Government grain purchasing program upset domestic wheat and corn markets; some flour mills were forced to shut down, resulting in a temporary bread shortage in the spring. In May substantial upward ceiling adjustments for grains were effected under new parity ratios. During the spring, meats were scarcer than at any time during the war, and other commodities such as butter, margarine, and other fats and oils became increasingly scarce. There were widespread reports that commodities were being withheld from market as the date of expiration of the Price Control Act approached.

After the lapse of OPA on June 30, agricultural commodity prices surged upward as subsidy payments ceased and demand continued strong. The farm products index advanced 12.1 percent and foods 24.2 percent in July. From the end of June through August, livestock prices climbed rapidly despite unprecedented marketings, and meat prices rose nearly 80 percent. Controls were reimposed on these commodities at the end of August and shipments dropped sharply, causing a general meat shortage in September. The ensuing price decreases, though substantial, were short-lived and after most food controls were rescinded in mid-October, prices rose to new high levels. Prices quoted for good to choice beef steers at Chicago in November averaged $29.75 per 100 pounds as compared with $17.41 in June.

Also contributing to the sharp advances for prices of agricultural commodities over the year was the 58-percent rise in prices of dairy products, due in large part to the elimination of the dairy feed subsidy in late April. Cereals and bakery products, recontrolled in late July, were later granted substantial ceiling advances and rose after decontrol in late October to a point almost 50 percent higher than in December 1945. Milling of regular flour was resumed, following termination on September 1 of the 6 months' emergency order requiring 80 percent wheat extraction. Sugar, together with sirups and rice, remained under OPA control but continued to advance as the purchase price of Cuban sugar was linked to increases in the Bureau's retail price indexes under an agreement made between the Commodity Credit Corporation and Cuba in July. In November, farm products prices approximated the January 1920 peak and food prices reached an all-time high. However, prices dropped somewhat in December, reflecting increased supplies and consumer resistance.

HIDES AND LEATHER PRODUCTS

Of most importance in the 48.6-percent rise for hides and leather roducts from December 1945 to December 1946 were the increases of 4 percent for hides and skins and 78 percent for leather, over half of hich developed after decontrol of these commodities at the end of ctober. Some ceiling advances had been granted prior to June 30, ut the first major increases took place after the removal of foreign ides and raw goatskins from import controls and the temporary apse of ceilings at the end of June. There were roll-backs to June eilings for some leathers when price controls were restored, but rices resumed their rapid climb after October 30 with final decontrol. ompetition with foreign bidders and a shortage of hides and skins eputedly resulting from black-market operations in meats served to ustain high prices, although there was a weakening for hides and kins toward the end of the year. There was a rise of 34 percent in actory prices of shoes over the year, most of which occurred in the ast quarter following advances in leather and other costs. In ecember 1946, hides and leather products prices were over 90 percent igher than in August 1939.

TEXTILE PRODUCTS

Prices of textile products advanced 32.8 percent in 1946, increasing teadily with OPA ceiling adjustments, and later with strong demand nd limited supplies. During the first 6 months, higher ceilings were granted for men's and women's apparel to stimulate production of carce items, and clothing prices advanced 12 percent. Prices of otton goods were adjusted under the Bankhead Amendment to the Stabilization Extension Act and were 11 percent higher in June 1946 han in December 1945. Further increases were necessitated by ising costs of raw cotton after June 30. In the second quarter, rices of raw cotton reached the highest point in over 20 years and ontinued to advance to nearly 39 cents a pound in October, when iquidation of speculative holdings caused a sharp break in the cotton market. The rise in prices of clothing and cotton goods continued fter the decontrol order in November, and in December prices were 21 and 45 percent higher, respectively, than in December 1945. The selling price of domestic raw wool was lowered by the Commodity Credit Corporation in the first quarter of 1946 to encourage purchases by manufacturers but was raised in the last quarter in accordance with parity ratios. Prices of woolen and worsted goods remained steady through July, advancing only moderately thereafter.

The first postwar imports of raw silk were offered for sale by the United States Commercial Company in July. Prices acceptable to the Government ranged well above prewar levels. Prices were lowered at subsequent auctions, as manufacturers hesitated to buy the raw silk in the face of consumer resistance to high prices of silk products in comparison with rayon and nylon goods.

BUILDING MATERIALS

The huge demand for building materials in conjunction with the housing program was an important factor in the price rise of 32 percent for building materials during 1946, more than half of which occurred in November and December after price decontrol. Higher ceilings were allowed by OPA prior to decontrol to cover costs and to stimulate production, particularly of lumber. It was reported during the first months of the year that much lumber was being sold through black markets. By the end of June, reported lumber prices were almost double their prewar average. Prices of plumbing and heating equipment were more than 11 percent higher than in December 1945.

During the period of uncontrolled prices in July, paint and paint materials was the only group to show significant price advances, with an increase of 6 percent. Following decontrol in November, prices of raw materials used in paints climbed to new highs with increases of 90 percent for linseed oil and 63 percent for ethyl acetate. Lumber prices continued to advance throughout the year, and at the close of the year quoted mill prices were the highest on record, 44 percent above December 1945.

Production of most building materials, although for some commodities above prewar levels, remained insufficient. In August a system of incentive premium payments was begun covering such items as hardwood flooring, brick, softwood plywood, gypsum paper liner, convector radiation, cast-iron soil pipe, and nails.

CHEMICALS AND ALLIED PRODUCTS

Chemicals and allied products prices as a group fluctuated moderately until after the removal of price controls in November, and then rose sharply. At the close of 1946, prices were 30.8 percent higher than in December 1945. There were large increases for a few commodities beginning in the spring, and during the temporary lapse of OPA in July prices for fats and oils and fertilizer materials advanced substantially. After decontrol, prices of many basic materials were advanced to cover higher production costs, and prices of derived products subsequently were increased. Drug and pharmaceutical materials reached all-time peaks in November and December, and fats and oils prices in December 1946 were twice as high as a year earlier.

METALS AND METAL PRODUCTS

The advance in prices of metals and metal products (27.6 percent r the year) began in the first quarter when OPA raised ceiling prices n steel an average of $5 per ton by order of the Stabilization Adminis- ator, to permit higher wages and to end the strike of steel mill workers hich was seriously hampering the reconversion program. This was llowed in the spring by ceiling increases in other basic metals, farm achinery, and plumbing and heating supplies, all reflecting the new age-price policy under which OPA was directed to give consider- tion to industry requests for price increases to relieve hardships rising from approved wage adjustments. Prior to decontrol, ceilings r copper, lead, and zinc were advanced. The shortages in these etals became more acute during the lapse of OPA controls and ubsidies in July, with trading virtually at a standstill. The price of ilver was raised to 90½ cents per ounce by Congress in July, and RFC urchase prices for lead and tin were raised with increases in world arkets. After controls were terminated in November, there were urther sharp increases for basic nonferrous metals. Iron and steel rices continued to advance, and many other commodities were ad- anced in price to cover higher material and labor costs. Production f motor vehicles reached prewar rates in October, permitting reintro- uction of current prices into the wholesale price index. In December, rices were 34 percent above April 1942 when civilian production as discontinued.

FUEL AND LIGHTING MATERIALS

Advances for fuel and lighting materials, housefurnishing goods, nd miscellaneous commodities were smaller, ranging around 15 ercent. Higher bituminous coal and anthracite prices were granted y OPA in late June to compensate producers for wage increases hich followed the work stoppage in the spring. Production was urtailed again in November when there was a general strike in soft oal mines, but miners returned to work under terms of the "Krug- ewis agreement," which had become effective in May. Following pecific exemption of petroleum and petroleum products from price ontrol in late July under the new act, prices of crude oil and petroleum roducts rose sharply, increasing nearly 25 percent over the year. As rices advanced, RFC subsidies to stripper-well producers were ithdrawn.

HOUSEFURNISHING AND MISCELLANEOUS GOODS

Housefurnishing goods prices advanced steadily and moderately uring 1946, for the most part following OPA adjustments, and there was much improvement in the supply of these commodities. The paper shortage of previous years continued through 1946. Prices for paper and its basic products were advanced by OPA and continued their upward trend following decontrol. There were advances in other miscellaneous commodities as well, particularly soap and cattle feed. However cattle feed quotations declined substantially late in the year, because of decreased demand and increased availability of feed corn.

Primary Market Prices—Index Numbers, by Groups and Subgroups of Commodities

Index numbers of primary market prices by groups and subgroups of commodities are shown for each month and the year 1946 in table 1, and for selected years in table 2. The commodities included in the groups "Raw materials," "Semimanufactured articles," and "Manufactured products" are listed on pages 8 and 9 of Wholesale Prices, 1944 (Bull. No. 870). These indexes are published regularly in monthly mimeographed reports and in the Monthly Labor Review.

TABLE 1.—*Index numbers of primary market prices, by groups and subgroups of commodities, 1946*

[1926=100]

Groups and subgroups	January	February	March	April	May	June	July	August	September	October	November	December	Year
All commodities	107.1	107.7	108.9	110.2	111.0	112.9	124.7	129.1	124.0	[1]134.1	[1]139.7	[1]140.9	[1]121.1
Farm products	129.9	130.8	133.4	135.4	137.5	140.1	157.0	161.0	154.3	165.3	169.8	168.1	148.9
Grains	133.8	133.9	136.7	137.0	148.1	151.8	181.4	169.0	170.6	174.2	165.4	163.0	155.6
Livestock and poultry	131.5	132.7	133.5	135.1	134.9	137.4	162.9	177.6	150.4	174.6	197.4	194.7	155.6
Other farm products	126.9	127.9	131.4	134.2	135.1	137.5	145.7	147.8	151.1	156.1	153.3	152.5	142.0
Foods	107.3	107.8	109.4	110.8	111.5	112.9	140.2	149.0	131.9	157.9	165.4	160.1	130.7
Dairy products	115.0	115.8	116.1	116.3	117.0	127.3	156.9	161.8	169.1	185.5	182.9	180.0	145.8
Cereal products	95.8	96.1	96.2	99.4	100.3	101.7	124.9	124.7	127.4	128.5	136.1	139.5	114.5
Fruits and vegetables	125.7	127.5	133.1	138.2	140.6	136.1	130.0	120.4	115.5	122.5	139.5	134.5	129.9
Meats	108.1	108.1	109.6	110.3	110.5	110.1	169.9	198.1	131.3	191.4	202.8	188.2	145.9
Other foods	96.2	96.5	97.7	97.7	98.1	98.1	109.4	114.9	115.5	136.2	141.4	139.0	111.9
Hides and leather products	119.4	119.6	119.8	119.8	120.4	122.4	141.2	138.9	141.6	142.4	172.5	176.7	137.2
Shoes	127.9	128.2	128.6	128.6	128.9	129.5	140.4	140.1	144.8	145.2	162.9	169.9	141.7
Hides and skins	117.6	117.6	117.6	117.6	120.7	121.5	169.3	155.8	151.5	153.0	221.0	216.5	147.4
Leather	103.8	103.9	104.0	104.0	104.0	110.7	133.2	133.3	138.5	138.5	178.1	185.0	128.6
Other leather products	115.2	115.2	115.2	115.2	115.2	115.2	115.2	115.8	115.8	118.6	123.5	123.6	117.0
Textile products	101.6	102.2	104.7	107.9	108.8	109.2	118.1	124.0	125.7	128.6	131.6	134.7	116.3
Clothing	107.4	109.4	109.5	117.4	119.6	120.3	120.5	122.8	122.9	125.5	127.9	129.8	119.3
Cotton goods	125.6	125.8	132.9	137.6	138.6	139.4	148.6	160.0	166.6	172.9	174.7	181.6	150.5
Hosiery and underwear	75.2	75.3	75.5	75.5	75.7	75.8	76.3	87.7	88.7	88.8	89.3	96.9	82.1
Rayon	30.2	30.2	30.2	30.2	30.2	30.2	30.2	30.2	30.2	30.2	32.0	33.8	30.7
Silk	(2)	(2)	(2)	(2)	(2)	(2)	126.7	134.8	126.5	125.7	115.0	103.2	(2)
Woolen and worsted goods	112.7	112.7	112.7	112.7	112.7	112.7	112.7	112.8	113.9	116.6	117.7	119.0	115.7
Other textile products	101.9	102.0	109.6	110.5	111.9	112.3	113.5	121.7	126.7	130.6	161.3	168.1	122.8
Fuel and lighting materials	84.9	85.1	85.0	86.1	86.1	87.8	90.3	94.4	94.3	94.2	94.5	96.1	90.1
Anthracite	103.9	104.0	104.0	104.0	104.1	106.1	114.5	113.4	113.5	113.5	113.5	113.7	109.0
Bituminous coal	125.1	125.1	125.2	125.2	125.3	132.8	136.1	136.7	137.0	137.2	137.4	138.9	132.5
Coke	134.9	134.9	134.9	133.5	133.5	133.5	147.5	147.0	147.5	147.5	147.5	147.5	140.4
Electricity	69.2	71.3	68.3	66.6	67.0	67.2	65.6	63.9	64.7	64.1	65.2	65.8	66.6
Gas	77.4	79.1	79.6	79.7	80.2	79.6	80.7	79.5	82.3	82.8	84.4	83.1	80.7
Petroleum and products	61.5	61.6	61.2	62.8	63.5	64.0	65.1	72.8	73.0	73.1	73.4	75.8	67.5
Metals and metal products [1]	105.7	106.6	108.4	108.8	109.4	112.2	113.3	114.0	114.2	[1]125.8	[1]130.2	[1]134.7	[1]115.5
Agricultural implements	98.1	98.1	98.5	98.6	101.7	107.0	107.2	108.5	108.6	108.7	112.5	117.1	105.5
Farm machinery	99.1	99.2	99.6	99.6	102.7	108.4	108.7	109.7	109.8	109.9	113.8	118.6	106.7
Iron and steel	101.2	103.3	107.0	107.4	107.8	110.1	111.3	113.3	113.5	113.7	114.0	117.4	110.3
Motor vehicles	118.5	120.5	122.0	125.3	131.1	135.5	135.5	138.6	140.8	[1]141.4	[1]146.0	[1]148.9	133.7
Nonferrous metals	85.7	85.7	86.1	87.1	89.0	99.2	102.7	101.4	101.4	101.8	118.4	129.3	99.7
Plumbing and heating	95.0	95.1	95.1	100.8	100.8	106.0	106.0	106.3	107.2	107.2	107.2	114.9	103.8

TABLE 1.—*Index numbers of primary market prices, by groups and subgroups of commodities, 1946*—Continued

[1926=100]

Groups and subgroups	January	February	March	April	May	June	July	August	September	October	November	December	Year
Building materials	120.0	120.9	124.9	126.5	127.8	129.9	132.1	132.7	133.8	134.8	145.5	157.8	132.6
Brick and tile	116.9	116.9	117.4	119.9	120.5	121.3	122.5	126.0	127.7	127.8	129.1	130.0	122.9
Cement	101.1	101.5	102.3	102.4	102.6	102.6	104.0	105.8	106.5	106.5	107.0	106.9	104.1
Lumber	158.5	160.1	167.6	171.4	172.5	176.0	177.3	177.6	178.2	178.9	192.1	227.2	178.4
Paint and paint materials	107.8	107.8	107.8	108.0	108.2	108.6	114.9	113.9	116.7	119.2	151.3	155.4	118.5
Plumbing and heating	95.0	95.1	95.1	100.8	100.8	106.0	106.0	106.3	107.2	107.2	107.2	114.9	103.8
Structural steel	107.3	113.7	120.1	120.1	120.1	120.1	120.1	120.1	120.1	120.1	120.1	120.1	118.4
Other building materials	106.6	107.2	112.3	112.8	115.7	118.4	119.9	120.9	121.4	122.5	125.3	131.8	118.6
Chemicals and allied products	96.0	95.9	96.0	96.1	96.5	96.4	99.3	98.4	98.4	99.9	118.9	125.7	101.4
Chemicals	97.1	97.0	97.0	97.1	97.9	98.0	98.5	98.4	98.6	98.8	106.9	111.8	99.8
Drug and pharmaceutical materials	112.1	111.5	111.7	112.4	112.4	109.4	112.6	110.1	110.3	111.5	152.8	181.2	120.8
Fertilizer materials	81.9	81.9	81.9	81.9	81.9	82.7	88.2	94.4	90.2	91.9	96.3	95.1	87.4
Mixed fertilizers	86.6	86.6	86.6	86.6	86.6	86.6	86.6	87.7	90.0	90.5	91.1	93.6	88.2
Oils and fats	101.7	101.8	102.1	102.1	102.1	102.1	114.2	102.5	103.3	111.1	191.0	203.0	119.1
Housefurnishing goods	106.2	106.5	106.9	107.5	108.3	110.4	111.9	112.6	113.6	115.3	118.2	120.2	111.6
Furnishings	109.7	110.1	110.9	112.1	113.4	114.5	117.3	118.5	119.4	121.3	124.4	126.3	116.6
Furniture	102.8	102.9	102.9	102.9	102.9	106.1	106.4	106.6	107.5	109.2	111.8	113.9	106.4
Miscellaneous	95.3	95.6	95.6	95.7	97.0	98.5	101.3	102.0	102.1	104.0	106.5	108.9	100.3
Automobile tires and tubes	73.0	73.0	73.0	73.0	73.0	73.0	73.0	73.0	73.0	73.0	73.0	73.0	73.0
Cattle feed	159.6	159.6	159.6	159.6	173.6	197.8	246.3	221.1	201.8	217.2	210.8	193.8	191.1
Paper and pulp	112.0	113.7	113.7	113.9	115.3	115.6	117.1	119.6	121.9	124.6	127.7	136.4	119.4
Crude rubber	46.2	46.2	46.2	46.2	46.2	46.2	46.2	46.2	46.2	46.2	46.2	46.2	46.2
Other miscellaneous	98.9	98.9	98.9	99.2	100.2	101.0	101.9	105.0	106.5	108.2	113.3	117.0	104.3
Raw materials	118.3	118.9	120.5	122.2	123.6	126.3	141.7	145.7	141.4	148.7	153.4	153.2	134.7
Semimanufactured articles	97.6	98.8	100.4	101.1	101.9	105.7	110.2	111.9	115.0	118.2	129.1	136.2	110.8
Manufactured products[1]	102.9	103.4	104.5	105.5	106.1	107.3	118.9	123.9	117.2	[1] 129.6	[1] 134.7	[1] 135.7	[1] 116.1
All commodities other than farm products[1]	101.9	102.5	103.4	104.5	105.1	106.7	117.5	121.9	117.2	[1] 127.1	[1] 132.9	[1] 134.8	[1] 114.9
All commodities other than farm products and foods[1]	100.8	101.3	102.2	103.3	103.9	105.6	109.5	111.6	112.2	[1] 115.8	[1] 120.7	[1] 124.7	[1] 109.5

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[1] The rate of production of motor vehicles in October 1946 exceeded the monthly average rate of civilian production in 1941, and in accordance with previous announcements the Bureau introduced current prices for motor vehicles in the October calculations. During the war, motor vehicles were not produced for general civilian sale, and the Bureau carried April 1942 prices forward in each computation through September 1946.

If April 1942 prices of motor vehicles had been used after September 1946, the indexes (1926=100) for the groups of which motor vehicles is a component would have been as follows:

	October	*November*	*December*	*Year*[2]
All commodities	132.5	137.9	139.0	120.7
Metals and metal products	114.3	117.0	120.5	112.3
Manufactured products	127.0	131.7	132.5	115.4
All commodities other than farm products	125.1	130.7	132.4	114.3
All commodities other than farm products and foods	121.6	117.8	121.6	108.8

[2] Not available.

ABLE 2.—*Annual index numbers of primary market prices, by groups and subgroups of commodities*

[1926=100]

Groups and subgroups	1946	1945	1944	1943	1942	1941	1939	1929
l commodities	[1]121.1	105.8	104.0	103.1	98.8	87.3	77.1	95.3
rm products	148.9	128.2	123.3	122.6	105.9	82.4	65.3	104.9
Grains	155.6	129.7	126.9	116.3	92.9	76.9	58.6	97.4
Livestock and poultry	155.6	132.5	124.6	128.7	117.8	91.6	72.2	106.1
Other farm products	142.0	124.3	120.7	119.8	101.6	77.8	62.6	106.6
ods	130.7	106.2	104.9	106.6	99.6	82.7	70.4	99.9
Dairy products	145.8	111.1	110.5	111.1	100.0	87.3	69.5	105.6
Cereal products	114.5	95.2	94.8	93.7	89.2	80.7	74.8	88.0
Fruits and vegetables	129.9	122.8	121.3	121.3	95.5	67.5	62.0	97.8
Meats	145.9	107.8	106.1	110.3	111.8	90.4	77.2	109.1
Other foods	111.9	96.6	95.0	97.3	92.3	78.9	64.1	93.9
des and leather products	137.2	118.1	116.7	117.5	117.7	108.3	95.6	109.1
Shoes	141.7	126.4	126.3	126.4	125.7	113.5	102.6	106.3
Hides and skins	147.4	117.0	109.9	114.7	117.6	108.4	84.6	112.7
Leather	128.6	102.2	101.3	101.3	101.3	97.9	87.5	113.2
Other leather products	117.0	115.2	115.2	115.2	114.9	104.7	97.1	106.4
xtile products	116.3	100.1	98.4	97.4	96.9	84.8	69.7	90.4
Clothing	119.3	107.4	107.1	107.0	106.9	92.6	82.0	90.0
Cotton goods	150.5	121.4	115.7	112.7	112.4	94.2	67.2	98.8
Hosiery and underwear	82.1	71.7	70.9	70.8	70.5	63.1	61.4	88.5
Silk	(2)	(2)	(2)	(2)	(2)	(2)	46.1	82.7
Rayon	30.7	30.2	30.2	30.3	30.3	29.7	28.8	68.4
Woolen and worsted goods	115.7	112.7	112.7	112.5	110.4	96.6	79.8	88.3
Other textile products	122.8	101.1	100.6	98.8	97.9	90.7	69.2	93.1
el and lighting materials	90.1	84.0	83.0	80.8	78.5	76.2	73.1	83.0
Anthracite	109.0	99.0	95.6	90.4	85.5	82.7	75.8	90.1
Bituminous coal	132.5	123.1	120.3	116.1	109.7	104.3	97.5	91.3
Coke	140.4	132.5	130.3	122.7	122.1	119.3	105.6	84.6
Electricity	66.6	62.3	59.6	59.5	63.8	68.3	78.6	94.5
Gas	80.7	77.7	77.2	76.5	78.4	78.6	84.1	93.1
Petroleum products	67.5	63.5	63.9	62.5	59.8	57.0	52.2	71.3
etals and metal products	[1]115.5	104.7	103.8	103.8	103.8	99.4	94.4	100.5
Agricultural implements	105.5	97.8	97.3	96.9	96.9	93.5	93.4	98.7
Farm machinery	106.7	98.8	98.4	98.0	98.0	94.5	94.6	98.0
Iron and steel	110.3	99.2	97.2	97.2	97.2	96.4	95.8	94.9
Motor vehicles	[3]133.7	[3]115.4	[3]113.2	[3]112.6	[3]112.5	103.3	93.4	100.0
Nonferrous metals	99.7	85.8	85.8	86.0	85.7	84.4	78.0	106.1
Plumbing and heating	103.8	93.4	92.2	90.7	95.4	84.8	79.2	95.0
ilding materials	132.6	117.8	115.5	111.4	110.2	103.2	90.5	95.4
Brick and tile	122.9	112.4	101.7	99.1	98.0	93.7	91.4	94.3
Cement	104.1	99.4	95.8	93.8	94.0	92.0	91.3	89.0
Lumber	178.4	155.1	[3]153.3	[3]141.4	133.0	122.5	93.2	93.8
Paint and paint materials	118.5	106.9	105.2	102.3	100.3	91.4	82.8	94.9
Plumbing and heating	103.8	93.4	92.2	90.7	95.4	84.8	79.2	95.0
Structural steel	118.4	107.3	107.3	107.3	107.3	107.3	107.3	98.1
Other building materials	118.6	104.4	103.1	102.0	103.5	98.3	90.3	97.7
emicals and allied products	101.4	95.2	[3]95.2	[3]94.9	[3]95.5	[3]84.4	76.0	94.0
Chemicals	99.8	96.1	96.1	96.5	96.2	87.2	84.7	99.7
Drug and pharmaceutical materials	120.8	109.0	[3]108.8	[3]106.2	[3]116.0	[3]102.6	78.2	66.8
Fertilizer materials	87.4	81.6	81.3	80.0	78.7	73.5	67.9	95.6
Mixed fertilizers	88.2	86.6	86.4	86.1	82.7	76.0	73.0	95.2
Oils and fats	119.1	102.0	102.0	101.9	105.1	77.6	48.4	89.0
ousefurnishing goods	111.6	104.5	104.3	102.7	102.4	94.3	86.3	94.3
Furnishings	116.6	107.6	107.3	107.2	107.3	99.9	91.1	93.6
Furniture	106.4	101.5	101.4	98.1	97.4	88.4	81.3	95.0
iscellaneous	100.3	94.7	93.6	92.2	89.7	82.0	74.8	82.6
Automobile tires and tubes	73.0	73.0	73.0	73.0	72.5	61.0	59.5	54.5
Cattle feed	191.1	159.6	159.6	152.7	134.4	101.2	83.3	121.6
Paper and pulp	119.4	108.8	107.1	104.1	100.8	98.2	82.4	88.9
Crude rubber	46.2	46.2	46.2	46.2	46.3	46.1	37.2	42.3
Other miscellaneous	104.3	98.9	97.0	95.8	93.4	87.8	82.6	98.4
aw materials	134.7	116.8	113.2	112.1	100.6	83.5	70.2	97.5
mimanufactured articles	110.8	95.9	94.1	92.9	92.6	86.9	77.0	93.9
anufactured products	[1]116.1	101.8	100.8	100.1	98.6	89.1	80.4	94.5
l commodities other than farm products	[1]114.9	100.8	99.6	98.7	97.0	88.3	79.5	93.3
l commodities other than farm products and foods	[1]109.5	99.7	98.5	96.9	95.5	89.0	81.3	91.6

[1] See footnote 1, table 1.

[2] Data not available.

[3] Revised.

Weekly Fluctuations in Primary Market Prices

Weekly index numbers of primary market prices by groups of commodities during 1946 are shown in table 3. These indexes are computed from 1-day-a-week prices to show week-to-week fluctuations. They are not directly comparable with the monthly primary market indexes given in tables 1 and 2. (For explanation see p. 1.) These indexes are issued in a regular weekly release available on Thursday for the previous week.

TABLE 3.—*Weekly index numbers of commodity prices in primary markets, by groups of commodities, 1946*

[1926=100]

Week ending—	All commodities	Farm products	Foods	Hides and leather products	Textile products	Fuel and lighting materials	Metals and metal products	Building materials
1946								
Jan. 5	106.8	131.3	108.0	119.4	100.6	85.2	105.3	119.1
Jan. 12	106.7	130.0	107.6	119.4	101.0	85.5	105.4	119.2
Jan. 19	106.7	129.3	107.3	119.4	101.1	85.5	105.4	119.8
Jan. 26	106.8	129.9	106.8	119.4	101.1	85.4	105.8	119.9
Feb. 2	106.8	129.7	106.7	119.8	101.1	85.4	105.8	119.9
Feb. 9	107.1	130.4	107.1	120.0	101.1	85.8	105.8	119.9
Feb. 16	107.2	131.0	108.0	120.1	101.1	85.7	105.8	120.0
Feb. 23	107.4	131.1	108.3	120.1	101.1	85.6	105.8	120.2
Mar. 2	107.6	130.7	107.9	120.1	101.4	85.4	107.8	121.0
Mar. 9	108.2	133.9	109.2	120.1	101.9	85.4	107.8	121.1
Mar. 16	108.4	133.1	109.5	120.1	101.9	85.4	107.7	123.3
Mar. 23	108.4	132.9	109.4	120.1	102.4	85.4	107.9	123.6
Mar. 30	108.7	133.3	109.5	120.1	104.3	85.4	107.9	123.6
Apr. 6	109.1	135.2	109.7	120.1	104.5	85.5	108.0	124.0
Apr. 13	109.3	135.1	109.9	120.3	105.0	86.5	108.2	124.0
Apr. 20	109.6	135.4	110.4	120.3	105.2	86.6	109.0	126.0
Apr. 27	109.6	135.5	110.3	120.3	105.5	86.6	109.0	126.0
May 4	109.9	135.6	110.7	120.3	106.7	87.0	109.1	126.6
May 11	110.1	135.8	110.9	120.3	106.7	87.0	109.3	126.8
May 18	110.9	137.9	111.5	120.9	108.2	87.0	109.3	126.9
May 25	110.7	137.2	111.0	120.9	108.2	87.1	109.4	127.2
June 1	111.1	138.8	111.8	120.9	108.2	86.7	109.5	127.8
June 8	111.5	139.4	111.9	120.9	108.3	86.9	110.5	128.2
June 15	111.8	139.9	111.8	123.4	108.3	86.9	111.0	128.5
June 22	112.4	140.0	113.7	123.5	108.3	87.1	111.0	129.7
June 29	112.7	140.3	113.4	123.8	108.5	87.5	111.6	130.3
July 6	117.2	152.9	121.1	124.0	108.8	89.5	112.6	130.7
July 13	120.7	153.9	134.0	129.1	108.8	90.1	113.0	131.8
July 20	124.2	159.2	142.0	139.3	109.5	90.2	113.2	132.5
July 27	124.1	157.3	140.7	144.0	109.5	90.2	113.3	132.6
Aug. 3	125.0	156.5	142.3	143.0	110.8	92.5	113.1	132.0
Aug. 10	127.1	162.3	144.0	138.3	114.6	96.6	113.5	132.4
Aug. 17	128.3	163.3	148.9	138.4	114.9	96.5	113.7	132.7
Aug. 24	128.4	160.9	148.1	140.4	115.0	96.7	113.7	132.9
Aug. 31	128.2	157.1	150.9	140.1	115.2	96.7	113.6	132.8
Sept. 7	122.0	150.4	130.7	139.6	117.3	95.1	113.6	133.1
Sept. 14	121.7	151.8	128.1	139.7	117.5	95.2	113.6	133.3
Sept. 21	123.8	155.1	131.9	139.4	123.7	95.3	114.2	133.9
Sept. 28	124.4	156.6	133.0	140.9	125.4	95.1	114.2	134.0
Oct. 5	125.1	158.0	135.5	141.1	125.9	95.0	114.2	134.1
Oct. 12	126.0	160.2	137.7	141.3	126.1	95.0	114.2	134.1
Oct. 19	135.1	160.1	175.6	141.5	126.3	95.0	114.4	134.2
Oct. 26	135.9	170.1	169.9	143.3	126.5	95.0	114.4	134.2
Nov. 2	134.8	166.5	165.9	143.3	127.3	94.8	114.4	137.4
Nov. 9	134.8	166.0	162.5	158.7	130.2	94.7	114.4	140.0
Nov. 16	135.8	167.3	164.1	159.2	129.5	94.8	116.3	140.4
Nov. 23	137.3	172.1	165.0	158.6	129.6	94.9	117.2	142.0
Nov. 30	139.1	170.3	163.6	165.0	130.7	95.8	131.8	144.3
Dec. 7	139.1	169.2	161.7	166.9	131.7	96.0	132.2	145.2
Dec. 14	139.7	168.7	161.3	170.7	132.5	96.1	132.7	151.1
Dec. 21	139.8	170.7	159.5	170.9	132.8	96.9	133.3	151.9
Dec. 28	139.6	167.7	159.1	171.3	133.3	97.0	133.9	154.6

TABLE 3.—*Weekly index numbers of commodity prices in primary markets, by groups of commodities, 1946*—Continued

[1926=100]

Week ending—	Chemicals and allied products	House-furnishing goods	Miscellaneous	Raw materials	Semi-manufactured articles	Manufactured products	All other than farm products	All other than farm products and foods
1946								
an. 5	96.1	106.4	95.0	119.7	96.9	102.6	101.4	100.6
an. 12	96.1	106.4	95.0	119.0	96.9	102.8	101.5	100.7
an. 19	96.1	106.6	95.0	118.7	96.9	102.9	101.7	100.8
an. 26	96.0	106.6	95.0	119.0	97.5	102.9	101.7	100.9
eb. 2	96.0	106.8	95.0	118.9	97.5	102.9	101.7	100.9
eb. 9	96.0	106.8	95.3	119.3	97.5	103.2	101.9	101.1
eb. 16	95.9	106.8	95.4	119.7	98.5	103.2	102.0	101.1
eb. 23	96.0	108.0	95.4	119.7	98.5	103.4	102.2	101.1
Mar. 2	96.0	108.0	95.4	119.5	99.6	103.7	102.5	101.5
Mar. 9	96.0	108.3	95.4	121.4	99.6	103.8	102.6	101.6
Mar. 16	96.0	108.4	95.4	121.0	99.7	104.3	103.0	101.9
Mar. 23	96.0	108.4	95.4	120.9	100.3	104.3	103.0	102.0
Mar. 30	96.0	108.5	95.4	121.1	100.5	104.5	103.3	102.3
pr. 6	96.0	108.7	95.4	122.2	100.6	104.6	103.4	102.4
pr. 13	96.1	108.7	95.4	122.8	100.8	104.8	103.7	102.8
pr. 20	96.1	108.7	95.4	123.0	100.8	105.1	103.9	103.1
pr. 27	96.1	108.7	95.5	123.0	101.2	105.1	103.9	103.1
May 4	96.1	108.7	96.2	123.1	101.5	105.5	104.3	103.6
May 11	96.2	108.9	96.2	123.2	101.6	105.6	104.4	103.7
May 18	96.3	109.4	96.3	124.6	101.7	106.1	104.8	104.0
May 25	96.6	109.4	96.6	124.2	101.7	106.2	104.9	104.1
une 1	96.6	110.0	97.8	125.1	101.7	106.5	105.1	104.3
une 8	96.8	110.2	97.9	125.5	103.4	106.6	105.4	104.6
une 15	96.8	110.4	97.9	125.8	104.4	106.8	105.6	104.9
une 22	96.9	110.4	97.9	126.0	104.4	107.7	106.3	105.1
une 29	96.9	110.7	97.9	126.7	104.4	107.8	106.6	105.4
uly 6	98.2	110.7	98.0	135.2	106.1	110.9	109.4	106.3
uly 13	98.4	110.7	98.3	137.2	107.5	115.3	113.3	106.9
uly 20	100.0	112.5	98.8	141.4	108.5	118.9	116.6	107.8
uly 27	100.3	112.5	101.7	140.2	109.0	119.3	116.8	108.6
ug. 3	98.1	113.0	101.6	140.6	109.0	120.6	118.1	109.2
ug. 10	98.2	113.4	101.7	145.7	110.4	121.3	119.3	110.8
ug. 17	98.3	114.0	101.0	146.3	110.5	122.9	120.6	110.8
ug. 24	98.3	114.0	101.5	144.9	111.3	123.6	121.2	111.0
ug. 31	98.1	114.0	101.5	142.6	111.3	124.5	121.9	111.0
ept. 7	97.9	114.1	101.3	137.5	111.5	116.9	115.8	110.8
ept. 14	97.9	114.3	101.9	138.4	111.9	115.9	115.1	111.0
ept. 21	98.4	114.7	101.8	142.5	116.2	117.1	116.9	112.1
ept. 28	98.2	115.0	101.8	143.6	116.7	117.5	117.4	112.4
ct. 5	98.6	115.1	102.2	144.5	116.9	118.1	117.8	112.6
ct. 12	98.8	115.3	102.2	146.3	117.1	118.6	118.4	112.6
ct. 19	98.8	115.7	102.5	146.3	117.5	133.7	129.7	112.8
ct. 26	99.5	115.9	103.7	153.0	117.7	131.7	128.5	113.1
Nov. 2	103.5	117.3	105.4	150.9	120.6	130.4	127.9	114.0
Nov. 9	110.2	117.5	104.9	152.2	122.4	129.5	128.0	115.5
Nov. 16	122.3	117.6	104.6	152.6	125.9	130.4	129.0	116.2
Nov. 23	123.1	118.0	106.1	155.3	128.2	131.1	129.7	116.9
Nov. 30	123.7	118.3	106.7	154.8	130.2	134.1	132.3	121.1
Dec. 7	124.0	118.7	106.9	154.4	131.6	134.0	132.5	121.6
Dec. 14	125.4	120.0	107.9	154.3	133.7	134.8	133.4	122.9
Dec. 21	125.6	120.5	108.1	155.5	134.4	134.2	133.0	123.4
Dec. 28	126.1	120.5	107.7	154.2	135.0	134.5	133.5	123.9

Daily Index of Spot Primary Market Prices of 28 Commodities

Daily index numbers based on spot primary market prices of 28 commodities for the period January 1 to December 31, 1946, are given in table 4.

These index numbers show the daily movements of prices of 28 selected commodities as quoted on organized exchanges and in primary markets. The daily index is more sensitive to changes in market conditions than is the Bureau's comprehensive wholesale price index, which includes many fabricated and semifabricated goods whose prices fluctuate less frequently and within narrower ranges. It differs from and should not be used as a substitute for the monthly consumers' price index, which measures changes in the retail prices of goods and services purchased by moderate income families. The daily index is calculated as an unweighted geometric mean of the individual price ratios.[1] It is computed with the average of daily prices in August 1939 as the base in order to facilitate comparisons with prices prevailing in world markets just before the beginning of World War II. Prior to October 1946 this index was called the Daily Index of 28 Basic Commodities. The index is available each weekday, except Saturday, at 6 p. m. by telephone or by collect telegram. A release showing figures for the current week is issued each Friday.

A list of the 28 commodities included in the index is given below:

Wheat, average, per bushel:
  No. 2 hard winter, Kansas City.
  No. 2 dark northern spring, Minneapolis.
Flaxseed, No. 1, per bushel, Minneapolis.
Barley, good, malting, per bushel, Minneapolis.
Corn, No. 3 yellow, per bushel, Chicago.
Butter, extra, 92 score, per pound, Chicago.
Tallow, packers' prime, per pound, Chicago.
Hogs, good to choice, 200–220 pounds, per 100 pounds, Chicago.
Steers, good, 900–1,100 pounds, per 100 pounds, Chicago.
Lard, prime steam, per pound, Chicago.
Sugar, raw, 96°, duty paid, per pound, New York.
Coffee, Santos, No. 4, per pound, New York.
Cocoa beans, Accra, per pound, New York.
Shellac, T. N., per pound, New York.
Rubber, plantation, ribbed, s. s., per pound, New York.
Hides, cow, light native packers,' per pound, Chicago.
Rosin, "H" grade, per 100 pounds, Savannah.
Cottonseed oil, prime summer bleachable, per pound, New York.
Print cloth, 38½-inch, 64 by 60, 5.35 yards to pound, per yard, New York.
Silk, raw, Japan, 13–15 denier, 78 seriplane, per pound, New York.
Wool tops, spot market, per pound, New York.
Burlap, 10-ounce, 40-inch, per yard, New York.
Cotton, middling, 15/16 inch staple, per pound, average 10 spot markets.
Steel scrap, heavy melting, per ton:
  Chicago.
  Philadelphia.

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[1] This means that a 10-percent rise in the price of sugar, which on August 30, 1946, was 4.2 cents per pound, has the same effect on the index as a 10-percent rise in steers which on the same date sold for $21.25 per 100 pounds. The index should therefore not be confused with a simple aggregate of actual prices, in which steers would have several hundred times the weight of sugar.

Tin, Grade A, 99.8 percent or higher, pig, per pound, New York.
Copper, electrolytic, ingot, per pound, New York.
Lead, desilverized, pig, open market, per pound, New York.
Zinc, prime western, pig, per pound, New York.

The index of 28 daily commodities is broken down into 5 major groups. These groups and the commodities falling under each group are as follows:

Import Commodities

Flaxseed
Sugar
Coffee
Cocoa beans
Shellac
Rubber
Hides
Silk
Wool tops
Burlap
Tin

Domestic Commodities

Wheat
Barley
Corn
Butter
Tallow
Hogs
Steers
Lard
Rosin
Cottonseed oil
Print cloth
Cotton
Steel scrap:
  Chicago
  Philadelphia
Copper
Lead
Zinc

Domestic Agricultural Commodities

Barley
Wheat
Corn
Hogs
Steers
Wool tops
Cotton

Foodstuffs

Wheat
Barley
Corn
Butter
Tallow
Hogs
Steers
Lard
Sugar
Coffee
Cocoa beans
Cottonseed oil

Raw Industrial

Flaxseed
Shellac
Rubber
Hides
Rosin
Print cloth
Silk
Wool tops
Burlap
Cotton
Tin
Copper
Lead
Zinc
Steel scrap:
  Chicago
  Philadelphia

On January 1, 1946, the daily index stood at 187.1. By the end of the year it had moved up to 303.9, an increase of 62.4 percent. From January 1 to June 29, 1946, the last day before the temporary suspension of OPA controls, prices of the 28 commodities moved upward only 6.6 percent. However, during the period of suspension between June 29 and July 25 prices moved upward by 24.8 percent. On November 9, 1946, when the President removed all but a few price controls the index stood at 276.1. By December 31 it had risen an additional 10.1 percent.

TABLE 4.—*Daily indexes of spot market prices of 28 commodities*

[August 1939=100. S=Sunday; H=Holiday. Figures in parentheses indicate number of items in commodity group]

Date	General index	Import and domestic		Domestic agricultural	Foodstuffs and industrial	
		Import commodities	Domestic commodities		Foodstuffs	Raw industrial
	(28)	(11)	(17)	(7)	(12)	(16)
1946						
Jan. 1	H	H	H	H	H	H
Jan. 2	187.1	168.9	199.8	232.9	212.8	169.7
Jan. 3	187.0	168.9	199.7	232.6	212.6	169.7
Jan. 4	186.9	168.9	199.5	231.9	212.2	169.7
Jan. 5	186.8	168.9	199.5	231.9	212.2	169.7
Jan. 6	S	S	S	S	S	S
Jan. 7	187.1	168.9	199.9	233.3	213.0	169.6
Jan. 8	187.1	168.9	200.0	233.3	213.0	169.6
Jan. 9	187.2	168.9	200.0	233.4	213.0	169.7
Jan. 10	187.2	168.9	200.1	233.6	213.1	169.7
Jan. 11	187.2	168.9	200.1	233.6	213.2	169.7
Jan. 12	187.2	168.9	200.1	233.6	213.2	169.7
Jan. 13	S	S	S	S	S	S
Jan. 14	187.3	168.9	200.3	234.1	213.4	169.7
Jan. 15	187.3	168.9	200.3	234.3	213.6	169.6
Jan. 16	187.4	168.9	200.4	234.6	213.7	169.7
Jan. 17	187.4	168.9	200.4	234.4	213.6	169.7
Jan. 18	187.4	168.9	200.4	234.4	213.6	169.7
Jan. 19	187.4	168.9	200.4	234.5	213.6	169.7
Jan. 20	S	S	S	S	S	S
Jan. 21	187.3	168.9	200.3	234.2	213.3	169.8
Jan. 22	187.4	168.9	200.5	234.7	213.4	169.9
Jan. 23	187.4	168.9	200.5	234.7	213.4	169.9
Jan. 24	187.3	168.9	200.2	234.1	213.0	169.9
Jan. 25	187.3	168.9	200.2	234.0	213.0	169.9
Jan. 26	187.3	168.9	200.3	234.2	213.0	169.9
Jan. 27	S	S	S	S	S	S
Jan. 28	187.3	168.9	200.3	234.3	212.9	170.1
Jan. 29	187.3	168.9	200.3	234.2	212.9	170.0
Jan. 30	187.4	168.9	200.5	234.7	213.3	169.9
Jan. 31	187.5	168.9	200.5	234.9	213.4	170.0
Feb. 1	187.4	168.9	200.5	234.7	213.3	169.9
Feb. 2	187.4	168.9	200.5	234.7	213.3	169.9
Feb. 3	S		S	S	S	S
Feb. 4	187.4	168.9	200.4	234.7	213.2	170.0
Feb. 5	187.3	168.9	200.2	233.9	212.8	170.0
Feb. 6	187.3	168.9	200.2	234.0	212.8	170.0
Feb. 7	187.4	168.9	200.4	234.6	213.0	170.1
Feb. 8	187.5	168.9	200.5	234.9	213.0	170.2
Feb. 9	187.5	168.9	200.6	235.1	213.0	170.2
Feb. 10	S	S	S	S	S	S
Feb. 11	188.3	170.7	200.7	235.3	215.2	170.2
Feb. 12	H	H	H	H	H	H
Feb. 13	188.3	170.7	200.6	235.1	215.0	170.2
Feb. 14	188.3	170.7	200.6	235.2	215.0	170.2
Feb. 15	188.4	170.7	200.8	235.8	215.0	170.4
Feb. 16	188.4	170.7	200.8	235.7	215.0	170.4
Feb. 17	S	S	S	S	S	S
Feb. 18	188.4	170.7	200.8	235.6	215.0	170.4
Feb. 19	188.2	170.7	200.5	234.9	214.9	170.2
Feb. 20	188.2	170.7	200.5	234.7	214.6	170.3
Feb. 21	188.2	170.7	200.6	235.0	214.6	170.4
Feb. 22	H	H	H	H	H	H
Feb. 23	H	H	H	H	H	H
Feb. 24	S	S	S	S	S	S
Feb. 25	188.3	170.7	200.7	235.4	214.9	170.4
Feb. 26	188.3	170.7	200.7	235.3	214.9	170.4
Feb. 27	188.5	170.7	201.0	236.2	215.2	170.5
Feb. 28	188.5	170.7	201.0	236.3	215.2	170.5
Mar. 1	188.6	170.7	201.2	236.8	215.2	170.7
Mar. 2	188.6	170.7	201.2	236.8	215.2	170.7
Mar. 3	S	S	S	S	S	S
Mar. 4	189.1	170.7	202.1	239.3	216.5	170.7
Mar. 5	189.1	170.7	202.0	239.1	216.5	170.6

TABLE 4.—*Daily indexes of spot market prices of 28 commodities*—Continued

Date	General index (28)	Import and domestic		Domestic agricultural (7)	Foodstuffs and industrial	
		Import commodities (11)	Domestic commodities (17)		Foodstuffs (12)	Raw industrial (16)
1946						
ar. 6	188.9	170.7	201.8	238.6	216.4	170.5
ar. 7	189.0	170.7	201.8	238.6	216.3	170.6
ar. 8	189.8	170.7	203.3	238.3	216.3	172.0
ar. 9	189.9	170.7	203.4	238.6	216.3	172.1
ar. 10	S	S	S	S	S	S
ar. 11	190.0	170.7	203.7	238.7	216.7	172.0
ar. 12	190.0	170.7	203.7	238.7	216.7	172.0
ar. 13	189.9	170.7	203.5	238.1	216.4	172.0
ar. 14	189.9	170.7	203.5	238.0	216.4	172.0
ar. 15	189.9	170.7	203.5	238.0	216.4	172.0
ar. 16	189.9	170.7	203.5	238.0	216.4	172.0
ar. 17	S	S	S	S	S	S
ar. 18	189.9	170.7	203.5	238.2	216.4	172.0
ar. 19	189.9	170.7	203.5	238.2	216.4	172.0
ar. 20	190.0	170.7	203.6	238.4	216.6	172.0
ar. 21	190.0	170.7	203.7	238.6	216.6	172.1
ar. 22	190.0	170.7	203.7	238.7	216.6	172.1
ar. 23	190.0	170.7	203.7	238.8	216.6	172.1
ar. 24	S	S	S	S	S	S
ar. 25	190.1	170.7	203.8	238.8	216.6	172.2
ar. 26	190.0	170.7	203.7	238.8	216.6	172.1
ar. 27	190.1	170.7	203.8	239.0	216.6	172.2
ar. 28	190.2	170.7	203.9	239.3	216.6	172.3
ar. 29	190.2	170.7	204.1	239.8	216.6	172.4
ar. 30	190.2	170.7	204.0	239.5	216.6	172.3
ar. 31	S	S	S	S	S	S
pr. 1	190.2	170.7	204.1	239.8	216.6	172.4
pr. 2	190.3	170.7	204.1	239.9	216.6	172.5
pr. 3	190.3	170.7	204.2	240.1	216.6	172.5
pr. 4	190.3	170.7	204.3	240.2	216.7	172.5
pr. 5	190.4	170.7	204.3	240.4	216.7	172.5
pr. 6	190.4	170.7	204.4	240.6	216.7	172.6
pr. 7	S	S	S	S	S	S
pr. 8	190.4	170.7	204.3	240.5	216.9	172.5
pr. 9	190.4	170.7	204.4	240.7	216.9	172.6
pr. 10	190.3	170.7	204.3	240.3	216.6	172.6
pr. 11	190.3	170.7	204.2	240.2	216.7	172.5
pr. 12	190.2	170.7	204.0	239.5	216.7	172.3
pr. 13	190.2	170.7	204.0	239.6	216.7	172.3
pr. 14	S	S	S	S	S	S
pr. 15	190.3	170.7	204.1	239.9	216.7	172.4
pr. 16	190.3	170.7	204.1	239.9	216.7	172.4
pr. 17	190.2	170.7	204.1	239.7	216.7	172.3
pr. 18	190.3	170.7	204.3	240.3	216.7	172.5
pr. 19	H	H	H	H	H	H
pr. 20	H	H	H	H	H	H
Apr. 21	S	S	S	S	S	S
Apr. 22	190.3	170.7	204.2	240.0	216.7	172.4
Apr. 23	190.2	170.7	204.1	239.7	216.5	172.5
Apr. 24	190.1	170.7	203.8	238.9	216.1	172.5
Apr. 25	190.2	170.7	204.0	239.4	216.3	172.5
Apr. 26	190.1	170.7	203.9	239.3	216.3	172.4
Apr. 27	190.2	170.7	204.0	239.5	216.3	172.5
Apr. 28	S	S	S	S	S	S
Apr. 29	190.2	170.7	203.9	239.3	216.3	172.4
Apr. 30	190.1	170.7	203.8	239.1	216.3	172.4
May 1	190.2	170.7	204.0	239.4	216.6	172.3
May 2	190.1	170.7	203.9	239.2	216.5	172.3
May 3	190.1	170.7	203.9	239.3	216.5	172.4
May 4	190.1	170.7	203.9	239.2	216.5	172.3
May 5	S	S	S	S	S	S
May 6	190.1	170.7	203.8	238.8	216.3	172.3
May 7	190.1	170.7	203.9	239.2	216.5	172.3
May 8	190.2	170.7	204.0	239.5	216.6	172.3
May 9	190.2	170.7	204.1	239.7	216.6	172.4
May 10	190.2	170.7	204.0	239.6	216.6	172.4

TABLE 4.—*Daily indexes of spot market prices of 28 commodities*—Continued

Date	General index	Import and domestic		Domestic agricultural	Foodstuffs and industrial	
		Import commodities	Domestic commodities		Foodstuffs	Raw industrial
	(28)	(11)	(17)	(7)	(12)	(16)
1946.						
May 11	190.2	170.7	204.0	239.6	216.6	172.4
May 12	S	S	S	S	S	S
May 13	192.4	170.7	208.0	250.9	222.6	172.3
May 14	192.4	170.7	207.9	250.7	222.6	172.3
May 15	192.3	170.7	207.8	250.5	222.6	172.2
May 16	192.3	170.7	207.8	250.4	222.5	172.2
May 17	192.8	171.9	207.7	250.2	222.5	173.0
May 18	192.8	171.9	207.7	250.2	222.5	173.0
May 19	S	S	S	S	S	S
May 20	192.9	171.9	207.9	250.9	222.6	173.1
May 21	192.9	171.9	207.9	250.8	222.6	173.1
May 22	193.0	171.9	208.0	251.1	222.6	173.2
May 23	193.0	171.9	208.0	251.1	222.6	173.2
May 24	193.0	171.9	208.1	251.3	222.6	173.3
May 25	193.1	171.9	208.1	251.4	222.6	173.3
May 26	S	S	S	S	S	S
May 27	193.1	171.9	208.2	251.5	222.7	173.3
May 28	193.1	171.9	208.3	251.9	222.7	173.4
May 29	193.2	171.9	208.3	252.1	222.9	173.4
May 30	H	H	H	H	H	H
May 31	193.2	171.9	208.4	252.2	222.9	173.4
June 1	193.2	171.9	208.4	252.4	222.9	173.4
June 2	S	S	S	S	S	S
June 3	196.1	171.9	213.6	252.2	222.7	178.1
June 4	196.1	171.9	213.6	252.3	222.7	178.1
June 5	196.2	171.9	213.7	252.5	222.9	178.1
June 6	196.2	171.9	213.7	252.5	222.9	178.1
June 7	196.3	171.9	213.9	253.1	222.9	178.3
June 8	196.3	171.9	214.0	253.2	222.9	178.3
June 9	S	S	S	S	S	S
June 10	196.4	171.9	214.1	253.6	222.9	178.4
June 11	196.3	171.9	214.0	253.4	223.0	178.3
June 12	196.5	171.9	214.4	254.4	223.3	178.4
June 13	196.6	171.9	214.4	254.6	223.3	178.5
June 14	196.5	171.9	214.4	254.4	223.3	178.4
June 15	196.6	171.9	214.4	254.6	223.3	178.5
June 16	S	S	S	S	S	S
June 17	198.0	171.9	217.0	254.7	227.0	178.5
June 18	198.0	171.9	217.1	255.0	227.2	178.5
June 19	198.1	171.9	217.1	255.2	227.2	178.5
June 20	198.1	171.9	217.1	255.1	227.2	178.5
June 21	198.1	171.9	217.1	255.2	227.2	178.5
June 22	198.1	171.9	217.2	255.3	227.2	178.6
June 23	S	S	S	S	S	S
June 24	198.1	171.9	217.2	255.5	227.2	178.6
June 25	198.2	171.9	217.3	255.6	227.0	178.8
June 26	198.2	171.9	217.4	255.9	226.9	178.9
June 27	198.3	171.9	217.6	256.4	226.8	179.1
June 28	199.4	174.1	217.6	256.5	229.6	179.1
June 29	199.4	174.1	217.6	256.5	229.6	179.1
June 30	S	S	S	S	S	S
July 1	206.5	176.8	228.4	285.3	245.3	181.3
July 2	208.0	176.9	230.9	281.5	246.4	182.9
July 3	216.4	182.8	241.4	292.9	267.6	184.4
July 4	H	H	H	H	H	H
July 5	221.2	188.0	245.8	289.2	281.6	184.4
July 6	221.2	188.0	245.7	289.1	281.6	184.4
July 7	S	S	S	S	S	S
July 8	226.8	199.8	246.1	288.9	281.3	192.7
July 9	227.9	200.9	247.3	294.9	283.2	193.5
July 10	232.0	207.0	249.8	299.9	287.4	197.4
July 11	233.1	207.9	250.9	302.4	289.6	197.8
July 12	244.9	226.7	257.5	305.6	297.7	211.4
July 13	245.3	226.7	258.1	306.0	298.7	211.4
July 14	S	S	S	S	S	S
July 15	247.9	229.5	260.6	313.1	302.6	213.2

Table 4.—*Daily indexes of spot market prices of 28 commodities*—Continued

Date	General index (28)	Import and domestic		Domestic agricultural (7)	Foodstuffs and industrial	
		Import commodities (11)	Domestic commodities (17)		Foodstuffs (12)	Raw industrial (16)
1946						
ly 16	248.9	229.6	262.3	316.8	305.4	213.3
ly 17	249.7	229.9	263.5	319.3	307.1	213.7
ly 18	248.8	230.0	261.8	312.9	303.7	214.1
ly 19	248.7	230.6	261.1	310.7	302.6	214.4
ly 20	248.3	230.6	260.5	309.2	301.8	214.4
ly 21	S	S	S	S	S	S
ly 22	248.9	232.2	260.3	310.4	302.6	214.8
ly 23	249.8	232.1	261.9	311.0	305.5	214.5
ly 24	248.8	230.7	261.2	309.5	305.7	213.0
ly 25	248.9	230.7	261.4	307.5	306.7	212.6
ly 26	248.3	230.7	260.3	303.6	305.7	212.2
ly 27	248.1	230.7	260.0	302.7	305.2	212.2
ly 28	S	S	S	S	S	S
ly 29	248.8	230.7	261.2	304.3	308.2	211.7
ly 30	249.6	230.7	262.7	305.5	310.9	211.5
ly 31	248.6	230.7	261.0	310.5	313.5	208.7
ug. 1	248.8	230.7	261.2	311.2	313.9	208.8
ug. 2	245.5	230.7	255.6	312.1	304.3	208.8
ug. 3	245.4	230.7	255.5	311.6	304.1	208.8
ug. 4	S	S	S	S	S	S
ug. 5	245.6	230.7	255.8	312.5	304.4	208.9
ug. 6	245.1	230.7	254.8	30[illegible].6	302.8	208.9
ug. 7	244.2	230.7	253.3	305.2	300.2	209.0
ug. 8	239.9	220.1	253.6	306.1	299.7	202.8
ug. 9	239.7	218.5	254.4	305.0	300.9	201.9
ug. 10	239.8	218.5	254.6	305.4	301.2	201.9
ug. 11	S	S	S	S	S	S
ug. 12	239.7	219.1	254.1	304.0	300.5	202.1
ug. 13	239.5	219.1	253.7	303.2	299.8	202.1
ug. 14	240.3	219.7	254.6	306.7	301.4	202.5
ug. 15	240.3	219.7	254.7	307.2	301.5	202.5
ug. 16	239.8	219.7	253.8	304.5	300.1	202.5
ug. 17	238.7	217.3	253.6	304.1	299.8	201.0
ug. 18	S	S	S	S	S	S
ug. 19	238.6	217.3	253.5	303.8	299.9	200.9
ug. 20	238.4	217.3	253.1	302.4	298.9	201.0
ug. 21	239.1	219.3	252.9	300.9	298.7	202.2
ug. 22	240.3	219.3	254.9	306 9	302.2	202.1
ug. 23	241.9	219.6	257.6	314.6	306.4	202.5
ug. 24	241.9	219.6	257.6	314.6	306.4	202.5
ug. 25	S	S	S	S	S	S
ug. 26	239.0	219.6	252.4	297.9	297.8	202.5
ug. 27	239.1	219.2	252.8	298.7	298.6	202.1
ug. 28	240.3	219.2	255.1	305.2	302.2	202.2
ug. 29	240.5	219.2	255.3	305.9	302.5	202.2
ug. 30	239.4	219.2	253.5	300.7	299.3	202.3
ug. 31	239.2	219.2	253.1	299.7	298.7	202.3
ept. 1	S	S	S	S	S	S
ept. 2	H	H	H	H	H	H
ept. 3	237.3	219.2	249.7	288.0	292.1	202.8
ept. 4	237.9	219.2	250.8	288.7	292.7	203.4
ept. 5	237.9	219.2	250.9	288.9	292.7	203.5
ept. 6	238.0	219.2	251.0	289.0	292.8	203.5
ept. 7	238.2	219.2	251.3	290.0	293.0	203.7
ept. 8	S	S	S	S	S	S
ept. 9	238.2	219.2	251.4	290.1	293.4	203.6
ept. 10	238.0	219.2	251.0	288.8	293.2	203.3
Sept. 11	238.2	219.2	251.4	289.5	293.6	203.5
Sept. 12	238.3	219.2	251.5	289.5	293.8	203.4
Sept. 13	238.7	219.2	252.2	289.8	293.8	204.0
Sept. 14	238.8	219.2	252.4	290.3	294.0	204.1
Sept. 15	S	S	S	S	S	S
Sept. 16	238.9	219.2	252.5	290.5	294.1	204.2
Sept. 17	239.0	219.2	252.8	291.2	294.5	204.2
Sept. 18	242.5	227.2	253.0	290.5	301.3	205.9
Sept. 19	242.5	227.2	253.0	290.6	301.2	205.9
Sept. 20	242.9	227.2	253.7	291.9	301.7	206.3

TABLE 4.—*Daily indexes of spot market prices of 28 commodities*—Continued

Date	General index (28)	Import and domestic		Domestic agricultural (7)	Foodstuffs and industrial	
		Import commodities (11)	Domestic commodities (17)		Foodstuffs (12)	Raw industrial (16)
1946						
Sept. 21	243.1	227.2	253.9	292.7	302.1	206.3
Sept. 22	S	S	S	S	S	S
Sept. 23	242.5	224.8	254.8	293.6	303.3	204.9
Sept. 24	242.8	224.8	255.3	294.3	303.9	205.1
Sept. 25	243.3	225.7	255.4	294.8	304.5	205.4
Sept. 26	243.3	225.7	255.4	294.9	304.5	205.4
Sept. 27	243.2	225.7	255.3	293.9	304.0	205.6
Sept. 28	243.3	225.7	255.4	294.3	304.0	205.7
Sept. 29	S	S	S	S	S	S
Sept. 30	243.2	225.7	255.2	292.7	303.4	205.8
Oct. 1	243.6	225.7	255.9	292.9	303.8	206.2
Oct. 2	243.3	224.3	256.4	293.4	302.5	206.4
Oct. 3	243.5	224.3	256.8	294.4	303.2	206.4
Oct. 4	243.5	224.3	256.8	294.5	303.4	206.3
Oct. 5	243.6	224.3	257.0	295.0	303.6	206.4
Oct. 6	S	S	S	S	S	S
Oct. 7	243.2	223.0	257.3	295.4	303.9	205.6
Oct. 8	243.4	223.0	257.5	295.6	304.2	205.6
Oct. 9	243.3	223.0	257.5	295.5	304.4	205.5
Oct. 10	243.8	223.0	258.4	296.7	305.8	205.6
Oct. 11	244.0	223.0	258.6	297.5	306.0	205.6
Oct. 12	H	H	H	H	H	H
Oct. 13	S	S	S	S	S	S
Oct. 14	245.2	223.0	260.8	299.0	306.9	207.1
Oct. 15	251.6	223.0	272.1	331.4	326.0	207.0
Oct. 16	251.0	220.9	272.7	333.2	328.2	205.1
Oct. 17	251.6	231.3	265.7	314.4	322.8	208.6
Oct. 18	253.4	234.0	266.8	312.5	325.3	209.9
Oct. 19	254.4	234.9	267.9	311.6	327.2	210.5
Oct. 20	S	S	S	S	S	S
Oct. 21	258.6	237.7	273.1	313.8	338.7	211.0
Oct. 22	259.7	237.4	275.2	315.7	341.0	211.5
Oct. 23	260.7	237.4	277.0	319.5	343.0	212.0
Oct. 24	261.3	238.7	277.0	321.2	346.3	211.3
Oct. 25	260.8	239.2	275.8	318.3	345.6	211.0
Oct. 26	260.5	239.2	275.2	316.7	344.5	211.0
Oct. 27	S	S	S	S	S	S
Oct. 28	258.2	239.5	271.0	307.6	339.6	210.0
Oct. 29	256.3	238.6	268.5	302.0	335.9	209.1
Oct. 30	256.1	238.8	268.0	303.2	335.1	209.2
Oct. 31	262.8	252.8	269.6	307.0	336.9	218.0
Nov. 1	269.9	253.0	281.5	302.5	356.7	218.8
Nov. 2	269.6	253.0	281.0	301.4	355.8	218.8
Nov. 3	S	S	S	S	S	S
Nov. 4	269.6	252.5	281.2	300.3	356.0	218.6
Nov. 5	H	H	H	H	H	H
Nov. 6	274.9	266.6	280.4	300.6	356.4	226.0
Nov. 7	276.1	270.2	280.0	298.6	357.7	227.2
Nov. 8	276.9	271.0	280.9	300.2	358.2	228.1
Nov. 9	276.1	271.0	279.5	296.6	355.2	228.3
Nov. 10	S	S	S	S	S	S
Nov. 11	H	H	H	H	H	H
Nov. 12	285.4	274.1	292.9	300.3	354.9	242.1
Nov. 13	292.5	283.4	298.6	304.2	358.7	250.8
Nov. 14	295.2	284.7	302.2	310.1	365.5	251.2
Nov. 15	296.3	286.6	302.8	310.6	366.7	252.3
Nov. 16	296.7	286.6	303.3	312.1	367.6	252.4
Nov. 17	S	S	S	S	S	S
Nov. 18	297.1	286.7	304.1	313.2	365.2	254.3
Nov. 19	299.6	290.6	305.6	316.5	371.4	254.7
Nov. 20	298.3	290.6	303.4	315.6	368.1	254.5
Nov. 21	298.6	290.7	303.8	313.5	368.2	254.9
Nov. 22	298.5	290.1	304.0	315.5	368.2	254.7
Nov. 23	298.7	289.8	304.6	315.5	368.9	254.7
Nov. 24	S	S	S	S	S	S
Nov. 25	298.9	290.1	304.8	315.7	367.4	255.8

TABLE 4.—*Daily indexes of spot market prices of 28 commodities*—Continued

Date	General index (28)	Import and domestic		Domestic agricultural (7)	Foodstuffs and industrial	
		Import commodities (11)	Domestic commodities (17)		Foodstuffs (12)	Raw industrial (16)
1956						
Nov. 26	300.4	289.2	307.8	313.2	364.8	259.4
Nov. 27	298.9	287.2	306.6	313.1	362.6	258.3
Nov. 28	H	H	H	H	H	H
Nov. 29	298.6	286.4	306.9	315.0	363.1	257.7
Nov. 30	297.4	286.3	304.9	310.7	359.8	257.6
Dec. 1	S	S	S	S	S	S
Dec. 2	297.4	286.5	304.7	309.8	359.8	257.6
Dec. 3	297.8	286.9	305.0	310.6	359.7	258.2
Dec. 4	298.0	287.3	305.2	311.4	359.8	258.5
Dec. 5	297.0	285.7	304.5	310.0	358.8	257.5
Dec. 6	297.9	286.8	305.4	311.9	360.4	258.0
Dec. 7	298.0	286.8	305.5	312.2	360.6	258.0
Dec. 8	S	S	S	S	S	S
Dec. 9	298.3	288.4	305.0	311.1	360.7	258.5
Dec. 10	298.8	289.4	305.0	311.9	362.0	258.5
Dec. 11	299.9	290.7	306.0	314.1	364.7	258.7
Dec. 12	299.7	289.5	306.4	314.5	363.7	258.9
Dec. 13	299.2	288.5	306.3	316.2	363.9	258.1
Dec. 14	299.3	288.5	306.5	316.9	363.7	258.4
Dec. 15	S	S	S	S	S	S
Dec. 16	300.7	289.5	308.2	318.6	365.0	259.9
Dec. 17	301.8	289.0	310.4	316.2	363.8	262.1
Dec. 18	302.6	289.5	311.4	311.0	360.7	265.0
Dec. 19	302.0	289.5	310.4	308.7	359.2	264.9
Dec. 20	303.2	290.0	312.0	310.0	362.3	265.0
Dec. 21	303.1	290.0	311.8	309.6	362.1	265.0
Dec. 22	S	S	S	S	S	S
Dec. 23	303.1	289.3	312.4	309.5	363.6	264.2
Dec. 24	303.2	289.8	312.3	310.0	363.8	264.3
Dec. 25	H	H	H	H	H	H
Dec. 26	302.6	289.4	311.5	310.3	361.5	264.6
Dec. 27	303.6	289.3	313.2	307.1	360.9	266.4
Dec. 28	303.5	289 3	313.1	306.6	360.8	266.3
Dec. 29	S	S	S	S	S	S
Dec. 30	304.3	289.3	314.5	306.5	362.8	266.5
Dec. 31	303.9	289.8	313.5	303.7	363.0	265.7

Revised Wholesale Price Series for Gas

In the 1926–27 revision of the Bureau's comprehensive primary market (wholesale) price index, a series of prices for manufactured gas was developed and introduced for the first time into the index. The series was carried back to 1913 as one of the subgroups of the fuel and lighting materials group. In 1928 the series was expanded to include prices for natural and mixed gas and the indexes were revised back to 1926. With the effective cooperation of the gas industry through its trade association and the Federal Power Commission, the Bureau of Mines, and the Division of Statistical Standards of the Bureau of the Budget, an extensive revision was made in the wholesale price series for gas and introduced in the calculation of the comprehensive index in March 1946.

FORMER SERIES

Prior to the revision, the gas composite represented average sales realization values (prices) per thousand cubic feet for (1) all sales of natural gas to all types of consumers by 20 producing or distributing companies in 19 cities and (2) all sales of manufactured and mixed gas to all types of consumers by 27 manufacturing or distributing companies in 27 cities. Sales realization value was obtained by dividing the combined revenue from sales of natural gas and manufactured and mixed gas by the combined sales expressed in thousand cubic feet.

The realized value represented rates and quantities at different levels of sale under different conditions of sale and without clearly defined specifications for the product. Fluctuations in any of these factors caused variations in the realization values, which were influenced by shifts in distribution to the different types of customers and were not due to changes in established gas rates. Also, the average value based on cubic feet did not take account of the heating content of the gas.

REVISED SERIES

The revised series represents weighted average realized values (prices) per dekatherm (1 million B. t. u.) for gas to industrial consumers and for electric power generation, adjusted for seasonal variation. Complete specifications are:

Code No. 354.1–A—Gas, manufactured and mixed; weighted average realized price per dekatherm (1 million B. t. u.), adjusted for seasonal variation, utility to all industrial consumers including sales for electric power generation; monthly from 24 utilities as reported to the Bureau through its association.

Code No. 354.1–B—Gas, natural; weighted average realized price per dekatherm (1 million B. t. u.), adjusted for seasonal variation, utility to all industrial consumers including sales for electric power generation; monthly from 25 utilities, as reported to the Bureau through its association.

The revised sample of respondents represents more than 60 percent of total United States sales of gas, in both quantity and revenue, to industry and for electric power generation. To obtain the average price for the country as a whole, the average realized price for each of seven geographic regions is weighted by the gas consumption in 1941 in the region, for each type of gas (natural or manufactured and mixed), separately.

Prices are expressed in dollars per million British thermal units (or per dekatherm), a basis of pricing which converts all types of gas to a common unit and allows computation of accurate composites for gas of varying heat content. Prices are adjusted for seasonal variation according to data reported to the industry association for the period 1939-44. It is planned to review these seasonal indexes in 1950, using data for a selected postwar period.

The revised series was incorporated in the calculation of the index for March 1946 with the customary lag of 1 month, using February prices. The revised series was introduced into the index at the same level as the former series, and no revision of previous data was made. The changed specifications are expected to minimize fluctuations in the realized prices resulting from seasonal changes in the volume of consumption and from shifts in the relative importance of industrial, commercial, and residential consumers who purchase gas at widely different rates.

In addition to the composite series for all gas meeting these specifications, composite average prices will be published separately for manufactured and mixed gas and for natural gas.

Revision of Prices and Index Numbers for Motor Vehicles

During the war, motor vehicles (passenger cars and trucks) were not produced for general civilian sale and the Bureau carried forward the April 1942 prices in the computation of the primary market (wholesale) price index. October 1946 production exceeded the 1941 monthly average production (for general civilian sale), and current prices for motor vehicles were reintroduced into the index calculations as of that month. With this reintroduction at currently prevailing prices a revision was made in both the passenger car and truck indexes, involving the type of prices used and the product and company samples.

An advisory committee consisting of technical representatives of the various automobile companies and the industry association cooperated with and advised the Bureau in this revision.

FORMER PASSENGER CAR PRICE INDEX

Passenger cars were included in the comprehensive primary market price index for the first time in the 1926–27 general revision. Prices and indexes were carried back to 1913 and were included as a subgroup of the metals and metal products group. The former index for passenger cars was a weighted series based on average prices of two low-priced, two medium-priced, and two high-priced makes. For all makes except one of the low-priced cars, the price included in the composite series was a simple arithmetic average of the quotations for all models and body types selling below $4,000. In the case of the one low-priced make, the price used was a weighted average of prices of the two-door and four-door sedans and the business coupe. The index was subject to the criticisms (1) that the sample included some makes which were unimportant in terms of dollar sales volume while omitting other makes which had assumed considerable importance, (2) that the less popular body types were equally as important in the index as were the volume selling body types, (3) that the quotations used in the calculation were factory delivered prices and not primary market (wholesale) prices, and (4) that little or no adjustment was made for specification changes.

REVISED PASSENGER CAR INDEX

The revised passenger car index is made up of two composite price series, one for low-priced cars and the other for medium-priced cars, weighted by total new car registrations in 1941.

The composite for low-priced cars includes three popular makes of two-door sedans produced by three large manufacturers. The composite for medium-priced cars includes four makes of the volume selling four-door sedans produced by two large and two representative smaller companies.

Each make of car in the lower-price category is weighted either by the total number of cars of that make produced or by those produced in that price class by each of the three large manufacturers in 1941. The cars selected for the sample in the medium-price field, which are produced by the two large companies, are assigned the total weight of all cars produced by these manufacturers outside the low-price field. The two medium-priced cars selected for the sample, which are produced by two smaller manufacturers, are assigned the weight of all cars produced in all price ranges by all of the smaller manufacturers, with their importance divided equally between the two makes priced for the index. The seven makes included in the revised index account directly for nearly 80 percent of all new car sales in 1941 and indirectly for all new car sales in that year. In the revision, manufacturers' net selling prices to direct dealers are used. This revision does not meet all of the criticisms of the former index, but it does make substantial progress in improvement in an uncharted statistical field.

FORMER TRUCK PRICE INDEX

Trucks were included in the comprehensive primary market price index for the first time in the 1930–31 general revision. Prices and indexes were carried back to 1926 and were combined with passenger cars to form the motor vehicle subgroup of the metals and metal products group.

The former truck index was computed from prices of 76 models grouped in three composite series: ¾ ton and less, 1 ton and less than 2 tons, and 2 to 3½ tons. The makes of trucks included in the above groupings were limited to the product of three manufacturers. The verage price of each capacity group was weighted in accordance ith its relative importance to all new trucks, on the basis of regis- ations. This index was subject to the same criticism as the index r passenger cars.

REVISED TRUCK INDEX

The revised truck index represents prices from 10 manufacturers, rouped into 6 classes, each covering a different range of gross vehicle eights. These ranges are as follows:

	Range of gross vehicle weights
Class 1	5,000 pounds and less.
Class 2	5,001 pounds to and including 10,000 pounds.
Class 3	10,001 pounds to and including 14,000 pounds.
Class 4	14,001 pounds to and including 16,000 pounds.
Class 5	16,001 pounds to and including 19,500 pounds.
Class 6	19,501 pounds and over.

The total registration of all new trucks in 1941 was used as the asis for weighting. Total registrations were distributed according gross vehicle weight and each make was assigned a value in accord- nce with its relative importance in total production during the period 936–40. The prices used were manufacturers' net prices to direct ealers.

Method of introduction.—Since the revised series for passenger cars nd trucks were not comparable with the former series, the following rocedure was used in introducing the revised series into the index. rices on the new series were obtained back to December 1941. The evised subgroup aggregates (sum of products of prices and quantity eights) for December 1941 were made identical with the former ubgroup aggregates for the same date by means of a conversion actor. Consequently for all dates subsequent to December 1941, evised aggregates for the "motor vehicles" subgroup, after adjust- ent by the conversion factor, are comparable with aggregates used rior to the revision. The revised indexes are then derived in the ustomary manner by dividing the adjusted aggregates by the 1926 ase period aggregate.

In the calculation of the October 1946 indexes (the effective date of he reintroduction) the total increase in price since December 1941 for otor vehicles was reflected, and this affected several groups of the ureau's comprehensive primary market price index. Certain of the roup indexes were in use for contract adjustments, and special in- exes for the affected groups were calculated which continued to use he April 1942 prices. These indexes have been continued and will be ublished as long as the need for them exists. The regularly com- uted indexes using current prices are given in table 1.

The monthly indexes for the affected groups from October to December 1946, inclusive, using April 1942 prices for motor vehicles, were as follows:

	Indexes (1926=100), using April 1942 prices for motor vehicles		
	October 1946	*November 1946*	*December 1946*
All commodities	132.5	137.9	139.0
Metals and metal products	114.3	117.0	120.5
Manufactured products	127.0	131.7	132.5
All commodities other than farm products	125.1	130.7	132.4
All commodities other than farm products and foods	113.2	117.8	121.6

The revised indexes of passenger cars, trucks, and motor vehicles combined are available back to 1942 and provide a comparable series of indexes for passenger cars and trucks since January 1926 and for motor vehicles since January 1913.

Soap—Indexes of Primary Market Prices

Because of special interest in price movements for soap, the Bureau has prepared a special index of primary market prices of soap. The commodities included in this index are those included in the comprehensive wholesale price index of the Bureau, as listed in table 12, Primary Market Prices, Index Numbers, and Relative Importance of Individual Commodities (codes 773–1 through 777–3.1). Annual indexes from 1926 through 1946 and monthly indexes from January 1933 through December 1946 are shown in the following table.

TABLE 5.—*Indexes of primary market prices of soap*

[1926=100]

Year	January	February	March	April	May	June	July	August	September	October	November	December	Average
1926	------	------	------	------	------	------	------	------	------	------	------	------	100.0
1927	------	------	------	------	------	------	------	------	------	------	------	------	98.4
1928	------	------	------	------	------	------	------	------	------	------	------	------	96.8
1929	------	------	------	------	------	------	------	------	------	------	------	------	98.8
1930	------	------	------	------	------	------	------	------	------	------	------	------	97.1
1931	------	------	------	------	------	------	------	------	------	------	------	------	90.9
1932	------	------	------	------	------	------	------	------	------	------	------	------	76.2
1933	70.6	69.9	70.2	70.5	72.0	72.7	72.7	73.0	73.0	71.9	70.6	70.4	71.5
1934	67.5	67.6	68.1	68.2	67.9	67.9	68.2	69.2	69.5	70.3	71.1	71.8	68.9
1935	72.1	74.1	74.9	75.9	76.9	77.8	78.5	77.6	77.6	77.8	78.5	78.7	76.7
1936	78.7	78.6	78.2	77.6	76.7	76.2	76.9	77.6	79.5	80.9	81.7	82.8	78.8
1937	84.3	86.0	86.5	86.5	86.2	85.6	85.6	84.8	84.1	83.8	83.3	82.7	84.8
1938	81.9	81.9	82.1	81.7	82.2	80.7	80.7	80.5	80.3	80.3	80.6	80.7	81.3
1939	80.5	80.2	80.3	80.3	79.8	79.8	79.5	78.9	81.6	82.8	82.3	82.3	80.7
1940	81.0	80.9	80.3	79.8	79.7	79.1	78.4	77.1	76.5	76.5	76.9	77.2	78.6
1941	77.5	78.1	78.0	81.2	86.5	89.8	90.2	91.9	93.4	95.6	96.0	96.3	87.9
1942	97.9	100.9	103.7	104.5	103.7	102.3	101.3	101.0	100.8	100.8	100.9	100.9	101.6
1943	100.8	100.9	100.9	101.2	101.1	101.1	101.1	101.1	101.1	101.1	101.1	101.1	101.1
1944	101.0	100.9	100.9	100.9	100.9	100.9	100.8	100.7	100.7	100.7	100.7	100.7	100.8
1945	100.7	100.8	100.9	100.9	100.9	100.9	100.9	100.9	100.9	100.9	100.9	100.9	100.9
1946	101.0	101.0	101.1	101.1	101.2	101.3	103.8	102.6	102.0	102.0	136.8	152.1	108.9

Wood Pulp, Paperboard, and Paper—Indexes of Primary Market Prices

The Bureau has prepared separate indexes of primary market prices for three subgroupings of the paper and pulp subgroup in the comprehensive wholesale price index—wood pulp, paperboard, and paper—to give more detailed information on price movements for various types of paper and pulp products. The price series and weighting factors used in the calculation of these indexes are those used in the computation of the index numbers for paper and pulp. (See mimeographed report LS 46–2471, April 1, 1946.) Annual indexes from 1926 through 1945 and monthly indexes from January 1933 through December 1945 are shown in table 6. Indexes for 1946 are shown in table 12, Primary Market Prices, Index Numbers, and Relative Importance of Individual Commodities.

TABLE 6.—*Index numbers of primary market prices of paper and pulp, by groups*

[1926=100]

Year and month	Paper and pulp	Wood-pulp	Paper-board	Paper
1926	100.0	100.0	100.0	100.0
1927	93.8	92.4	103.0	91.1
1928	91.4	88.7	96.3	90.7
1929	88.9	88.4	86.7	88.9
1930	86.1	86.2	74.4	88.7
1931	81.4	79.4	62.7	85.9
1932	75.5	64.0	57.9	80.2
1933	76.6	65.4	75.7	76.6
1934	82.7	78.2	86.9	80.0
1935	80.0	72.2	78.7	80.3
1936	80.7	75.2	79.1	80.6
1937	91.7	116.8	90.6	85.7
1938	85.0	85.6	70.0	87.4
1939	82.4	73.6	71.8	85.2
1940	91.7	112.2	82.1	89.3
1941	98.2	124.0	92.3	93.8
1942	100.8	128.7	95.1	96.2
1943	104.1	128.9	102.4	98.7
1944	107.1	138.9	104.7	100.7
1945	108.8	140.6	109.1	101.8
1946	119.4	155.3	120.2	111.2
1933				
January	72.0	59.0	58.5	76.0
February	72.1	59.3	58.8	76.0
March	72.2	59.4	58.9	76.0
April	70.6	59.4	59.5	73.7
May	70.7	59.4	61.4	73.7
June	73.5	60.6	72.1	73.7
July	78.1	64.0	83.9	76.6
August	81.0	69.2	90.3	78.0
September	82.2	70.9	91.4	78.9
October	82.4	73.8	91.5	78.9
November	82.5	74.8	91.4	78.9
December	82.5	74.6	90.3	78.9
1934				
January	83.0	78.3	90.5	79.1
February	82.7	78.3	90.1	79.1
March	82.7	78.6	90.0	79.1
April	83.6	78.6	89.9	80.4
May	83.7	78.6	90.0	80.4
June	83.5	78.6	88.7	80.4
July	82.4	78.6	86.2	80.4
August	82.4	78.2	84.9	80.4
September	82.4	78.0	83.7	80.4
October	82.4	78.0	83.0	80.4
November	82.1	77.8	82.6	80.4
December	81.5	77.0	82.2	80.4
1935				
January	81.5	75.9	81.1	80.4
February	80.9	76.1	80.9	80.4
March	80.6	73.6	80.8	80.4
April	80.4	71.1	80.5	80.4
May	80.0	71.1	79.6	80.4
June	79.7	71.1	78.1	80.4
July	79.7	71.1	77.7	80.4
August	79.7	71.1	77.2	80.4
September	79.7	71.1	77.3	80.4
October	79.7	71.1	77.2	80.4
November	79.4	71.1	77.2	80.3
December	79.2	71.4	77.3	80.0
1936				
January	79.8	72.0	77.0	80.7
February	79.9	72.8	76.8	80.7
March	80.3	73.0	77.0	80.7
April	80.5	73.0	78.5	80.7
May	80.5	73.2	79.1	80.7
June	80.6	73.6	79.1	80.7
July	80.6	73.8	78.6	80.5
August	80.6	73.9	78.6	80.5
September	80.7	74.4	79.4	80.5
October	80.8	75.7	80.9	80.5
November	81.5	78.8	81.5	81.0
December	82.9	86.7	82.4	81.4

TABLE 6.—*Index numbers of primary market prices of paper and pulp, by groups*—Con.

[1926=100]

Year and month	Paper and pulp	Wood-pulp	Paper-board	Paper	Year and month	Paper and pulp	Wood-pulp	Paper-board	Paper
1937					*1942*				
January	84.8	91.3	84.4	82.3	January	102.8	128.3	101.5	97.1
February	87.5	101.0	87.1	83.0	February	102.9	128.3	102.0	97.1
March	90.2	109.1	93.0	83.9	March	102.9	128.3	102.1	97.1
April	93.9	121.6	98.4	85.4	April	102.9	128.6	102.1	97.1
May	94.6	121.4	99.3	85.9	May	102.8	128.9	102.1	97.1
June	95.0	123.7	97.7	86.4	June	101.6	128.9	95.6	97.0
July	94.2	126.1	92.5	87.3	July	100.5	128.9	91.4	96.6
August	94.1	126.1	91.7	87.3	August	98.9	128.9	89.1	95.0
September	93.4	126.3	88.8	87.3	September	98.8	128.9	88.8	95.0
October	92.4	123.7	86.3	86.8	October	98.8	128.9	88.5	95.0
November	90.4	117.2	84.0	86.4	November	98.8	128.9	88.8	95.0
December	89.8	111.4	82.8	86.7	December	99.0	128.9	89.7	95.0
1938					*1943*				
January	90.0	100.7	79.3	89.6	January	100.1	128.9	95.3	95.0
February	89.7	100.7	77.6	89.6	February	101.1	128.9	100.5	95.0
March	88.8	98.8	75.0	89.4	March	102.7	128.9	102.1	96.9
April	87.5	94.5	73.1	88.7	April	102.9	128.9	103.0	98.9
May	86.9	92.3	71.4	88.7	May	104.3	128.9	103.0	98.9
June	85.5	85.4	69.8	88.2	June	104.3	128.9	103.0	98.9
July	82.8	81.8	66.8	85.8	July	104.3	128.9	103.0	98.9
August	82.4	79.7	66.3	85.8	August	104.3	128.9	103.0	98.9
September	81.9	75.5	66.1	85.8	September	105.6	128.9	103.0	100.7
October	81.7	73.3	66.2	85.8	October	105.6	128.9	103.0	100.7
November	81.5	72.9	65.6	85.8	November	105.8	128.9	103.9	100.7
December	80.9	71.2	63.1	85.8	December	106.0	128.9	104.7	100.7
1939					*1944*				
January	81.0	70.7	64.1	85.8	January	106.0	128.9	104.7	100.7
February	81.1	70.7	64.6	85.8	February	106.6	134.6	104.7	100.7
March	81.3	69.6	66.0	85.8	March	107.2	140.3	104.7	100.7
April	81.1	69.6	67.7	85.1	April	107.2	140.3	104.7	100.7
May	80.4	69.6	67.0	84.3	May	107.2	140.3	104.7	100.7
June	79.9	69.6	66.1	83.9	June	107.2	140.3	104.7	100.7
July	79.9	69.6	65.6	83.9	July	107.2	140.3	104.7	100.7
August	80.0	69.6	66.2	83.9	August	107.2	140.3	104.7	100.7
September	81.8	74.9	71.8	84.1	September	107.2	140.3	104.7	100.7
October	86.3	81.1	86.5	85.4	October	107.2	140.3	104.7	100.7
November	88.0	81.7	88.7	87.2	November	107.2	140.3	104.7	100.7
December	89.0	87.7	87.8	87.8	December	107.3	140.3	104.9	100.7
1940					*1945*				
January	89.8	96.6	85.7	88.2	January	107.6	140.3	106.4	100.7
February	89.5	97.4	82.3	88.5	February	108.0	140.6	108.4	100.7
March	89.0	97.4	79.9	88.5	March	108.0	140.6	108.4	100.7
April	89.5	103.2	79.1	88.5	April	109.0	140.6	108.4	102.1
May	90.7	110.8	81.0	88.5	May	109.0	140.6	108.4	102.1
June	91.7	115.5	82.7	88.7	June	109.0	140.6	108.4	102.1
July	93.5	120.4	84.6	90.0	July	109.0	140.6	108.8	102.1
August	93.5	121.1	83.3	90.2	August	109.3	140.6	110.3	102.1
September	93.2	121.2	82.0	90.2	September	109.3	140.6	110.4	102.1
October	93.2	121.2	81.9	90.2	October	109.3	140.6	110.4	102.1
November	93.1	121.2	81.5	90.2	November	109.3	140.6	110.4	102.1
December	93.1	121.2	81.1	90.2	December	109.3	140.6	110.4	102.1
1941					*1946*				
January	93.1	121.2	81.4	90.2	January	112.0	140.6	110.4	105.8
February	93.3	120.7	82.4	90.2	February	113.7	140.6	113.7	107.3
March	93.5	120.7	83.6	90.2	March	113.7	140.6	113.9	107.3
April	94.5	120.5	86.3	91.0	April	113.9	141.7	114.2	107.3
May	96.7	122.1	88.9	93.0	May	115.3	154.1	114.2	107.3
June	98.0	122.6	92.0	93.9	June	115.6	154.1	115.6	107.3
July	98.8	122.6	94.2	94.4	July	117.1	154.1	117.0	109.2
August	100.7	124.0	97.3	96.1	August	119.6	154.1	121.7	111.4
September	101.7	128.3	98.3	96.6	September	121.9	165.6	122.9	112.5
October	101.9	128.3	99.2	96.6	October	124.6	169.4	122.9	115.8
November	102.2	128.3	100.8	96.6	November	127.7	173.1	128.4	118.0
December	102.5	128.3	101.1	96.9	December	136.4	178.5	142.2	125.6

Prepared Paint and Paint Materials—Indexes of Primary Market Prices

To show the price movements for prepared paint as contrasted with paint materials, the Bureau has prepared separate index numbers for these groups, as a break-down of the paint and paint materials subgroup of the comprehensive wholesale price index. The price series and weighting factors used in the calculation of these indexes are those used in the computation of the index numbers for paint and paint materials. (See mimeographed report LS 47–3806, June 16, 1947). Table 7 shows annual indexes from 1926 and monthly indexes from January 1935. Indexes for 1946 are shown in table 12, Primary Market Prices, Index Numbers, and Relative Importance of Individual Commodities.

TABLE 7.—*Index numbers of primary market prices of paint and paint materials, by groups*

[1926=100]

Year and month	Paint and paint materials	Prepared paint	Paint materials
1926	100.0	100.0	100.0
1927	96.3	99.9	93.2
1928	93.1	98.4	88.4
1929	94.9	97.4	92.7
1930	90.5	97.4	84.2
1931	79.4	89.6	70.3
1932	71.1	82.1	61.1
1933	73.3	79.9	67.6
1934	79.5	85.8	74.1
1935	79.8	85.8	74.7
1936	80.1	85.8	75.5
1937	83.4	85.7	82.5
1938	81.3	92.9	70.2
1939	82.8	92.9	73.3
1940	85.7	94.4	77.7
1941	91.4	96.1	88.1
1942	100.3	99.3	103.2
1943	102.3	99.3	107.6
1944	105.2	99.3	113.6
1945	106.9	99.3	117.3
1946	118.5	104.0	136.5
1935			
January	79.0	85.8	73.1
February	78.8	85.8	72.8
March	79.4	85.8	74.0
April	79.2	85.8	73.5
May	79.9	85.8	74.9
June	79.8	85.8	74.8
July	79.1	85.8	73.4
August	78.6	85.8	72.4
September	80.8	85.8	76.8
October	81.9	85.8	79.0
November	80.3	85.8	75.8
December	80.0	85.8	75.2
1936			
January	79.6	85.8	74.4
February	79.5	85.8	74.0
March	79.2	85.8	73.4
April	79.3	85.8	73.6
May	78.8	85.8	72.7
June	79.5	85.8	74.0
July	80.4	85.8	75.9
August	81.0	85.8	77.2
September	80.6	85.8	76.4
October	80.2	85.8	75.5
November	80.5	85.8	76.1
December	82.4	85.8	80.3
1937			
January	83.7	85.8	82.9
February	83.4	85.8	82.2
March	83.9	85.8	83.4
April	83.9	85.8	83.4
May	83.7	85.8	83.1
June	83.6	85.6	83.1
July	83.9	85.6	83.8
August	84.1	85.6	84.2
September	84.6	85.6	85.2
October	84.2	85.6	84.4
November	81.5	85.6	78.7
December	80.2	85.6	75.8
1938			
January	80.1	92.9	75.7
February	79.2	92.9	73.8
March	82.2	92.9	71.9
April	81.4	92.9	70.3
May	80.9	92.9	69.2
June	80.1	92.9	67.6
July	80.5	92.9	68.5
August	80.5	92.9	68.3
September	80.4	92.9	68.1
October	81.1	92.9	69.8
November	80.9	92.9	69.3
December	81.0	92.9	69.5
1939			
January	81.0	92.9	69.5
February	80.5	92.9	68.3
March	81.5	92.9	70.6
April	81.3	92.9	70.2
May	81.6	92.9	70.8
June	82.4	92.9	72.5
July	82.2	92.9	72.0
August	82.1	92.9	71.8
September	84.7	92.9	77.3
October	85.7	92.9	79.3
November	84.9	92.9	77.7
December	85.5	92.9	79.0

TABLE 7.—*Index numbers of primary market prices of paint and paint materials, by groups*—Continued

[1926=100]

Year and month	Paint and paint materials	Prepared paint	Paint materials
1940			
January	87.2	94.4	81.1
February	86.8	94.4	80.3
March	87.2	94.4	81.2
April	86.7	94.4	79.8
May	86.0	94.4	78.3
June	85.2	94.4	76.6
July	84.6	94.4	75.4
August	84.2	94.4	74.5
September	84.1	94.4	74.3
October	84.8	94.4	75.8
November	85.7	94.4	77.9
December	85.4	94.4	77.2
1941			
January	86.7	94.4	79.8
February	86.6	94.4	79.8
March	87.4	94.4	81.5
April	88.7	94.4	84.2
May	89.3	94.7	85.2
June	90.3	95.3	86.4
July	91.6	95.3	89.3
August	93.3	95.3	92.8
September	94.7	96.4	94.7
October	96.0	99.3	94.3
November	95.3	99.3	92.7
December	96.5	99.3	95.3
1942			
January	99.1	99.3	100.8
February	99.9	99.3	102.6
March	100.8	99.3	104.4
April	100.6	99.3	104.2
May	100.6	99.3	103.9
June	100.3	99.3	103.3
July	100.7	99.3	104.0
August	100.1	99.3	102.9
September	100.4	99.3	103.5
October	101.0	99.3	104.1
November	100.7	99.3	103.2
December	100.3	99.3	103.3
1943			
January	100.6	99.3	103.9
February	101.2	99.3	105.1
March	102.2	99.3	107.4
April	102.5	99.3	107.9
May	102.2	99.3	107.3
June	102.0	99.3	107.0
July	102.0	99.3	107.4
August	102.8	99.3	108.5
September	102.6	99.3	108.2
October	102.8	99.3	108.6
November	103.2	99.3	109.5
December	103.3	99.3	109.7
1944			
January	103.5	99.3	110.3
February	103.9	99.3	111.1
March	104.4	99.3	112.1
April	104.4	99.3	112.0
May	104.7	99.3	112.7
June	105.7	99.3	114.6
July	105.5	99.3	114.2
August	105.5	99.3	114.3
September	105.5	99.3	114.4
October	106.0	99.3	115.4
November	106.3	99.3	116.0
December	106.3	99.3	116.1
1945			
January	106.3	99.3	116.1
February	106.4	99.3	116.2
March	106.3	99.3	116.1
April	106.3	99.3	116.1
May	106.4	99.3	116.1
June	106.3	99.3	116.1
July	106.1	99.3	115.5
August	107.3	99.3	118.1
September	107.6	99.3	118.8
October	107.6	99.3	118.7
November	107.7	99.3	118.9
December	107.8	99.3	119.1
1946			
January	107.8	99.3	119.1
February	107.8	99.3	119.1
March	107.8	99.3	119.2
April	108.0	99.3	119.5
May	108.2	99.3	119.9
June	108.6	99.3	120.9
July	114.9	99.3	134.2
August	113.9	99.3	132.1
September	116.7	99.3	137.9
October	119.2	191.0	141.3
November	151.3	125.8	182.1
December	155.4	126.9	189.7

Waste and Scrap Materials—Indexes of Market Prices

Index numbers showing changes in market prices for waste and scrap materials for 1946, by groups of commodities and by weeks, are shown in table 8. Calculation of these indexes, prepared at the request of war agencies of the Federal Government, was discontinued at the end of 1946. A mimeographed statement is available upon request, giving a description of the 44 materials included in the indexes and weekly indexes back to January 1939. Indexes prior to 1946 have been published in previous wholesale prices publications, beginning with Wholesale Prices, October 1941 (Serial No. R. 1407). That publication also lists the commodities included in the indexes.

TABLE 8.—*Index numbers of market prices of waste and scrap materials*

[August 1939=100]

Week ended—	All waste and scrap materials	Scrap metals			Waste textiles					Waste paper	Scrap rubber
		Iron and steel	Nonferrous metals	All metals	Cotton	Wool	Rayon and silk	Old burlap and cordage	All textiles		
1946											
Jan. 5	163.6	131.5	96.1	101.2	198.3	157.3	169.7	228.1	182.8	339.5	160.1
Jan. 12	164.0	131.5	96.1	101.2	198.3	157.3	169.7	239.2	183.4	339.5	160.1
Jan. 19	164.0	131.5	96.1	101.2	198.3	157.3	169.7	239.2	183.4	339.5	160.1
Jan. 26	164.3	131.5	96.1	101.2	198.3	157.3	169.7	249.0	184.0	339.5	160.1
Feb. 2	164.4	131.5	96.1	101.2	198.4	157.3	169.7	249.0	184.0	339.5	162.3
Feb. 9	164.4	131.5	96.1	101.2	198.4	157.3	169.7	249.0	184.0	339.5	162.3
Feb. 16	164.4	131.5	96.1	101.2	198.4	157.3	169.7	249.0	184.0	339.5	162.3
Feb. 23	164.4	131.5	96.1	101.2	198.4	157.3	169.7	249.0	184.0	339.5	162.3
Mar. 2	164.4	131.5	96.1	101.2	198.4	157.3	169.7	249.0	184.0	339.5	162.3
Mar. 9	164.4	131.5	96.1	101.2	198.4	157.3	169.7	249.0	184.0	339.5	162.3
Mar. 16	164.3	131.5	96.1	101.2	198.4	157.3	169.7	249.0	184.0	339.5	160.1
Mar. 23	164.5	131.5	96.1	101.2	199.5	157.3	169.7	249.0	184.5	339.5	160.1
Mar. 30	167.3	131.5	103.8	108.0	199.5	157.3	169.7	249.0	184.5	339.5	156.5
Apr. 6	167.3	131.5	103.8	108.0	199.5	157.3	169.7	249.0	184.5	339.5	156.5
Apr. 13	167.5	131.5	103.8	108.0	201.0	157.3	169.7	249.0	185.2	339.5	154.3
Apr. 20	167.5	131.5	103.8	108.0	201.0	157.3	169.7	249.0	185.2	339.5	154.3
Apr. 27	167.4	131.5	103.8	108.0	201.0	157.3	169.7	246.6	185.0	339.5	154.3
May 4	167.6	131.5	104.3	108.4	201.0	157.3	169.7	246.6	185.0	339.5	154.3
May 11	167.7	131.5	104.6	108.7	201.0	157.3	169.7	246.6	185.0	339.5	154.3
May 18	167.8	131.5	104.9	108.9	201.0	157.3	169.7	246.6	185.0	339.5	154.3
May 25	167.8	131.5	104.9	108.9	201.0	157.3	169.7	246.6	185.0	339.5	154.3
June 1	167.8	131.5	104.9	108.9	201.0	157.3	169.7	246.6	185.0	339.5	154.3
June 8	170.8	131.5	113.5	116.3	201.0	157.3	169.7	246.6	185.0	339.5	154.3
June 15	170.8	131.5	113.5	116.3	201.0	157.3	169.7	246.6	185.0	339.5	154.3
June 22	170.8	131.5	113.5	116.3	201.0	157.3	169.7	246.6	185.0	339.5	154.3
June 29	170.8	131.5	113.5	116.3	201.0	157.3	169.7	246.6	185.0	339.5	154.3
July 6	170.8	131.5	113.5	116.3	201.0	157.3	169.7	246.6	185.0	339.5	154.3
July 13	173.3	131.5	120.7	122.5	201.0	157.3	169.7	246.6	185.0	339.5	154.3
July 20	173.6	131.5	121.6	123.2	201.0	157.3	169.7	246.6	185.0	339.5	154.3
July 27	173.4	131.5	121.0	122.7	201.0	157.3	169.7	249.0	185.2	339.5	154.3
Aug. 3	168.1	131.5	105.3	109.3	201.0	157.3	169.7	249.0	185.2	339.5	154.3
Aug. 10	168.1	131.5	105.3	109.3	201.0	157.3	169.7	249.0	185.2	339.5	154.3
Aug. 17	168.1	131.5	105.3	109.3	201.0	157.3	169.7	249.0	185.2	339.5	154.3
Aug. 24	168.8	131.5	106.9	110.6	201.0	157.3	169.7	249.0	185.2	339.5	158.6
Aug. 31	168.8	131.5	106.9	110.6	201.0	157.3	169.7	249.0	185.2	339.5	158.6
Sept. 7	168.8	131.5	106.9	110.6	201.0	157.3	169.7	249.0	185.2	339.5	158.6
Sept. 14	169.9	131.5	106.9	110.6	201.0	157.3	169.7	286.1	187.1	339.5	158.6
Sept. 21	170.7	146.5	106.9	112.7	201.0	157.3	169.7	286.1	187.1	339.5	158.6
Sept. 28	170.7	146.5	106.9	112.7	201.0	157.3	169.7	286.1	187.1	339.5	158.6
Oct. 5	174.6	146.5	106.9	112.7	218.2	157.3	169.7	286.1	194.4	339.5	158.6
Oct. 12	174.6	146.5	106.9	112.7	218.2	157.3	169.7	286.1	194.4	339.5	158.6
Oct. 19	176.8	146.5	113.1	118.1	218.2	157.3	169.7	286.1	194.4	339.5	158.6
Oct. 26	176.8	146.5	113.1	118.1	218.2	157.3	169.7	286.1	194.4	339.5	158.6
Nov. 2	176.8	146.5	113.1	118.1	218.2	157.3	169.7	286.1	194.4	339.5	158.6
Nov. 9	176.8	146.5	113.1	118.1	218.2	157.3	169.7	286.1	194.4	339.5	158.6
Nov. 16	199.2	177.8	138.7	144.5	251.1	177.7	169.7	286.1	214.3	359.0	162.7
Nov. 23	221.8	191.7	192.4	192.3	280.7	177.7	169.7	264.7	224.3	359.0	171.7
Nov. 30	225.6	192.7	192.4	192.4	298.5	176.4	169.7	273.9	230.9	359.0	171.7
Dec. 7	226.8	193.3	192.4	192.5	302.7	177.6	169.7	273.9	232.8	359.0	171.7
Dec. 14	230.0	203.9	192.4	194.3	311.8	175.9	169.7	273.9	235.4	388.5	164.4
Dec. 21	234.1	217.2	197.5	200.6	318.2	179.4	169.7	273.9	238.9	388.5	164.4
Dec. 28	234.8	241.1	197.5	204.2	318.2	177.7	169.7	273.9	238.3	388.5	164.4

Standard Machine Tools—Indexes of Prices

Table 9 shows monthly index numbers of prices of 11 types of standard nonspecialty machine tools for 1946. Comparable data back to January 1937 have been given in previous wholesale price publications, beginning with Wholesale Prices, June 1941 (Serial No. R. 1349).

TABLE 9.—*Index numbers of prices of standard machine tools, 1946*

[August 1939=100]

Month	General index	Boring mill, vertical	Drill, radial	Drill, upright	Grinding machine, cylindrical type	Lathe, engine	Lathe, turret, for bar stock	Milling machine	Planer	Punch press	Screw machine, automatic, for bar stock	Shaper, horizontal type
January	118	117	125	114	119	119	110	117	116	122	117	127
February	118	117	125	114	119	119	110	117	116	122	117	127
March	118	117	125	114	119	119	110	117	116	124	117	127
April	119	117	125	114	120	119	110	119	120	129	117	127
May	128	121	125	118	134	133	128	125	125	158	120	127
June	130	128	131	118	134	132	128	128	125	158	122	127
July	132	128	140	118	134	131	128	128	131	158	122	138
August	132	128	140	118	134	131	128	128	131	160	122	138
September	133	128	140	118	134	131	133	130	131	163	122	138
October	135	128	142	128	134	131	133	130	131	180	122	138
November	136	128	142	128	134	131	133	130	132	180	122	138
December	136	128	142	128	134	131	133	130	137	180	122	138

Construction Machinery—Indexes of Manufacturers' Prices

Index numbers of manufacturers' prices of construction machinery are shown by months and for the year 1946 in table 10. A description of the 60 types of construction machinery included in the index and comparable data back to August 1939 are given in Wholesale Prices, 1944 (Bull.No. 870).

TABLE 10.—*Index numbers of manufacturers' prices of construction machinery, 1946* [1]

[August 1939=100]

Year and month	All groups	Group I	Group II	Group III	Group IV	Group V	Group VI	Group VII	Group VIII	Group IX
Average for year	120.8	116.6	120.9	114.2	128.4	120.1	115.5	107.3	128.6	104.1
January	114.2	110.5	114.6	108.0	119.5	114.7	109.7	100.0	120.3	97.6
February	114.5	112.1	114.6	108.8	119.5	114.9	110.0	100.0	120.3	97.6
March	114.7	113.0	114.6	109.5	119.5	114.9	110.3	100.0	120.3	97.6
April	117.5	114.3	116.9	113.1	127.2	118.5	112.4	103.3	122.6	97.6
May	120.3	116.9	120.1	115.4	127.5	120.3	114.4	106.6	127.5	97.6
June	121.9	117.9	120.1	115.5	127.5	120.3	115.2	111.3	131.8	97.6
July	122.2	117.9	121.3	115.4	127.5	120.7	116.6	112.0	131.8	106.7
August	122.5	118.1	122.1	115.0	130.4	120.6	116.7	112.0	131.2	111.1
September	122.8	118.5	122.3	115.3	133.6	120.8	116.9	112.0	131.5	111.1
October	124.9	119.9	124.7	116.8	135.2	123.1	120.6	112.0	133.3	111.1
November	125.6	120.2	127.2	117.8	135.7	123.6	120.9	112.0	134.0	111.6
December	129.1	120.2	132.4	118.1	137.1	130.0	122.3	112.0	138.0	111.9

[1] Group I—Construction equipment, tractor mounted; Group II—Construction machinery, specialized; Group III—Construction material mixers, pavers, spreaders and related equipment; Group IV—Construction material processing equipment; Group V—Power cranes, draglines, shovels, and related equipment; Group VI—Scrapers, maintainers and graders; Group VII—Drilling and boring machinery; Group VIII—Tractors, track type; Group IX—Portable air compressors.

General and Auxiliary Machinery and Equipment—Indexes of Manufacturers' Prices

Monthly and yearly indexes of manufacturers' prices of general and auxiliary machinery and equipment for 1946 are shown in table 11.

A description of this index and the monthly and yearly data, back to 1939, are given in Wholesale Prices, 1945 (Bull. No. 877).

[August 1939=100]

Group No.	Group and subgroup	January	February	March	April	May	June	July	August	September	October	November	December	Average for year
	All groups	102.8	103.3	103.5	104.0	108.1	110.1	113.1	114.8	117.0	117.9	119.8	121.6	111.4
I	Engines	107.8	107.8	109.7	111.5	116.6	120.1	122.7	122.8	122.8	123.2	123.8	124.4	117.8
	Gasoline	108.5	108.5	110.5	112.4	117.1	121.0	121.0	121.0	121.0	121.7	122.6	123.2	117.4
	Diesel	107.0	107.0	108.6	110.3	115.9	118.9	125.0	125.2	125.2	125.2	125.4	125.9	118.3
II	Air compressors	100.4	100.4	100.4	100.4	100.5	100.5	111.3	115.5	115.5	115.5	115.6	116.4	107.7
	Stationary	101.3	101.3	101.3	101.3	101.4	101.4	113.1	117.3	117.3	117.3	117.3	118.3	109.0
	Portable	98.1	98.1	98.1	98.1	98.1	98.1	106.5	110.6	110.6	110.6	110.9	111.2	104.1
III	Pumps (power driven)	103.3	103.3	103.3	104.1	104.5	105.9	110.8	116.1	116.2	116.9	117.4	126.0	110.8
	Centrifugal	104.6	104.6	104.6	106.1	106.3	106.5	112.2	120.3	120.3	120.3	120.3	131.2	113.1
	Other	102.1	102.1	102.1	102.1	102.6	105.3	109.4	112.0	112.1	113.6	114.5	120.8	108.4
IV	Mechanical measuring and testing instruments	109.3	110.0	110.0	110.0	110.9	123.3	123.5	123.5	123.7	123.7	123.9	123.9	118.0
	Hardness testers	104.3	104.3	104.3	104.3	104.3	104.3	108.8	108.8	114.0	114.0	119.6	119.6	109.3
	Gage blocks	103.1	120.9	120.9	120.9	120.9	120.9	120.9	120.9	120.9	120.9	120.9	120.9	119.4
	Micrometers	111.3	111.3	111.3	111.3	112.7	127.9	127.9	127.9	127.9	127.9	127.9	127.9	121.1
	Precision measuring tools	111.3	111.3	111.3	111.3	112.5	130.9	130.9	130.9	130.9	130.9	130.9	130.9	122.8
	Tool-room specialties	105.5	105.5	105.5	105.5	105.5	114.7	114.7	114.7	114.7	114.7	114.7	114.7	110.9
	Fixed gages	105.8	105.8	105.8	105.8	105.9	105.9	105.8	105.8	105.8	105.9	105.9	105.9	105.9
V	Scientific instruments	100.3	103.1	104.4	107.0	108.0	108.1	113.3	114.0	115.1	117.7	118.7	119.0	110.8
	Temperature instruments	99.6	104.5	104.8	105.3	106.2	106.2	113.7	114.0	114.9	118.6	119.7	120.4	110.7
	Pressure gauges	105.5	106.5	106.5	106.5	109.7	109.7	109.7	111.9	112.7	112.7	112.7	112.7	109.7
	Flow instruments	106.1	109.0	109.0	109.0	109.0	109.0	117.8	116.2	116.2	116.2	112.2	112.2	111.8
	Control valves and regulators	100.0	100.5	103.4	108.5	109.7	109.9	112.4	113.9	115.4	117.2	118.8	118.8	110.9
VI	Material handling equipment	103.9	103.9	104.2	104.5	110.8	111.4	114.4	116.6	116.8	118.2	119.5	120.6	112.1
	Industrial trucks, power	98.4	98.4	98.4	98.4	98.4	98.4	98.4	100.1	100.7	100.7	101.9	101.9	99.5
	Industrial trucks, hand	109.5	109.5	109.5	109.5	118.9	118.9	122.7	124.7	124.7	124.7	128.7	128.7	119.4
	Conveyors	102.5	102.5	102.5	102.5	111.3	123.3	116.5	117.1	117.1	120.3	121.1	122.5	112.3
	Hoists	104.4	104.4	106.5	106.5	107.7	108.1	111.2	117.6	117.6	117.6	117.6	117.6	111.4
	Freight elevators	110.8	110.8	110.8	114.3	127.6	128.1	129.0	134.5	135.1	135.1	136.8	142.4	126.3
	Locomotive cranes	112.1	112.1	112.1	112.1	112.1	112.1	118.6	121.5	121.5	121.5	123.7	123.7	117.0
VII	Fans and blowers	110.9	110.9	110.9	110.9	110.9	110.9	116.0	122.2	122.2	122.2	129.4	136.5	117.8
	Centrifugal blowers	109.1	109.1	109.1	109.1	109.1	109.1	111.3	118.5	118.5	118.5	126.8	131.5	115.0
	Propeller fans	115.1	115.1	115.1	115.1	115.1	115.1	127.2	131.2	131.2	131.2	135.5	148.5	124.6
VIII	Mechanical stokers, power type	103.5	103.5	105.0	110.8	4.9	114.9	119.3	119.4	127.0	127.3	140.6	140.6	119.4
IX	Industrial oil burners	106.4	108.0	108.0	108.6	108.6	108.6	109.9	116.7	116.7	116.7	117.4	122.4	112.3

TABLE 11.—*Index numbers of prices of general and auxiliary machinery and equipment, 1946*—Continued

[August 1939=100]

Group No.	Group and subgroup	January	February	March	April	May	June	July	August	September	October	November	December	Average for year
X	Heat exchangers, water and oil coolers	119.4	119.4	119.4	119.4	128.4	128.4	133.2	133.2	134.6	144.7	144.7	144.7	131.5
	Water and oil coolers	118.8	118.8	118.8	118.8	118.8	118.8	118.8	118.8	124.5	141.7	141.7	141.7	125.0
	Heat exchangers	119.6	119.6	119.6	119.6	131.6	131.6	138.0	138.0	138.0	145.7	145.7	145.7	133.7
XI	Cutting tools and machine tool attachments	100.0	100.0	100.0	100.0	111.6	114.3	116.5	118.1	118.1	117.3	117.3	117.3	111.0
	Twist drills	100.0	100.0	100.0	100.0	109.2	110.0	116.0	116.0	116.0	116.7	116.7	116.7	110.5
	Milling cutters	100.0	100.0	100.0	100.0	116.4	116.2	116.2	127.8	127.8	119.3	119.3	119.3	112.2
	Reamers	100.0	100.0	100.0	100.0	105.5	105.5	115.4	116.1	116.1	116.5	116.5	116.5	110.1
	Hand taps	100.0	100.0	100.0	100.0	107.4	108.4	112.9	114.6	114.6	116.7	116.7	116.7	109.4
	Dies	100.0	100.0	100.0	100.0	108.8	110.1	115.3	116.2	116.2	116.8	117.2	117.2	110.0
	Grinding wheels	100.0	100.0	100.0	100.0	111.7	118.6	118.6	118.6	118.6	118.6	118.6	118.6	111.8
	Wood saw blades	100.0	100.0	100.0	100.0	115.7	115.7	115.7	115.7	115.7	115.7	115.7	115.7	111.0
	Metal saw blades	99.8	99.8	99.8	99.8	103.6	105.8	112.4	112.4	112.4	112.4	112.4	112.4	107.0
	Machine knives	100.0	100.0	100.0	100.0	116.1	116.1	116.4	116.4	116.4	116.4	116.4	116.4	111.6
	Files	100.0	100.0	100.0	100.0	116.9	116.9	116.9	116.9	116.9	116.9	116.9	116.9	111.9
XII	Mechanical power transmission equipment	98.8	99.7	99.7	99.8	100.7	102.8	105.0	106.1	111.8	112.3	115.6	117.6	105.9
	Enclosed gearing	103.4	103.4	103.4	103.4	105.1	116.9	116.9	116.9	116.9	116.9	124.3	129.6	113.1
	Open gearing	121.0	121.0	121.0	121.0	121.4	133.4	133.4	133.4	133.4	133.4	148.5	159.6	131.7
	Antifriction bearings	89.9	91.7	91.7	91.7	91.7	91.7	93.3	95.5	101.0	100.1	102.8	102.8	95.3
	Plain bearings	107.8	107.8	107.8	107.8	107.8	107.8	107.8	107.8	121.8	124.8	124.8	121.8	113.5
	Chain-drive equipment	100.0	100.0	100.0	100.0	100.0	100.0	115.5	115.5	115.5	115.5	115.5	115.7	108.4
	V-belt drive equipment	102.5	102.5	102.5	103.6	113.4	115.3	116.9	116.9	116.9	128.6	128.6	136.4	115.8
XIII	Gas welding and cutting equipment	99.3	99.3	99.3	99.3	103.1	105.2	105.6	107.1	107.2	106.2	106.9	107.8	104.0
	Acetylene generators	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Torches and tips	100.0	100.0	100.0	100.0	103.6	106.4	106.4	106.4	106.9	106.9	106.9	106.9	104.3
	Flame cutting machines	100.0	100.0	100.0	100.0	100.0	100.0	100.0	108.7	108.7	108.7	108.7	115.1	104.1
	Accessories	100.0	100.0	100.0	100.0	100.0	100.0	100.0	115.1	115.1	115.1	115.1	115.1	106.5
	Welding rods	97.7	97.7	97.7	97.7	104.7	107.1	108.5	108.5	108.0	101.7	106.8	108.3	104.1
XIV	Lubricating equipment	101.4	101.4	101.4	101.5	106.9	108.1	112.3	111.6	111.6	111.6	118.2	118.2	108.9
	Grease pumps	100.5	100.5	100.5	100.5	106.9	108.4	114.8	112.5	112.5	112.5	116.4	116.4	108.8
	Hand guns	102.3	102.3	102.3	102.9	110.9	112.7	115.9	114.8	114.8	114.8	115.2	115.2	110.6
	Centralized lubricating equipment	102.0	102.0	102.0	102.0	102.0	102.0	102.8	105.8	105.8	105.8	125.8	125.8	107.0
XV	Industrial scales	107.6	108.3	108.3	108.3	129.8	129.8	130.4	130.4	132.6	134.3	135.7	135.7	124.9
XVI	Industrial heat treating furnaces	103.2	103.7	103.7	103.7	109.8	109.8	114.2	115.1	115.3	116.5	116.5	116.9	110.7
	Gas fired	110.6	110.6	110.6	110.6	110.6	110.6	125.6	125.6	125.9	126.8	126.8	126.8	118.4
	Electric fired	99.8	100.5	100.5	100.5	109.5	109.5	108.9	110.3	110.4	111.7	111.7	112.2	107.1

Primary Market Prices, Index Numbers, and Relative Importance of Individual Commodities

Monthly and annual average prices in 1946 for commodities included in the wholesale price index, plus a small number of additional commodities selected because of special importance in particular fields, are shown in table 12.

Changes in specifications are indicated by changes in the digit following the decimal in the code number assigned to the commodity. Such changes are handled so that the individual commodity indexes, but not the prices, for the new specification generally are comparable with those for the old specification.

The average prices shown are averages of 1-day-a-week quotations from one or more sellers of the commodity described. In general, the prices are those charged by manufacturers or producers, or prevailing in primary commodity markets.

Prices are "net" after the deduction of applicable discounts.

The meaning and use of the data in the column "Relative importance, year 1946" are discussed on page 2. In 1946, raw materials had a relative importance of 32.90 percent of all commodities, semimanufactured articles 7.65 percent, and manufactured products 59.45 percent.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*

Code No.	Commodity—Description and terms of sale	Unit	AVERAGE PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	FARM PRODUCTS, f. o.b. listed market:														
	Grains:														
1.1	Barley, No. 2 malting, Minneapolis	Bushel	$1.320	$1.320	$1.360	$1.360	$1.428	$1.450	$1.634	$1.674	$1.700	$1.703	$1.716	$1.791	$1.540
	Corn, Chicago:														
2	No. 2 yellow	do	1.185	1.185	1.215	1.215	1.396	1.452	2.151	1.912	1.914	1.842	1.438	1.358	1.525
3	No. 3 yellow	do	1.180	1.180	1.210	1.210	1.388	1.448	2.168	1.941	1.902	1.842	1.399	1.343	1.520
4.1	Oats, No. 3 white, Minneapolis	do	.757	.752	.779	.776	.817	.826	.822	.743	.755	.802	.807	.794	.786
[3] 5.1	Rye, No. 2, Minneapolis	do	(2)	(2)	(2)	2.698	2.841	(2)	2.388	1.956	2.235	2.416	2.695	2.793	(2)
	Wheat:														
6	No. 2 soft red winter, Chicago	do	1.790	1.790	1.820	1.820	1.932	1.970	2.086	2.018	2.051	2.151	2.194	2.313	1.998
7	No. 2 hard winter, Kansas City	do	1.699	1.696	1.721	1.721	1.834	1.871	2.008	1.950	1.980	2.055	2.105	2.076	1.895
8	No. 1 northern spring, Minneapolis	do	1.712	1.720	1.745	1.742	1.858	1.890	2.218	2.015	2.019	2.158	2.276	2.167	1.964
9	No. 2 dark northern spring, Minneapolis.	do	1.737	1.735	1.750	1.747	1.852	1.900	2.222	2.029	2.038	2.172	2.285	2.217	1.978
10	No. 1 hard white, Portland, Oreg	do	1.710	1.703	1.726	1.726	1.839	1.876	1.916	2.068	2.202	2.318	2.332	2.296	1.978
11	No. 2 soft red winter, St. Louis	do	1.790	1.790	1.820	1.820	1.932	1.970	2.109	2.058	2.102	2.157	2.250	2.327	2.013
	Livestock and poultry:														
	Cattle, Chicago:														
12	Calves, good to choice, vealers	100 pounds	14.688	14.812	15.656	15.750	15.625	15.875	17.100	16.438	16.150	18.188	18.375	18.200	16.435
	Cows:														
13	Fair to good	do	10.375	10.375	10.906	11.000	10.750	11.625	12.500	11.938	11.150	12.125	13.281	12.950	11.606
14	Good to choice	do	11.500	11.500	11.938	12.000	11.750	12.625	14.000	12.781	12.950	14.094	14.500	14.150	12.851
	Steers:														
15	Fair to good	do	15.594	15.938	15.812	15.950	16.031	16.875	19.050	20.875	18.950	22.500	25.250	23.925	18.940
16	Good to choice	do	16.750	16.938	16.812	16.950	16.844	17.406	21.350	24.469	19.900	24.688	29.750	29.425	21.014
	Hogs, Chicago:														
17	Good to choice, heavy butchers	do	14.762	14.850	14.850	14.850	14.850	14.850	18.715	21.975	16.250	19.969	24.169	23.510	17.841
18	Good to choice, light butchers	do	14.819	14.850	14.850	14.850	14.850	14.850	19.025	22.281	16.250	19.938	24.156	23.835	17.926
	Sheep, Chicago:														
19	Ewes, native, fair to best	do	7.050	7.781	7.750	7.975	8.469	8.906	8.850	6.769	8.800	8.750	7.938	7.225	8.036
20.1	Lambs, native, good to choice	do	14.888	15.312	15.619	16.325	17.188	17.250	19.525	21.269	19.200	20.825	23.400	23.040	18.720
21	Wethers, poor to best	do	7.281	8.281	8.250	8.600	8.812	9.375	9.525	7.688	9.400	9.375	8.562	8.125	8.630
	Poultry, live fowls:														
22	Chicago	Pound	.255	.253	.268	.272	.274	.269	.283	.265	.307	.298	.242	.266	.272
23	New York	do	.295	.308	.286	.312	.310	.310	.310	.292	.373	.351	.305	.312	.314

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Relative importance, year 1946	INDEXES (1926=100) OF PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	All commodities	100.00	107.1	107.7	106.9	110.2	111.0	112.9	124.7	129.1	124.0	134.1	139.7	140.9	121.1
	FARM PRODUCTS, f. o. b. listed market	22.03	**129.9**	**130.6**	**133.4**	**135.4**	**137.5**	**140.1**	**157.0**	**161.0**	**154.3**	**165.3**	**169.6**	**166.1**	**148.9**
	Grains	**3.34**	**133.6**	**133.9**	**136.7**	**137.0**	**146.1**	**151.6**	**161.4**	**169.0**	**170.6**	**174.2**	**165.4**	**163.0**	**155.6**
1.1	Barley, No. 2 malting, Minneapolis	.15	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
	Corn, Chicago:														
2	No. 2 yellow	.38	153.4	153.4	157.3	157.3	180.7	188.0	278.4	247.5	247.8	238.4	186.1	175.8	197.3
3	No. 3 yellow	.57	157.8	157.8	161.8	161.8	185.6	193.6	289.9	259.5	254.4	246.3	187.2	179.6	203.3
4.1	Oats, No. 3 white, Minneapolis	.31	186.4	185.1	191.9	191.2	201.1	203.3	202.4	183.0	185.9	197.6	198.6	195.6	193.6
[3] 5.1	Rye, No. 2, Minneapolis	.06	(2)	(2)	(2)	271.4	285.8	(2)	240.2	196.7	224.8	243.0	271.1	281.0	(2)
	Wheat:														
6	No. 2 soft red winter, Chicago	.27	116.1	116.1	118.0	118.0	125.3	127.7	135.2	130.8	133.0	139.5	142.3	150.0	129.6
7	No. 2 hard winter, Kansas City	.62	113.5	113.4	115.0	115.0	122.6	125.1	134.2	130.3	132.3	137.4	140.7	138.7	126.6
8	No. 1 northern spring, Minneapolis	.24	110.6	111.1	112.7	112.5	119.9	122.0	143.2	130.1	130.4	139.4	146.9	139.9	126.8
9	No. 2 dark northern spring, Minneapolis.	.37	111.7	111.5	112.5	112.3	119.1	122.2	142.9	130.4	131.0	139.6	146.9	112.5	127.2
10	No. 1 hard white, Portland, Oreg	.18	116.1	115.7	117.2	117.2	124.9	127.4	130.1	140.4	149.6	157.4	158.4	155.9	134.3
11	No. 2 soft red winter, St. Louis	.19	115.1	115.1	117.1	117.1	124.3	126.7	135.7	132.3	135.2	138.7	144.7	149.7	129.5
	Livestock and poultry	**7.39**	**131.5**	**132.7**	**133.5**	**135.1**	**134.9**	**137.4**	**162.9**	**177.6**	**150.4**	**174.6**	**197.4**	**194.7**	**155.6**
	Cattle, Chicago:														
12	Calves, good to choice, vealers	.39	121.0	122.1	129.0	129.8	128.8	130.8	140.9	135.5	133.1	149.9	151.4	150.0	135.4
	Cows:														
13	Fair to good	.29	180.1	180.0	189.2	190.8	186.5	201.7	216.9	207.1	193.4	210.4	230.4	224.7	201.4
14	Good to choice	.64	177.2	177.2	184.0	184.9	181.1	194.6	215.8	197.0	199.6	217.2	223.5	218.1	198.0
	Steers:														
15	Fair to good	.47	178.0	181.9	180.5	182.0	183.0	192.6	217.4	238.2	216.3	256.8	288.2	273.0	216.1
16	Good to choice	1.04	175.8	177.8	176.4	177.9	176.8	182.7	224.1	256.8	208.8	259.1	312.2	308.8	220.5
	Hogs, Chicago:														
17	Good to choice, heavy butchers	.85	119.7	120.4	120.4	120.4	120.4	120.4	151.7	178.1	131.7	161.9	195.9	190.6	144.6
18	Good to choice, light butchers	2.56	113.0	113.2	113.2	113.2	113.2	113.2	145.1	169.9	123.9	152.0	184.2	181.7	136.7
	Sheep, Chicago:														
19	Ewes, native, fair to best	.04	106.9	118.0	117.6	121.0	128.5	135.1	134.2	102.7	133.5	132.7	120.4	109.6	121.9
20.1	Lambs, native, good to choice	.33	103.8	106.8	109.0	113.9	119.9	120.3	136.2	148.4	133.9	145.3	163.2	160.7	130.6
21	Wethers, poor to best	.03	89.0	101.2	100.8	105.1	107.7	114.6	116.4	94.0	114.9	114.6	104.7	99.3	105.5
	Poultry, live fowls:														
22	Chicago	.35	101.5	100.4	106.6	108.3	108.9	107.1	112.5	105.4	122.0	118.7	96.2	106.0	108.0
23	New York	.40	99.1	103.3	95.9	104.6	104.2	104.0	104.3	98.1	125.3	117.7	102.4	104.7	105.4

See footnote at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Unit	AVERAGE PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	FARM PRODUCTS, f.o.b. listed market:—Continued														
	Other farm products:														
	Cotton, middling:														
[3]24-1	$1\frac{5}{16}''$, average of 10 spot markets	Pound	$0.247	$0.258	$0.267	$0.277	$0.274	$0.290	$0.331	$0.354	$0.366	$0.358	$0.308	$0.323	$0.305
	Eggs, fresh:														
27.2	Extras, 1 and 2, large, Boston	Dozen	.377	.393	.385	.391	.402	.416	.409	.410	.526	.550	.493	.472	.434
28	U. S. Standards, Chicago	do	.356	.331	.332	.333	.336	.332	.340	.346	.406	.420	.406	.388	.361
29	No. 1 Standards, Cincinnati	do	.384	.330	.339	.310	.320	.321	.346	.365	.448	.486	.400	.396	.372
30.1	U. S. Standards, New Orleans	do	.400	.336	.346	.344	.345	.349	.364	.372	.405	.434	.451	.422	.382
31.1	U. S. Standards, New York	do	.383	.359	.358	.348	.351	.348	.339	.354	.399	.426	.396	.378	.371
32	U. S. Standards, Philadelphia	do	.392	.354	.352	.334	.359	.358	.351	.361	.414	.448	.410	.408	.378
33	Mediums, San Francisco	do	.449	.368	.375	.375	.375	.395	.419	.475	.545	.575	.585	.594	.463
	Fruits:														
	Apples, fresh:														
	Average grade:														
34	Chicago	Bushel	4.882	4.905	4.911	4.935	5.057	4.576	3.875	2.775	3.156	2.860	2.719	3.125	3.956
35	New York	do	4.612	4.801	4.944	5.018	5.134	4.923	2.760	2.319	2.500	2.600	2.844	2.800	3.729
36.1	Medium grade Portland, Oreg	Box	3.749	3.791	4.049	4.282	4.454	4.480	3.295	3.367	2.631	3.300	3.188	3.125	3.587
37	Lemons, California, average grade, Chicago.	do	5.606	5.001	4.814	5.383	4.644	4.779	5.410	3.850	5.031	7.110	8.275	7.289	5.652
38	Oranges, California, average grade, Chicago.	do	4.099	4.424	4.412	5.506	5.345	5.364	6.385	5.244	5.084	6.420	7.700	4.805	5.403
	Hay:														
[3]39.1	Alfalfa, No 2, leafy or better, f. o. b. Kansas City.	Ton	31.642	29.438	30.182	31.078	30.970	30.790	29.708	28.819	29.945	32.092	34.500	33.668	31.072
40	Clover, No. 1, Chicago	do	24.875	21.375	24.000	23.600	23.500	23.500	23.500	23.500	23.900	26.750	28.000	28.000	24.788
41	Timothy, No. 1, Chicago	do	24.875	21.375	24.000	23.600	23.500	23.500	23.500	23.500	23.900	26.750	28.000	28.000	24.788
	Milk, fluid:														
43	Chicago	100 pounds	3.372	3.408	3.424	3.460	3.479	3.614	4.321	4.433	4.903	5.100	5.246	5.003	4.157
44	New York	do	4.345	4.345	4.345	4.356	4.400	4.800	5.536	5.720	5.720	6.270	6.310	6.310	5.220
45	San Francisco	do	3.600	3.600	3.600	3.600	3.600	3.900	4.672	4.840	4.840	4.840	4.840	4.840	4.238
[3]46.1	Peanuts, Spanish shelled No. 1, f. o. b. Southeastern shipping point.	Pound	.142	.142	.142	1.42	.142	.142	.142	.142	.143	.146	.152	.152	.144
	Seeds:														
47	Alfalfa, Kansas City	100 pounds	43.000	43.000	43.000	43.000	43.000	43.000	43.000	44.000	41.000	41.000	45.000	45.000	43.608
48	Clover, Chicago	do	31.500	31.500	31.500	31.500	31.500	(2)	(2)	(2)	31.500	31.500	41.500	42.000	(2)
49	Flax, Minneapolis	Bushel	3.100	3.100	3.100	3.100	3.225	3.350	3.770	3.951	4.000	5.187	7.250	7.250	4.225
50	Timothy, Chicago	100 pounds	5.375	5.500	5.875	5.875	5.875	(2)	(2)	(2)	6.875	6.875	7.175	7.275	(2)

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Relative importance, year 1946	INDEXES (1926=100) OF PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	FARM PRODUCTS f. o. b. listed market—Continued														
	Other farm products	11.30	**126.9**	**127.9**	**131.4**	**134.2**	**135.1**	**137.5**	**145.7**	**147.8**	**151.1**	**156.1**	**153.3**	**152.5**	**142.0**
[3]24-1	Cotton, middling, $^{15}/_{16}''$, average of 10 spot markets.	3.35	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
	Eggs, fresh:														
27.2	Extras, 1 and 2, large, Boston	.10	89.2	93.1	91.2	92.5	95.2	98.6	96.9	97.1	124.6	130.3	116.8	111.9	102.9
28	U. S. Standards, Chicago	.28	106.5	98.9	99.2	99.4	100.3	99.1	101.4	103.2	121.3	125.4	121.3	115.7	107.8
29	No. 1 Standards, Cincinnati	.03	107.9	92.7	95.2	87.1	89.9	90.3	97.2	102.6	125.8	136.6	112.4	111.3	104.5
30.1	U. S. Standards, New Orleans	.03	108.3	91.1	93.8	93.4	93.5	94.5	98.5	100.9	109.8	117.7	122.3	114.5	103.5
31.1	U. S. Standards, New York	.49	106.9	100.3	100.1	97.3	98.8	97.3	94.8	98.9	111.6	119.2	110.6	105.8	103.6
32	U. S. Standards, Philadelphia	.12	99.1	89.5	88.9	84.6	90.8	90.5	88.7	91.3	104.7	113.2	103.7	103.3	95.5
33	Mediums, San Francisco	.06	150.8	123.4	126.0	126.0	126.0	132.7	140.7	159.6	183.1	193.1	196.5	199.4	155.5
	Fruits:														
	Apples, fresh:														
	Average grade:														
34	Chicago	.11	357.1	358.8	359.2	361.0	369.9	334.7	283.4	203.0	230.9	209.2	198.9	228.6	289.4
35	New York	.20	219.2	228.2	235.0	238.5	244.0	234.0	131.2	110.2	118.8	123.6	135.2	133.1	177.2
36.1	Medium grade Portland, Oreg	.35	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
37	Lemons, California, average grade, Chicago.	.07	100.6	89.8	86.4	96.6	83.4	85.8	97.1	69.1	90.3	127.6	148.5	130.8	101.5
38	Oranges, California, average grade, Chicago.	.38	68.8	74.3	74.1	92.4	89.7	90.0	107.2	88.0	85.3	107.8	129.3	80.7	90.7
	Hay:														
[3]39.1	Alfalfa, No. 2, leafy or better, f. o. b. Kansas City.	.20	150.3	139.9	143.4	147.3	147.1	146.3	141.1	136.9	142.3	152.5	163.9	160.0	147.6
40	Clover, No. 1, Chicago	.11	108.9	106.7	105.1	103.3	102.9	102.9	102.9	102.9	104.6	117.1	122.6	122.6	108.5
41	Timothy, No. 1, Chicago	.09	105.9	103.8	102.2	100.5	100.1	100.1	100.1	100.1	101.8	113.9	119.2	119.2	105.6
	Milk, fluid:														
43	Chicago	.57	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
44	New York	1.71	119.9	119.9	119.9	120.2	121.5	132.5	152.8	157.9	157.9	173.1	174.2	174.2	144.1
45	San Francisco	.13	115.0	115.0	115.0	115.0	115.0	124.6	149.3	154.6	154.6	154.6	154.6	154.6	135.4
[3]46.1	Peanuts, Spanish shelled No. 1, f. o. b. southeastern shipping point.	.11	181.0	181.0	181.0	181.0	181.0	181.0	181.0	181.0	181.7	185.7	193.7	192.8	183.5
	Seeds:														
47	Alfalfa, Kansas City	.04	261.0	261.0	261.0	261.0	261.0	261.0	261.0	267.1	267.1	267.1	273.1	273.1	264.7
48	Clover, Chicago	.09	131.8	131.8	131.8	131.8	131.8	(2)	(2)	(2)	131.8	131.8	173.7	175.8	(2)
49	Flax, Minneapolis	.20	133.2	133.2	133.2	133.2	138.5	143.9	161.9	169.7	171.8	222.8	311.4	311.4	181.5
50	Timothy, Chicago	.01	87.1	89.1	95.2	95.2	95.2	(2)	(2)	(2)	111.4	111.4	116.3	117.9	(2)

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Unit	AVERAGE PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	FARM PRODUCTS, f. o. b. listed market:—Continued														
	Other farm products—Continued														
51	Tobacco, leaf, warehouse sales, average last 12 months.	100 pounds	$42.723	$42.444	$42.487	$42.466	$42.396	$42.395	$42.389	$43.741	$44.808	$46.348	$46.078	$45.400	$43.640
	Vegetables:														
52	Beans, dried, New York	do	6.895	6.895	6.895	6.895	6.914	6.970	6.970	(2)	(2)	(2)	13.750	13.750	(2)
[3] 53.1	Onions, Chicago	50 pounds	2.518	2.598	2.695	2.893	2.569	2.088	1.355	1.259	1.200	1.075	1.156	1.220	1.885
	Potatoes:														
	Sweet:														
[3] 54-1	New York	Bushel	3.800	3.940	3.980	4.160	4.280	4.520	5.650	4.810	2.530	2.850	2.940	2.769	3.852
[3] 54-2	Chicago	do	3.510	3.550	3.740	3.960	4.270	4.930	4.940	3.280	2.610	2.800	3.080	3.428	3.626
	White, U. S. No. 1:														
55	Boston	100 pounds	2.955	3.006	3.450	3.525	4.080	3.469	3.888	3.530	3.188	2.535	2.131	2.338	3.182
56	Chicago	do	3.150	2.997	3.225	3.335	3.751	3.138	3.185	3.044	2.688	2.460	2.656	3.225	3.071
57	New York	do	3.060	3.000	3.844	4.115	3.894	3.344	3.465	3.012	3.188	2.515	2.312	2.495	3.182
58	Portland, Oreg	do	3.340	3.306	3.900	3.890	3.710	3.338	2.925	2.738	3.069	2.675	2.681	2.790	3.190
	Wool, Boston:														
	Domestic, bright fleece, grease basis:														
59.1	Fine clothing	Pound	.315	.315	.305	.305	.305	.305	.305	.305	.305	.312	.320	.350	.312
60.1	Fine combing delaine	do	.420	.420	.400	.400	.400	.400	.405	.400	.400	.418	.435	.460	.413
61.1	Halfblood, combing	do	.440	.440	.425	.425	.425	.425	.425	.425	.425	.440	.455	.490	.436
62.1	3/8 blood, combing	do	.495	.495	.465	.465	.465	.465	.465	.465	.465	.478	.490	.535	.478
	Domestic, territory, staple scoured basis:														
[3] 63.1	Fine combing	do	1.035	1.035	.995	.995	.995	.995	.995	.995	.995	1.030	1.098	1.145	1.025
[3] 64.1	Halfblood, combing	do	1.010	1.010	.970	.970	.970	.970	.970	.970	.970	1.002	1.065	1.095	.997
	Foreign, in bond:														
[3] 65.1	Buenos Aires 5's, 40's, grease basis.	do	.235	.235	.235	.211	.210	.210	.210	.210	.210	.215	.224	.240	.220
[3] 66.2	Australian combing, 64's, scoured basis.	do	.700	.700	.700	.692	.690	.690	.690	.690	.690	.705	.743	.815	.709
[3] 67.1	Montevideo 2's, 50's, grease basis	do	.410	.411	.415	.415	.415	.421	.426	.420	.428	.438	.446	.470	.426
	FOODS:														
	Dairy products:														
	Butter, creamery:														
71	92 score, f. o. b. Chicago	do	.454	.460	.460	.460	.460	.510	.694	.698	.757	.837	.801	.793	.620

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Relative importance, year 1946	INDEXES (1926=100) OF PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	FARM PRODUCTS, f. o. b. listed market—Continued														
	Other farm products—Continued														
51	Tobacco, leaf, warehouse sales, average last 12 months.	1.11	214.0	212.6	212.9	212.7	212.4	212.4	212.4	219.1	224.5	232.2	230.9	227.4	218.6
	Vegetables:														
52	Beans, dried, New York	.15	126.7	126.7	126.7	126.7	127.0	128.1	128.1	(2)	(2)	(2)	252.7	252.7	(2)
[3] 53.1	Onions, Chicago	.06	205.8	212.3	220.3	236.4	209.9	170.6	110.7	102.9	98.1	87.9	94.5	99.7	154.1
	Potatoes:														
	Sweet:														
[3] 54-1	New York	.09	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
[3] 54-2	Chicago	.07	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
	White, U. S. No. 1:														
55	Boston	.24	83.8	85.3	97.9	100.0	115.7	98.4	110.3	100.1	90.4	71.9	60.5	66.3	90.3
56	Chicago	.16	104.5	99.5	107.0	110.7	124.5	104.1	105.7	101.0	89.2	81.6	88.2	107.0	101.9
57	New York	.07	81.0	79.4	101.8	109.0	103.1	88.5	91.8	79.8	84.4	66.6	61.2	66.1	84.3
58	Portland, Oreg	.19	116.3	115.1	135.7	135.4	129.1	116.2	101.8	95.3	106.8	93.1	93.3	97.1	111.0
	Wool, Boston:														
	Domestic, bright fleece, grease basis:														
59.1	Fine clothing	.02	78.6	78.6	76.1	76.1	76.1	76.1	76.1	76.1	76.1	78.0	79.8	87.3	77.8
60.1	Fine combing delaine	.01	90.5	90.5	86.2	86.2	86.2	86.2	87.3	86.2	86.2	90.0	93.8	99.1	89.0
61.1	Halfblood, combing	.01	95.0	95.0	91.8	91.8	91.8	91.8	91.8	91.8	91.8	95.0	98.2	105.8	94.2
62.1	⅜ blood, combing	.02	107.6	107.6	101.1	101.1	101.1	101.1	101.1	101.1	101.1	103.8	106.5	116.3	104.0
	Domestic, territory, staple scoured basis:														
[3] 63.1	Fine combing	.10	89.9	89.9	86.4	86.4	86.4	86.4	86.4	86.4	86.4	89.4	95.3	99.4	89.0
[3] 64.1	Halfblood combing	.10	96.5	96.5	92.7	92.7	92.7	92.7	92.7	92.7	92.7	95.8	101.7	104.6	95.3
	Foreign, in bond:														
[3] 65.1	Buenos Aires 5's, 40's, grease basis.	.03	97.0	97.0	97.0	87.2	86.7	86.7	86.7	86.7	86.7	88.8	92.5	99.1	91.0
[3] 66.2	Australian, combing, 64's, scoured basis.	.02	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
[3] 67.1	Montevideo, 2's, 50's, grease basis.	.02	115.1	115.4	116.5	116.5	116.5	118.2	119.5	117.9	120.0	122.8	125.2	131.9	119.6
	FOODS	20.49	107.3	107.6	109.4	110.6	111.5	112.9	140.2	149.0	131.9	157.9	165.4	160.1	130.7
	Dairy products	2.60	115.0	115.6	116.1	116.3	117.0	127.3	156.9	161.6	169.1	165.5	162.9	180.0	145.6
	Butter, creamery:														
71	92 score, f. o. b. Chicago	.84	105.8	107.3	107.3	107.3	107.3	118.9	161.8	162.8	176.5	195.2	186.8	184.9	144.6

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Unit	AVERAGE PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	FOODS—Continued														
	Dairy products—Continued														
	Butter, creamery—Continued														
77	Extra, f. o. b. New York	Pound	$0.458	$0.468	$0.468	$0.468	$0.468	$0.518	$0.698	$0.706	$0.760	$0.849	$0.814	$0.820	$0.628
84	Extra, f. o. b. San Francisco	do	.475	.475	.475	.475	.475	.525	.712	.725	.775	.868	.826	.792	.636
	Cheese, whole milk, f. o. b. listed market:														
86	Chicago	do	.252	.260	.284	.284	.284	.310	.386	.435	.451	.536	.509	.432	.370
87	New York	do	.267	.286	.286	.285	.285	.329	.375	.460	.460	.553	.534	.465	.383
88.1	San Francisco	do	.272	.291	.291	.291	.309	.334	.413	.445	.462	.529	.544	.473	.388
	Milk:														
89	Condensed, f. o. b. New York	Case	6.250	6.250	6.250	6.250	6.250	6.250	7.201	7.600	7.688	8.130	8.250	8.250	7.044
90	Evaporated, f. o. b. New York	do	4.200	4.200	4.200	4.200	4.325	4.625	5.255	5.450	5.481	5.875	5.950	5.950	4.969
	Fluid. (See Farm products, code Nos. 43, 44, and 45.)														
91	Powdered, skimmed, f. o. b. destination.	Pound	.147	.147	.147	.147	.147	.147	.147	.158	.162	.162	.159	.152	.152
	Cereal products:														
	Bread, loaf, delivered, listed city (baked weight):														
[3] 92.1	Chicago	do	.068	.068	.068	.084	.087	.087	.098	.107	.107	.107	.115	.115	.093
[3] 93.2	Cincinnati	do	.080	.080	.080	.080	.090	.095	.095	.105	.105	.105	.105	.105	.094
[3] 94.2	New Orleans	do	(2)	(2)	(2)	(2)	.085	.085	.097	.107	.107	.107	.107	.107	(2)
[3] 95.1	New York	do	.086	.086	.086	.093	.093	.093	.107	.114	.114	.114	.114	.114	.101
[3] 96.2	San Francisco	do	.080	.080	.080	.080	.083	.089	.100	.111	.111	.111	.111	.111	.096
	Cereal breakfast foods:														
[3] 97.2	Corn flakes, 24 6-ounce packages, f. o. b. factory, freight prepaid.	Case	(2)	(2)	(2)	(2)	1.052	1.222	1.392	1.392	1.392	1.392	1.392	1.392	(2)
[3] 98.1	Rolled oats, delivered	do	1.998	1.980	1.980	1.988	1.988	1.988	1.988	1.980	1.988	1.988	1.988	1.988	1.986
99	Wheat, f. o. b. factory, freight prepaid.	do	3.406	3.406	3.406	3.406	3.406	3.406	3.621	3.718	3.748	3.835	3.944	3.944	3.610
100.1	Soda crackers, delivered, New York	Pound	.138	.138	.138	.138	.138	.138	.138	.145	.148	.153	.175	.175	.147
101	Cookies, sugar, delivered	do	.166	.166	.166	.166	.166	.166	.166	.180	.185	.190	.212	.212	.179
	Flour, f. o. b. listed market:														
102.1	Rye, white, Minneapolis	100 pounds	4.824	5.381	5.712	6.665	7.150	(2)	(2)	6.117	6.119	6.465	6.860	7.494	(2)
	Wheat:														
[4] 103.1	Standard patents, Buffalo	do	3.700	3.700	(2)	(2)	(2)	(2)	(2)	(2)	5.100	5.238	5.830	5.988	(2)
[4] 104.1	First clears, Buffalo	do	3.650	3.688	(2)	(2)	(2)	(2)	(2)	(2)	5.233	5.238	5.560	5.662	(2)

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Relative importance, year 1946	INDEXES (1926=100) OF PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	FOODS—Continued														
	Dairy products—Continued														
	Butter, creamery—Continued														
77	Extra, f. o. b. New York	1.12	103.2	105.5	105.5	105.5	105.5	116.7	157.5	159.2	171.4	191.5	183.6	184.9	141.6
84	Extra, f. o. b. San Francisco	.07	109.0	109.0	109.0	109.0	109.0	120.5	163.4	166.4	177.8	199.2	189.6	181.7	146.0
	Cheese, whole milk, f. o. b. listed market:														
86	Chicago	.15	116.1	119.9	131.1	131.1	131.1	142.6	177.6	200.5	207.9	246.8	234.7	199.3	170.3
87	New York	.13	115.8	124.0	123.9	123.7	123.7	142.7	162.8	199.6	199.6	239.9	231.6	201.7	166.0
88.1	San Francisco	.03	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
	Milk:														
89	Condensed, f. o. b. New York	.12	106.7	106.7	106.7	106.7	106.7	106.7	122.9	129.8	131.2	138.8	140.9	140.9	120.3
90	Evaporated, f. o. b. New York	.28	105.5	105.5	105.5	105.5	108.6	116.2	132.0	136.9	137.7	147.6	149.4	149.4	124.8
	Fluid. (See Farm products, code Nos. 43, 44, and 45.)														
91	Powdered, skimmed, f. o. b. destination.	.06	117.5	117.5	117.5	117.5	117.5	117.5	117.5	126.0	128.9	128.9	127.0	121.3	121.1
	Cereal products	**3.48**	**95.6**	**96.1**	**96.2**	**99.4**	**100.3**	**101.7**	**124.9**	**124.7**	**127.4**	**126.5**	**136.1**	**139.5**	**114.5**
	Bread, loaf, delivered, listed city (baked weight):														
[3]92.1	Chicago	.32	77.0	77.0	77.0	96.2	99.0	99.0	111.4	122.0	122.0	122.0	131.1	131.1	105.7
[3]93.2	Cincinnati	.04	96.4	96.4	96.4	96.4	108.5	114.5	114.5	126.6	126.6	126.6	126.6	126.6	113.0
[3]94.2	New Orleans	.05	(2)	(2)	(2)	(2)	105.4	105.4	120.7	132.8	132.8	132.8	132.8	132.8	(2)
[3]95.1	New York	.71	103.3	103.3	103.3	111.8	111.8	111.8	128.1	136.0	136.0	136.0	136.0	136.0	121.3
[3]96.2	San Francisco	.07	89.8	89.8	89.8	89.8	92.7	99.8	112.3	124.7	124.7	124.7	124.7	124.7	107.4
	Cereal breakfast foods:														
[3]97.2	Corn flakes, 24 6-ounce packages, f. o. b. factory, freight prepaid.	.08	(2)	(2)	(2)	(2)	87.2	101.3	115.4	115.4	115.4	115.4	115.4	115.4	(2)
[3]98.1	Rolled oats, delivered	.08	209.5	208.7	208.7	209.5	209.5	209.5	209.5	208.7	209.5	209.5	209.5	209.5	209.3
99	Wheat, f. o. b. factory, freight prepaid.	.11	100.4	100.4	100.4	100.4	100.4	100.4	106.8	110.5	110.5	113.1	116.3	116.3	106.5
100.1	Soda crackers, delivered, New York	.09	98.6	98.6	98.6	98.6	98.6	98.6	98.6	103.6	105.2	109.1	124.9	124.9	104.9
101	Cookies, sugar, delivered	.17	113.5	113.5	113.5	113.5	113.5	113.5	113.5	123.0	126.2	129.9	145.1	145.1	122.1
	Flour, f. o. b. listed market:														
102.1	Rye, white, Minneapolis	.03	167.3	186.7	198.2	231.2	248.0	(2)	(2)	212.2	212.3	224.3	238.0	260.0	(2)
	Wheat:														
[4]103.1	Standard patents, Buffalo	.34	83.5	83.5	(2)	(2)	(2)	(2)	(2)	(2)	115.2	118.3	131.6	135.2	(2)
[4]104.1	First clears, Buffalo	.11	87.0	87.9	(2)	(2)	(2)	(2)	(2)	(2)	124.8	124.9	132.6	135.0	(2)

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Unit	AVERAGE PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	FOODS—Continued														
	Cereal products—Continued														
	Flour, f. o. b. listed market—Continued														
	Wheat—Continued														
[4] 105.1	Short patents, Kansas City	100 pounds	$3.400	$3.400	(2)	(2)	(2)	(2)	(2)	(2)	$4.790	$4.905	$5.460	$5.738	(2)
[4] 106.1	Straights, Kansas City	do	3.295	3.295	(2)	(2)	(2)	(2)	(2)	(2)	4.690	4.786	5.295	5.561	(2)
[4] 107.1	Standard patents, Minneapolis	do	3.340	3.340	(2)	(2)	(2)	(2)	(2)	(2)	4.720	4.871	5.585	5.925	(2)
[4] 108.2	First patents, Minneapolis	do	3.440	3.440	(2)	(2)	(2)	(2)	(2)	(2)	4.820	4.971	5.685	6.025	(2)
[4] 109.1	Patents, Portland, Oreg	do	3.960	3.960	(2)	(2)	(2)	(2)	(2)	(2)	5.594	5.683	6.088	6.356	(2)
[4] 110.1	Short patents, St. Louis	do	4.200	4.200	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	5.915	6.294	(2)
[4] 111.1	Straights, St. Louis	do	4.075	4.075	(2)	(2)	(2)	(2)	(2)	(2)	4.870	4.945	5.650	6.112	(2)
113	Hominy grits, white, f. o. b., mill	do	3.350	3.350	$3.350	$3.350	$3.350	$3.850	(2)	(2)	(2)	(2)	4.902	4.648	(2)
[3] 114.1	Macaroni, f. o. b. Chicago	Box	1.372	1.372	1.372	1.372	1.372	1.372	$1.372	$1.882	1.882	1.882	2.009	2.009	$1.605
	Meal, corn:														
115	White, f. o. b. mill	100 pounds	3.350	3.350	3.350	3.350	3.350	3.850	(2)	(2)	(2)	(2)	4.902	4.648	(2)
116.1	Yellow, f. o. b. New York	do	3.440	3.440	3.440	3.440	3.565	3.946	5.695	5.085	5.085	5.109	4.685	4.330	4.284
117.1	Pretzels, sticks, bulk, delivered	Pound	.148	.148	.148	.148	.148	.148	.148	.148	.148	.148	.148	.148	.148
	Rice, head, clean, f. o. b. New Orleans:														
118	Blue Rose, medium to good	do	.066	.066	.066	.066	.066	.066	.066	.066	.066	.066	.078	.089	.070
119	Edith, medium to choice	do	.072	.072	.072	.072	.072	.072	.072	.072	.072	.072	.089	.106	.076
	Fruits and vegetables:														
	Fruits:														
	Canned:														
[3] 120.1	Apples, No. 10, f. o. b. cannery	Dozen	7.695	7.860	7.860	7.860	7.860	7.860	(2)	(2)	(2)	(2)	(2)	(2)	(2)
[3] 121.1	Apricots, No. 2½, f. o. b. cannery	do	2.590	2.590	2.590	2.590	2.590	2.590	2.590	(2)	(2)	(2)	(2)	(2)	(2)
[3] 122.1	Cherries, No. 2½, f. o. b. cannery	do	3.470	3.470	3.470	3.470	3.470	3.470	3.470	(2)	(2)	(2)	(2)	(2)	(2)
[3] 123.1	Peaches, No. 2½, f. o. b. cannery	do	2.340	2.340	2.340	2.340	2.340	2.340	2.340	(2)	(2)	(2)	(2)	(2)	(2)
[3] 124.1	Pears, No. 2½, f. o. b. cannery	do	2.890	2.890	2.890	2.890	2.890	2.890	2.890	(2)	(2)	(2)	(2)	(2)	(2)
[3] 125.2	Pineapples, No. 2½, f. o. b. Honolulu.	do	2.150	2.150	2.150	2.150	2.150	2.150	2.150	(2)	2.300	2.500	(2)	(2)	(2)
	Dried:														
126	Apples, f. o. b. New York	Pound	.425	.425	.425	.405	.394	.392	.392	.392	.395	.380	.340	.331	.369
127	Apricots, f. o. b. packer	do	.301	.301	.301	.303	.304	.304	.304	(2)	(2)	(2)	(2)	.345	(2)
[3] 128.1	Currants, cleaned, 15-ounce carton, f. o. b. packer.	Each	.174	.174	.174	.175	.176	.176	.176	(2)	(2)	.250	(2)	(2)	(2)
129	Peaches, f. o. b. packer	Pound	.258	.258	.258	.259	.260	.260	.260	(2)	(2)	.199	.198	.196	(2)

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Relative importance, year 1946	INDEXES (1926=100) OF PRIMARY MARKET PRCIES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	FOODS—Continued														
	Cereal products—Continued														
	Flour, f. o. b. listed morket—Continued														
	Wheat—Continued														
[4] 105.1	Short patents, Kansas City	0.23	81.3	81.3	(2)	(2)	(2)	(2)	(2)	(2)	114.6	117.3	130.6	137.3	(2)
[4] 106.1	Straights, Kansas City	.08	88.7	88.7	(2)	(2)	(2)	(2)	(2)	(2)	126.2	128.8	142.5	149.7	(2)
[4] 107.1	Standard patents, Minneapolis	.32	77.6	77.6	(2)	(2)	(2)	(2)	(2)	(2)	109.7	113.2	129.7	137.6	(2)
[4] 108.2	First patents, Minneapolis	.10	77.5	77.5	(2)	(2)	(2)	(2)	(2)	(2)	108.6	112.0	128.1	135.8	(2)
[4] 109.1	Patents, Portland, Oreg	.06	97.2	97.2	(2)	(2)	(2)	(2)	(2)	(2)	137.3	139.5	119.5	156.0	(2)
[4] 110.1	Short patents, St. Louis	.09	105.1	105.1	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	147.9	157.4	(2)
[4] 111.1	Straights, St. Louis	.07	112.3	112.3	(2)	(2)	(2)	(2)	(2)	(2)	134.2	136.3	155.7	168.5	(2)
113	Hominy grits, white, f. o. b., mill	.01	215.0	215.0	215.0	215.0	215.0	247.1	(2)	(2)	(2)	(2)	314.7	298.4	(2)
[3] 114.1	Macaroni, f. o. b. Chicago	.06	95.7	95.7	95.7	95.7	95.7	95.7	95.7	131.2	131.2	131.2	140.1	140.1	112.0
	Meal, corn:														
115	White, f. o. b. mill	.05	215.0	215.0	215.0	215.0	215.0	247.1	(2)	(2)	(2)	(2)	314.7	298.4	(2)
116.1	Yellow, f. o. b. New York	.06	128.7	128.7	128.7	128.7	133.4	147.7	213.1	190.3	190.3	191.2	175.3	162.0	160.3
117.1	Pretzels, sticks, bulk, delivered	.02	160.5	160.5	160.5	160.5	160.5	160.5	160.5	160.5	160.5	160.5	160.5	160.5	160.5
	Rice, head, clean, f. o. b. New Orleans:														
118	Blue Rose, medium to good	.10	108.0	108.0	108.0	108.0	108.0	108.0	108.0	108.0	108.0	108.0	126.3	144.5	112 8
119	Edith, medium to choice	.03	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	121.1	144.6	103.8
	Fruits and vegetables	1.39	**125.7**	**127.5**	**133.1**	**138.2**	**140.6**	**136.1**	**130.0**	**120.4**	**115.5**	**122.5**	**139.5**	**134.5**	**129.9**
	Fruits:														
	Canned:														
[3] 120.1	Apples, No. 10, f. o. b. cannery	.04	244.9	250.1	250.1	250.1	250.1	250.1	(2)	(2)	(2)	(2)	(2)	(2)	(2)
[3] 121.1	Apricots, No. 2½, f. o. b. cannery	.02	112.4	112.4	112.4	112.4	112.4	112.4	112.4	(2)	(2)	(2)	(2)	(2)	(2)
[3] 122.1	Cherries, No. 2½, f. o. b. cannery	.02	98.8	98.8	98.8	98.8	98.8	98.8	98.8	(2)	(2)	(2)	(2)	(2)	(2)
[3] 123.1	Peaches, No. 2½, f. o. b. cannery	.06	107.3	107.3	107.3	107.3	107.3	107.3	107.3	(2)	(2)	(2)	(2)	(2)	(2)
[3] 124.1	Pears, No. 2½, f. o. b. cannery	.03	106.8	106.8	106.8	106.8	106.8	106.8	106.8	(2)	(2)	(2)	(2)	(2)	(2)
[3] 125.2	Pineapples, No. 2½, f. o. b. Honolulu.	.08	107.0	107.0	107.0	107.0	107.0	107.0	107.0	(2)	114.5	124.4	(2)	(2)	(2)
	Dried:														
126	Apples, f. o. b. New York	.02	359.9	359.9	359.9	342.9	333.4	332.3	332.3	332.3	334.5	321.8	287.9	279.9	312.2
127	Apricots, f. o. b. packer	.03	133.5	133.5	133.5	134.4	134.7	134.7	134.7	(2)	(2)	(2)	(2)	152.9	(2)
[3] 128.1	Currants, cleaned, 15-ounce carton, f. o. b. packer.	(6)	258.1	258.1	258.1	259.4	260.6	260.6	260.6	(2)	(2)	369.8	(2)	(2)	(2)
129	Peaches, f. o. b. packer	.02	190.9	190.9	190.9	192.3	192.7	192.7	192.7	(2)	(2)	147.5	146.4	145.4	(2)

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Unit	AVERAGE PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	FOODS—Continued														
	Fruits and vegetables—Continued														
	Fruits—Continued														
	Dried—Continued														
130	Prunes, California, 50's to 60's, f. o. b. packer.	Pound	$0.098	$0.098	$0.098	$0.098	$0.099	$0.099	$0.099	(2)	(2)	$0.166	$0.169	$0.169	(2)
131	Raisins, seedless, f. o. b. packer	do	.079	.079	.079	.080	.080	.080	.080	(2)	(2)	.203	.212	.210	(2)
	Fresh:														
	Apples. (See Farm products, code Nos. 34, 35, and 36.1.)														
132.2	Bananas, Central American, f. o. b. New York.	100 pounds	4.500	4.500	4.500	4.500	4.500	4.500	4.500	$4.500	$4.500	4.620	5.475	5.600	$4.689
	Lemons. (See Farm products, code No. 37.)														
	Oranges. (See Farm products, code No. 38.)														
	Vegetables:														
	Canned:														
133.1	Asparagus, large, No. 2, f. o. b. cannery.	Dozen	3.640	3.640	3.640	3.640	3.640	3.640	3.640	(2)	(2)	(2)	(2)	(2)	(2)
[3] 134.2	Baked beans, with tomato sauce, 16 ounce, f. o. b. cannery.	do	1.300	1.300	1.300	1.300	1.300	1.300	1.300	1.300	1.300	1.300	1.800	1.800	1.376
[3] 135.1	Corn, golden whole kernel, No. 2, f. o. b. cannery.	do	1.389	1.389	1.389	1.389	1.389	1.389	1.389	1.389	1.389	1.625	1.724	1.724	1.468
136.1	Peas, No. 2, f. o. b. cannery	do	1.261	1.261	1.261	1.261	1.261	1.261	1.261	1.261	1.608	1.724	1.724	1.724	1.409
137	Spinach, No. 2½, f. o. b. cannery	do	1.590	1.590	1.590	1.590	1.590	1.590	1.590	(2)	(2)	(2)	(2)	(2)	(2)
138	Stringless beans, No. 2, f. o. b. cannery.	do	(2)	(2)	(2)	1.095	1.270	1.445	1.445	1.242	1.175	1.175	1.300	1.300	(2)
139.1	Tomatoes, No. 2, delivered New York.	do	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	2.410	2.410	(2)
	Dried and fresh:														
	Beans. (See Farm products, code No. 52.)														
	Onions. (See Farm products, code No. 53.1.)														
	Potatoes. (See Farm products, code Nos. 54-1 through 58.)														

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Relative importance, year 1946	INDEXES (1926=100) OF PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	FOODS—Continued														
	Fruits and vegetables—Continued														
	Fruits—Continued														
	Dried—Continued														
130	Prunes, California, 50's to 60's, f. o. b. packer.	0.07	131.2	131.2	131.2	132.4	133.0	133.0	133.0	(2)	(2)	222.7	227.2	227.2	(2)
131	Raisins, seedless, f. o. b. packer	.07	121.4	121.4	121.4	122.8	123.3	123.3	123.3	(2)	(2)	312.8	327.0	323.1	(2)
	Fresh:														
	Apples. (See Farm products, code Nos. 34, 35, and 36.1.)														
132.2	Bananas, Central American, f. o. b. New York.	.56	270.3	270.3	270.3	270.3	270.3	270.3	270.3	270.3	270.3	277.5	328.9	336.4	281.7
	Lemons. (See Farm products, code No. 37.)														
	Oranges. (See Farm products, code No. 38.)														
	Vegetables:														
	Canned:														
133.1	Asparagus, large, No. 2, f. o. b. cannery.	.03	135.9	135.9	135.9	135.9	135.9	135.9	135.9	(2)	(2)	(2)	(2)	(2)	(2)
[3] 134.2	Baked beans, with tomato sauce, 16-ounce, f. o. b. cannery.	.06	100.9	100.9	100.9	100.9	100.9	100.9	100.9	100.9	100.9	100.9	139.6	139.6	106.8
[3] 135.1	Corn, golden whole kernel, No. 2, f. o. b. cannery.	.05	110.6	110.6	110.6	110.6	110.6	110.6	110.6	110.6	110.6	129.5	137.3	137.3	117.0
136.1	Peas, No. 2, f. o. b. cannery	.05	88.9	88.9	88.9	88.9	88.9	88.9	88.9	88.9	113.4	121.6	121.6	121.6	99.4
137	Spinach, No. 2½, f. o. b. cannery.	.02	111.3	111.3	111.3	111.3	111.3	111.3	111.3	(2)	(2)	(2)	(2)	(2)	(2)
138	Stringless beans, No. 2, f. o. b. cannery.	.05	(2)	(2)	(2)	122.6	142.2	161.8	161.8	139.1	131.6	131.6	145.6	145.6	(2)
139.1	Tomatoes, No. 2, delivered New York.	.11	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(1)	(1)	(2)
	Dried and fresh:														
	Beans. (See Farm products, code No. 52.).														
	Onions. (See Farm products, code No. 53.1.)														
	Potatoes. (See Farm products, code Nos. 54-1 through 58.)														

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Unit	AVERAGE PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	FOODS—Continued														
	Meat, f.o.b. listed city:														
	Beef:														
	Fresh, carcass, good grade, steers:														
141	Chicago	Pound	$0.200	$0.200	$0.202	$0.203	$0.203	$0.203	$0.319	$0.382	$0.235	$0.380	$0.409	$0.415	$0.279
142.1	New York	do	.210	.210	.212	.213	.213	.213	.379	.402	.276	.402	.405	.404	.301
143	Lamb, fresh, Chicago	do	.238	.238	.242	.244	.244	.244	.348	.426	.306	.415	.390	.378	.310
144	Mutton, fresh, commercial grade, New York.	do	(2)	(2)	.129	.130	.130	.130	.185	.112	.156	.220	.139	.121	(2)
	Pork:														
	Cured:														
[3] 145.1	Bacon, square cut, smoked, No. 1 grade, Chicago.	do	.232	.232	.240	.242	.242	.242	.371	.459	.265	.396	.527	.522	.338
146	Bellies, clear, Chicago	do	.150	.150	.156	.158	.158	.158	.263	.329	.178	.313	.399	.300	.227
148	Ham, smoked, Chicago	do	.258	.258	.263	.265	.265	.265	.410	.503	.265	.265	(2)	(2)	(2)
[3] 150.1	Fresh pork loins, under 12 pounds, Chicago.	do	.235	.235	.241	.242	.242	.242	.378	.482	.295	.467	.476	.392	.330
151	Veal, carcass, good grade, Chicago	do	.192	.192	.194	.195	.195	.195	.264	.312	.195	.293	.320	.325	.240
	Poultry, dressed:														
152	Chicago		.325	.325	.330	.338	.343	.334	.363	.342	.388	.404	.332	.356	.349
153.1	New York	do	.349	.351	.356	.362	.367	.358	.390	.354	.405	.410	.348	.369	.369
	Other foods:														
153-1	Baking powder, four 10-pound cans to case, delivered.	do	.088	.038	.088	.088	.088	.088	.088	.088	.091	.094	.094	.094	.090
	Beverages:														
154	Ginger ale delivered	Case	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
155	Grape juice, f. o. b. plant	do	4.950	4.950	4.950	4.950	4.950	4.950	4.950	4.950	4.950	4.950	5.250	5.250	5.004
156.1	Plain soda, f. o. b. factory	do	.750	.750	.750	.750	.750	.750	.840	.750	.750	.750	.900	.900	.784
	Cocoa:														
157	Beans, Accra, f. o. b. New York	Pound	.089	.089	.089	.089	.089	.089	.089	.089	.089	.140	.191	.245	.116
158	Powdered, delivered	do	.170	.170	.170	.170	.170	.170	.170	.170	.170	.204	.213	.213	.180
	Coffee, Brazilian grades, f. o. b. New York:														
159	Rio No. 7	do	.094	.094	.094	.094	.094	.094	.094	.094	.094	.094	.094	(2)	[10] .094
160	Santos No. 4	do	.136	.136	.136	.136	.136	.136	.206	.221	.221	.241	.263	.264	.187
	Eggs. (See Farm products, code Nos. 27.2 through 33.)														

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Relative importance, year 1946	INDEXES (1926=100) OF PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	FOODS—Continued														
	Meats, f. o. b. listed city	7.97	108.1	108.1	109.6	110.3	110.5	110.1	189.9	198.1	131.3	191.4	202.8	188.2	145.9
	Beef:														
	Fresh, carcass, good grade steers:														
141	Chicago	.89	121.8	121.8	123.1	123.6	123.6	123.6	194.0	232.6	143.1	231.4	249.0	252.7	169.9
142.1	New York	1.94	125.1	125.1	126.5	126.9	126.9	126.9	225.9	239.9	164.6	239.9	241.4	241.1	179.4
143	Lamb, fresh, Chicago	.31	91.2	91.2	92.6	93.1	93.1	93.1	133.1	162.9	117.0	158.8	149.1	144.3	118.3
144	Mutton, fresh, commercial grade, New York.	.04	(2)	(2)	89.3	90.2	90.2	90.2	128.2	78.0	108.3	152.2	96.3	83.9	(2)
	Pork:														
	Cured:														
[3] 145.1	Bacon, square cut, smoked, No. 1 grade, Chicago.	.37	78.1	78.1	80.6	81.4	81.4	81.4	124.5	154.0	86.1	132.9	176.9	175.3	113.3
146	Bellies, clear, Chicago	.35	103.9	103.9	107.8	109.1	109.1	109.1	182.0	227.8	123.0	216.8	276.3	207.8	157.0
148	Ham, smoked, Chicago	.37	83.7	83.7	85.5	86.1	86.1	86.1	133.4	163.5	86.1	86.1	(2)	(2)	(2)
[3] 150.1	Fresh pork loins, under 12 pounds, Chicago.	2.64	91.1	91.1	93.2	94.0	94.0	94.0	146.6	186.8	114.3	181.0	184.3	152.1	127.7
151	Veal, carcass, good grade, Chicago	.32	102.9	102.9	103.9	104.2	104.2	104.2	141.0	166.7	104.2	156.6	171.0	173.7	128.3
	Poultry, dressed:														
152	Chicago	.23	104.1	104.2	105.7	108.4	109.9	107.0	116.3	109.7	124.2	129.4	106.5	114.1	111.9
153.1	New York	.51	97.5	98.2	99.7	101.3	102.6	100.1	108.9	99.1	113.2	114.6	97.2	103.1	103.1
	Other foods	4.85	98.2	98.5	97.7	97.7	98.1	98.1	109.4	114.9	115.5	136.2	141.4	139.0	111.9
153-1	Baking powder, four 10-pound cans to case, delivered.	.04	91.7	91.7	91.7	91.7	91.7	91.7	91.7	91.7	94.4	97.1	97.1	97.1	93.2
	Beverages:														
154	Ginger ale delivered	.13	64.9	64.9	64.9	64.9	64.9	64.9	64.9	64.9	64.9	64.9	64.9	64.9	64.9
155	Grape juice, f. o. b. plant	.01	91.4	91.4	91.4	91.4	91.4	91.4	91.4	91.4	91.4	91.4	97.0	97.0	92.4
156.1	Plain soda, f. o. b. factory	.18	106.5	106.5	106.5	106.5	106.5	106.5	119.3	106.5	106.5	106.5	127.8	127.8	111.3
	Cocoa:														
157	Beans, Accra, f. o. b. New York	.24	77.5	77.5	77.5	77.5	77.5	77.5	77.5	77.5	77.5	122.2	166.4	213.2	101.2
158	Powdered, delivered	.03	86.3	86.3	86.3	86.3	86.3	86.3	86.3	86.3	86.3	103.9	108.3	108.3	91.7
	Coffee, Brazilian grades, f. o. b. New York:														
159	Rio No. 7	.05	51.5	51.5	51.5	51.5	51.5	51.5	51.5	51.5	51.5	51.5	51.5	(2)	[10] 51.5
160	Santos No. 4	.36	61.2	61.2	61.2	61.2	61.2	61.2	92.6	98.9	99.2	108.0	117.8	118.2	83.9
	Eggs. (See Farm products, code Nos. 27.2 through 33.)														

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Unit	AVERAGE PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	FOODS—Continued														
	Other foods—Continued														
	Fish:														
	Canned salmon, f. o. b. Seattle:														
162-1	Pink, No. 1, tall	Dozen	$1.970	$1.970	$1.970	$1.970	$1.970	$1.970	$2.167	$2.167	$2.438	$2.588	$3.189	$3.189	$2.304
163-1	Red, No. 1, tall	do	3.694	3.694	3.694	3.694	3.694	3.694	4.063	4.063	4.570	4.729	5.363	5.363	4.204
164	Cod, pickled, f. o. b. Gloucester, Mass.	100 pounds	13.500	13.500	13.500	13.500	13.500	13.500	13.500	13.500	13.500	13.900	14.500	14.800	13.736
165	Herring, pickled, f. o. b. New York	Pound	.120	.120	.120	.120	.120	.120	.120	.120	.120	.120	.120	.120	.120
[3] 166.1	Mackerel, salt Canadian f. o. b. New York.	200 pounds	30.000	30.000	30.000	36.000	36.000	(2)	(2)	(2)	(2)	36.000	39.000	42.000	(2)
167	Salmon, smoked, Alaska, f. o. b. New York.	Pound	.350	.350	.350	.350	.350	.350	.350	.350	.350	.350	.350	.350	.350
168	Glucose, 42° unmixed, f. o. b. New York	100 pounds	4.221	4.221	4.221	4.221	4.221	4.221	5.916	6.497	6.637	5.967	4.997	4.780	5.027
[3] 169.2	Jelly, grape, 24 1-pound jars, f. o. b. plant.	Case	(2)	(2)	(2)	(2)	(2)	4.018	4.018	4.018	4.018	4.018	4.557	4.557	(2)
[3] 170.2	Lard, prime, steam refined Chicago, 50-pound carton.	Pound	(2)	(2)	(2)	(2)	(2)	.148	.264	.332	.190	.353	.351	.246	(2)
171.1	Molasses, New Orleans, fancy, f. o. b. Atlantic seaboard.	Gallon	.787	.787	.787	.787	.787	.787	.787	.787	.787	.787	.787	.787	.787
172.1	Oleomargarine, vegetable fat, f. o. b. New York.	Pound	.204	.204	.204	.204	.204	.204	.212	.254	.210	.254	.305	.305	.231
173	Oleo oil, f. o. b. Chicago	do	.130	.130	.130	.130	.130	.130	.167	.262	.130	.210	.374	.348	.189
[3] 174.3	Peanut butter, 1-pound jar, f. o. b. Chicago.	Dozen	2.861	2.861	2.861	2.861	2.861	2.861	2.861	2.861	2.861	2.861	2.861	2.861	2.861
175	Pepper, black, f. o. b. New York	Pound	.100	.100	.125	.150	.150	.150	.392	.516	.705	.780	.820	.647	.391
176.1	Salt, American, common granulated, f. o. b. Chicago.	100 pounds	.890	.890	.890	.890	.890	.890	.910	.910	.910	.910	.910	.910	.900
[3] 177.1	Soup, condensed tomato, 10½-ounce can, f. o. b. cannery.	Dozen	(2)	(2)	.988	.988	.988	(2)	(2)	(2)	1.138	1.138	(2)	(2)	(2)
178.1	Starch, corn, delivered New York	Pound	.058	.058	.058	.058	.058	.058	.058	.058	.058	.058	.058	.070	.059
	Sugar:														
179	Granulated, f. o. b. New York	do	.054	.056	.059	.059	.059	.059	.060	.060	.067	.074	.076	.078	.064
180	Raw, 96°, duty paid, c. i. f. New York	do	.038	.041	.042	.042	.042	.042	.042	.042	.049	.056	.058	.059	.046
181	Tallow, edible, f. o. b. Chicago	do	.099	.099	.099	.099	.099	.099	.150	.174	.112	.180	.261	.238	.142
182-1	Tea, black, medium grade, ex-warehouse, New York.	do	.419	.419	.419	.419	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	Vegetable oil:														
183-1	Coconut, edible, 76°, drums, carlots, f. o. b. New York.	do	.128	.128	.128	.128	.128	.128	.128	.128	.128	.131	(2)	(2)	(2)

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Relative importance, year 1946	INDEXES (1926=100) OF PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	FOODS—Continued														
	Other foods—Continued														
	Fish:														
	Canned salmon, f. o. b. Seattle:														
162-1	Pink, No. 1, tall	0.06	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
163-1	Red, No. 1, tall	.06	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
164	Cod, pickled, f. o. b. Gloucester, Mass.	.01	186.0	186.0	186.0	186.0	186.0	186.0	186.0	186.0	186.0	191.5	199.8	203.9	189.2
165	Herring, pickled, f. o. b. New York	.01	90.8	90.8	90.8	90.8	90.8	90.8	90.8	90.8	90.8	90.8	90.8	90.8	90.8
[3] 166.1	Mackerel, salt, Canadian, f. o. b. New York.	(6)	135.3	135.3	135.3	162.3	162.3	(2)	(2)	(2)	(2)	162.3	175.9	189.4	(2)
167	Salmon, smoked, Alaska, f. o. b. New York.	.01	91.3	91.3	91.3	91.3	91.3	91.3	91.3	91.3	91.3	91.3	91.3	91.3	91.3
168	Glucose, 42° unmixed, f. o. b. New York	.08	122.7	122.7	122.7	122.7	122.7	122.7	172.0	188.9	193.0	173.5	145.3	139.0	146.2
[3] 169.2	Jelly, grape, 24 1-pound jars, f. o. b. plant	.05	(2)	(2)	(2)	(2)	(2)	56.9	56.9	56.9	56.9	56.9	64.6	64.6	(2)
[3] 170.2	Lard, prime, steam refined, Chicago, 50-pound carton.	.60	(2)	(2)	(2)	(2)	(2)	93.9	167.2	210.9	120.8	224.0	222.7	155.7	(2)
171.1	Molasses, New Orleans, fancy, f. o. b. Atlantic seaboard.	.05	135.4	135.4	135.4	135.4	135.4	135.4	135.4	135.4	135.4	135.4	135.4	135.4	135.4
172.1	Oleomargarine, vegetable fat, f. o. b. New York.	.07	93.6	93.6	93.6	93.6	93.6	93.6	97.2	116.5	96.3	116.7	139.9	139.9	105.9
173	Oleo oil, f. o. b. Chicago	.03	108.3	108.3	108.3	108.3	108.3	108.3	138.8	218.0	108.3	174.6	311.0	288.6	157.1
[3] 174.3	Peanut butter, 1-pound jar, f. o. b. Chicago.	.03	172.6	172.6	172.6	172.6	172.6	172.6	172.6	172.6	172.6	172.6	172.6	172.6	172.6
175	Pepper, black, f. o. b. New York	.02	39.1	39.1	48.8	58.6	58.6	58.6	153.4	201.6	275.5	304.8	320.4	252.8	152.9
176.1	Salt, American, common granulated, f. o. b. Chicago.	.13	134.2	134.2	134.2	134.2	134.2	134.2	137.2	137.2	137.2	137.2	137.2	137.2	135.7
[3] 177.1	Soup, condensed tomato, 10½-ounce can, f. o. b. cannery.	.11	(2)	(2)	112.2	112.2	112.2	(2)	(2)	(2)	129.2	129.2	(2)	(2)	(2)
178.1	Starch, corn, delivered New York	.02	65.9	65.9	65.9	65.9	65.9	65.9	65.9	65.9	65.9	65.9	65.9	79.1	67.1
	Sugar:														
179	Granulated, f. o. b. New York	1.13	98.4	102.9	107.3	107.3	107.3	107.7	109.1	109.1	122.6	135.9	139.4	143.1	116.1
180	Raw, 96°, duty paid, c. i. f. New York	.69	86.4	94.2	96.8	96.8	96.8	96.8	96.8	96.8	112.7	128.6	132.7	136.9	106.5
181	Tallow, edible, f. o. b. Chicago	.01	103.6	103.6	103.6	103.6	103.6	103.6	157.5	182.4	117.0	189.2	273.8	249.0	148.8
182-1	Tea, black, medium grade, ex-warehouse, New York.	.07	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
	Vegetable oil:														
183-1	Coconut, edible, 76°, drums, carlots, f. o. b. New York.	.05	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(2)	(2)	(2)

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Unit	AVERAGE PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	FOODS—Continued														
	Other foods—Continued														
	Vegetable oil—Continued														
184-1.1	Corn, refined edible, drums, less than carlots, f. o. b. New York.	Pound	$0.166	$0.166	$0.166	$0.166	$0.166	$0.166	$0.166	(2)	(2)	$0.271	$0.265	$0.355	(2)
185	Cottonseed, delivered New York	do	.143	.143	.143	.143	.143	.143	.163	(2)	(2)	.268	.262	.280	(2)
186	Olive, edible, f. o. b. New York	Gallon	(2)	(2)	(2)	(2)	(2)	(2)	9.250	$5.732	$4.915	4.915	8.500	8.250	(2)
187-1	Peanut, refined, edible, drums, f. o. b. New York.	Pound	.168	.168	.168	.168	.168	.168	.168	.168	.168	.187	(2)	(2)	(2)
187-2	Sesame, refined, imported, drums, carlots, f. o. b. New York.	do	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
188-1.1	Soybean, refined, in returnable drums l. c. l., f. o. b. New York.	do	.154	.154	.154	.154	.154	.154	.154	.182	.155	.209	.297	.320	$0.187
189	Vinegar, cider, delivered, New York	Gallon	.330	.330	.330	.330	.330	.330	.330	.330	.330	.330	.330	.330	.330
	HIDES AND LEATHER PRODUCTS:														
	Shoes, f. o. b. factory:														
	Children's oxfords:														
190.5	Boy's, Goodyear welt	Pair	2.538	2.560	2.560	2.560	2.560	3.600	3.600	3.950	3.950	3.950	4.850	4.850	3.461
191.3	Children's, Goodyear welt	do	2.313	2.333	2.333	2.333	2.333	2.333	2.458	2.541	2.541	2.541	2.850	2.850	2.482
192.1	Misses', stitchdown	do	2.538	2.560	2.560	2.560	2.560	2.560	2.844	2.801	2.801	2.801	3.250	3.250	2.759
193.2	Youths', stitchdown	do	1.505	1.512	1.512	1.512	1.512	1.512	1.704	1.692	1.692	1.692	1.950	1.950	1.646
	Men's:														
	Oxfords, Goodyear welt:														
	Calf:														
[3] 194.1	Series 1	do	(2)	(2)	(2)	(2)	(2)	(2)	6.640	6.761	6.761	6.761	8.788	8.788	(2)
195.1	Series 2	do	3.937	3.971	3.971	3.971	3.971	3.971	4.462	4.368	4.368	4.368	5.350	5.350	4.345
196	Series 3	do	4.760	4.800	4.800	4.800	4.800	4.800	4.800	5.370	5.370	5.370	6.500	6.500	5.225
198.1	Series 4	do	5.750	5.800	5.800	5.800	5.800	5.800	6.446	6.333	6.333	6.333	7.900	7.900	6.249
199	Series 5	do	5.180	5.225	5.225	5.225	5.225	5.225	5.773	5.716	5.716	5.716	7.250	7.250	5.737
[3] 201.1	Series 6	do	6.346	6.401	6.401	6.401	6.401	6.401	6.745	6.974	6.974	6.974	7.693	8.310	6.846
	Kip:														
197.1	Series 1	do	2.768	2.816	2.816	2.816	2.816	2.816	3.175	3.175	3.175	3.175	3.668	4.410	3.148
[3] 204.2	Series 2	do	3.112	3.127	3.127	3.127	3.127	3.127	3.557	3.557	3.557	3.557	4.350	4.350	3.476
200	Side leather	do	3.878	3.910	3.910	3.910	3.910	3.910	3.910	4.300	4.300	4.300	4.750	4.750	4.145
202.1	Work, nailed, elk	do	2.321	2.332	2.332	2.332	2.332	2.332	2.699	2.699	2.699	2.699	3.250	3.250	2.608
[3] 203.3	Work, Goodyear welt, grain leather upper.	do	3.512	3.543	3.543	3.543	3.543	3.543	3.543	3.715	3.887	3.887	4.100	4.250	3.720

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Relative importance, year 1946	INDEXES (1926=100) OF PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	FOODS—Continued														
	Other foods—Continued														
	Vegetable oil—Continued														
184-1.1	Corn, refined edible, drums, less than carlots, f. o. h. New York.	0.03	123.0	123.0	123.0	123.0	123.0	123.0	123.0	[2]	[2]	200.8	196.2	262.8	[2]
185	Cottonseed, delivered New York	.34	120.9	120.9	120.9	120.9	120.9	120.9	137.8	[2]	[2]	225.9	221.0	236.5	[2]
186	Olive, edible, f. o. b. New York	.10	[2]	[2]	[2]	[2]	[2]	[2]	484.1	300.0	257.3	257.3	444.9	431.8	[2]
187-1	Peanut, refined, edible, drums, f. o. h. New York.	[6]	106.9	106.9	106.9	106.9	106.9	106.9	106.9	106.9	106.9	118.8	[2]	[2]	[2]
187-2	Sesame, refined, imported, drums, carlots, f. o. b. New York.	[6]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
188-1.1	Soybean, refined, in returnable drums, l. c. l., f. o. b. New York.	[6]	[1]	[1]	[1]	[1]	[1]	[1]	[1]	[1]	[1]	[1]	[1]	[1]	[1]
189	Vinegar, cider, delivered New York	.05	177.6	177.6	177.6	177.6	177.6	177.6	177.6	177.6	177.6	177.6	177.6	177.6	177.6
	HIDES AND LEATHER PRODUCTS	**3.18**	**119.4**	**119.6**	**119.8**	**119.8**	**120.4**	**122.4**	**141.2**	**138.9**	**141.8**	**142.4**	**172.5**	**178.7**	**137.2**
	Shoes, f. o. b. factory	**1.56**	**127.9**	**128.2**	**128.8**	**128.6**	**128.9**	**129.5**	**140.4**	**140.1**	**144.8**	**145.2**	**182.9**	**189.9**	**141.7**
	Children's oxfords:														
190.5	Boy's, Goodyear welt	.05	98.0	98.9	98.9	98.9	98.9	139.0	139.0	152.5	152.5	152.5	187.3	187.3	133.8
191.3	Children's, Goodyear welt	.01	110.7	111.7	111.7	111.7	111.7	111.7	117.7	121.7	121.7	121.7	136.5	136.5	118.8
192.1	Misses, stitchdown	.04	108.5	109.4	109.4	109.4	109.4	109.4	121.6	119.7	119.7	119.7	138.9	138.9	118.0
193.2	Youths, stitchdown	.07	105.7	106.2	106.2	106.2	106.2	106.2	119.7	118.8	118.8	118.8	137.0	137.0	115.6
	Men's:														
	Oxfords, Goodyear welt:														
	Calf:														
[3] 194.1	Series 1	.12	[2]	[2]	[2]	[2]	[2]	[2]	130.5	132.9	132.9	132.9	172.7	172.7	[2]
195.1	Series 2	.05	177.4	179.0	179.0	179.0	179.0	179.0	201.2	196.9	196.9	196.9	241.2	241.2	195.9
196	Series 3	.05	126.9	128.0	128.0	128.0	128.0	128.0	128.0	143.2	143.1	143.2	173.3	173.3	139.3
198.1	Series 4	.06	130.3	131.4	131.4	131.4	131.4	131.4	146.1	143.5	143.5	143.5	179.0	179.0	141.6
199	Series 5	.05	148.2	149.5	149.5	149.5	149.5	149.5	165.2	163.6	163.6	163.6	207.5	207.5	164.2
[3] 201.1	Series 6	.13	124.4	125.5	125.5	125.5	125.5	125.5	132.3	136.8	136.8	136.8	150.9	163.0	134.3
	Kip:														
197.1	Series 1	.04	197.8	201.3	201.3	201.3	201.3	201.3	226.9	226.9	226.9	226.9	262.1	315.1	225.0
[3] 204.2	Series 2	.04	193.5	194.4	194.4	194.4	194.4	194.4	221.2	221.2	221.2	221.2	270.5	270.5	216.2
200	Side leather	.04	149.2	150.4	150.4	150.4	150.4	150.4	150.4	165.4	165.4	165.4	182.7	182.7	159.4
202.1	Work, nailed, elk	.04	110.8	111.3	111.3	111.3	111.3	111.3	128.8	128.8	128.8	128.8	155.2	155.2	124.5
[3] 203.3	Work, grain leather upper, Goodyear welt.	.04	141.6	142.8	142.8	142.8	142.8	142.8	142.8	149.7	156.7	156.7	165.3	171.3	150.0

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Unit	AVERAGE PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	HIDES AND LEATHER PRODUCTS—Continued														
	Shoes, f. o. b. factory—Continued														
	Women's:														
205	Oxford, Goodyear welt, calf	Pair	$3.104	$3.130	$3.130	$3.130	$3.130	$3.315	$3.500	$3.550	$3.550	$3.550	$4.000	$4.000	$3.427
206.2	Tie, McKay, kid	do	2.470	2.470	2.470	2.470	2.470	2.470	2.688	2.688	2.688	2.688	2.992	2.992	2.633
207.1	Pump, Sbicca Delmac, patent leather.	do	3.362	3.390	3.390	3.390	3.390	3.390	3.390	3.860	3.860	3.860	4.750	4.750	3.734
208.2	Pump, cemented, kid	do	2.590	2.612	2.612	2.727	2.727	2.842	3.133	3.396	3.200	(2)	(2)	(2)	(2)
[3] 209.2	Pump, cemented, calf	do	3.004	3.030	3.030	3.030	3.030	3.030	3.030	3.030	3.030	3.030	(2)	(2)	(2)
210.1	Oxford, Goodyear welt, kid	do	3.750	3.750	3.750	3.919	3.919	3.919	4.073	4.175	4.264	4.264	4.264	4.900	4.088
	Hides and skins:														
	Hides, packer, f. o. b. Chicago:														
211	Cow, light, native	Pound	.155	.155	.155	.155	.155	.155	.222	.155	.155	.155	.306	.260	.183
212	Steer, heavy, native	do	.155	.155	.155	.155	.155	.155	.239	.155	.155	.155	.289	.276	.184
213	Steer, heavy Texas	do	.145	.145	.145	.145	.145	.145	.229	.145	.145	.145	.261	.256	.171
	Skins:														
214	Calf, packer, city, f. o. b. Chicago	do	.218	.218	.218	.218	.218	.218	.268	.218	.218	.218	.435	.414	.254
[3] 215.1	Goat, Amritsars, c. i. f. New York	Skin	.450	.450	.450	.450	.517	.533	.912	1.275	1.182	1.214	1.339	1.250	.804
216	Kip, packer, f. o. b. Chicago	Pound	.200	.200	.200	.200	.200	.200	.236	.200	.200	.200	.400	.356	.233
[3] 217.1	Shearlings, packer, No. 1, f. o. b. Chicago.	Pelt	2.150	2.150	2.150	2.150	2.150	2.150	2.150	2.150	2.150	2.150	2.433	2.850	2.239
	Leather:														
218	Calf, chrome, black, B and C grades, f. o. b. tannery (composite price)	Square foot	.512	.516	5.16	.516	.516	.519	.552	.546	.546	.546	.845	.914	.589
219	Kid, glazed, top grade, f. o. b. Boston	do	.600	.600	.600	.600	.600	.758	.810	.990	1.050	1.050	1.200	1.260	.822
220	Harness, oak, f. o. b. tannery	Pound	.466	.466	.466	.466	.466	.466	.526	.495	.495	.495	.686	.877	.534
221	Side, chrome, black, B grade, f. o. b. Boston.	Square foot	.310	.310	.310	.310	.310	.340	.350	.350	.350	.350	.550	.520	.361
	Sole, vegetable tanned, f. o. b. Boston:														
222.1	Bends, steer	Pound	.440	.440	.440	.440	.440	.462	.675	.470	.470	.470	.800	.770	.499
223	Backs, heavy	do	.415	.415	.415	.415	.415	.434	.565	.440	.440	.440	.750	.720	.481
224.1	Crops, steer	do	.392	.392	.392	.392	.392	.410	.592	.416	.416	.416	.740	.713	.474

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Relative importance, year 1946	INDEXES (1926=100) OF PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	HIDES AND LEATHER PRODUCTS—Continued														
	Shoes, f. o. b. factory—Continued														
	Women's:														
205	Oxford, Goodyear welt, calf	0.10	109.4	110.3	110.3	110.3	110.3	116.8	123.3	125.1	125.1	125.1	141.0	141.0	120.8
206.2	Tie, McKay, kid	.23	147.5	147.5	147.5	147.5	147.5	147.5	160.5	160.5	160.5	160.5	178.7	178.7	157.2
207.1	Pump, Shieca Delmac, patent leather.	.12	98.6	99.4	99.4	99.4	99.4	99.4	99.4	113.2	113.2	113.2	139.3	139.3	109.4
208.2	Pump, cemented, kid	.07	77.0	77.7	77.7	81.1	81.1	84.5	93.2	101.0	95.2	(2)	(2)	(2)	(2)
[3] 209.2	Pump, cemented, calf	.10	122.4	123.5	123.5	123.5	123.5	123.5	123.5	123.5	123.5	123.5	(2)	(2)	(2)
210.1	Oxford, Goodyear welt, kid	.11	115.4	115.4	115.4	120.5	120.5	120.5	125.3	128.5	131.2	131.2	131.2	150.7	125.8
	Hides and skins	.59	**117.6**	**117.6**	**117.6**	**117.6**	**120.7**	**121.5**	**169.3**	**155.6**	**151.5**	**153.0**	**221.0**	**216.5**	**147.4**
	Hides, packer, f. o. b. Chicago:														
211	Cow, light, native	.09	118.7	118.7	118.7	118.7	118.7	118.7	170.0	118.7	118.7	118.7	234.5	199.1	139.8
212	Steer, heavy, native	.09	110.5	110.5	110.5	110.5	110.5	110.5	170.2	110.5	110.5	110.5	206.0	196.9	130.9
213	Steer, heavy, Texas	.08	108.6	108.6	108.6	108.6	108.6	108.6	171.4	108.6	108.6	108.6	195.5	191.9	128.2
	Skins:														
214	Calf, packer, city, f. o. b. Chicago	.05	120.4	120.4	120.4	120.4	120.4	120.4	148.6	120.4	120.4	120.4	210.9	229.2	140.5
[3] 215.1	Goat, Amritsars, c. i. f. New York	.14	85.9	85.9	85.9	85.9	98.6	101.8	174.1	243.3	225.6	231.6	255.4	238.5	153.4
216	Kip, packer, f. o. b. Chicago	.02	113.3	113.3	113.3	113.3	113.3	113.3	133.7	113.3	113.3	113.3	226.6	202.0	132.2
[3] 217.1	Shearlings, packer, No. 1, f. o. b. Chicago.	.12	156.8	156.8	156.8	156.8	156.8	156.8	156.8	156.8	156.8	156.8	177.4	207.8	163.2
	Leather	.71	**103.6**	**103.9**	**104.0**	**104.0**	**104.0**	**110.7**	**133.2**	**133.3**	**136.5**	**136.5**	**176.1**	**165.0**	**126.6**
218	Calf, chrome, black, B and C grades, f. o. b. tannery (composite price).	.15	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
219	Kid, glazed, top grade, f. o. b. Boston	.30	88.9	88.9	88.9	88.9	88.9	112.2	120.0	146.7	155.6	155.6	177.8	186.7	121.9
220	Harness, oak, f. o. b. tannery	.01	105.9	105.9	105.9	105.9	105.9	105.9	119.7	112.6	112.6	112.6	156.1	199.5	121.5
221	Side, chrome, black, B grade, f. o. b. Boston.	.09	122.4	122.4	122.4	122.4	122.4	134.2	138.2	138.2	138.2	138.2	217.1	205.3	142.2
	Sole, vegetable tanned, f. o. b. Boston:														
222.1	Bends, steer	.05	88.3	88.3	88.3	88.3	88.3	92.8	135.5	94.3	94.3	94.3	160.6	154.5	100.2
223	Backs, heavy	.04	94.7	94.7	94.7	94.7	94.7	99.0	128.9	100.4	100.4	100.4	171.1	164.3	109.6
224.1	Crops, steer	.07	102.4	102.4	102.4	102.4	102.4	107.0	154.6	108.5	108.5	108.5	193.3	186.3	123.9

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Unit	AVERAGE PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	HIDES AND LEATHER PRODUCTS—Continued														
	Other leather products:														
225	Belting, leather, single, 1-inch wide, f. o. b. factory.	Linear foot	$0.143	$0.143	$0.143	$0.143	$0.143	$0.143	$0.169	$0.169	$0.169	$0.169	$0.211	$0.211	$0.163
	Gloves, cape, unlined, f. o. b. factory:														
226.1	Men's	Dozen pair	23.970	23.970	23.970	23.970	23.970	23.970	23.970	23.970	23.970	33.840	33.840	33.840	26.577
227	Women's	do	21.150	21.150	21.150	21.150	21.150	21.150	21.150	21.150	21.150	26.790	26.790	26.790	22.640
[3] 228.2	Harness, f. o. b. factory (composite price).	Set	(2)	(2)	57.702	57.702	57.702	57.702	57.702	60.458	60.458	60.458	62.532	63.224	(2)
229.2	Gladstone bags, f. o. b. factory (composite price).	Each	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
230.2	Traveling cases, f. o. b. factory (composite price).	do	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	TEXTILE PRODUCTS:														
	Clothing:														
	Collars:														
231	Soft, and semisoft, delivered (composite price).	Dozen	2.180	2.215	2.215	2.215	2.215	2.215	2.215	2.278	2.318	2.318	2.784	2.940	2.345
232	Stiff, f. o. b. factory	do	1.794	1.329	1.329	1.340	1.348	1.348	1.387	1.678	1.678	1.701	2.071	2.425	1.630
	Handkerchiefs, plain, f. o. b. factory:														
	Cotton:														
233	Men's	do	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
234	Women's	do	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	Linen:														
235	Men's	do	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
236	Women's	do	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	Hats, bodies, f. o. b. factory:														
[3] 237-1	Men's, fur felt	do	30.000	30.000	27.500	27.500	27.500	27.500	27.500	27.500	27.500	27.500	27.500	25.000	27.689
[3] 238-1	Women's, wool felt	do	4.988	4.988	4.988	4.988	4.988	4.988	4.988	4.988	4.988	4.988	5.272	5.558	5.063
[3] 239-1.1	Overalls, bib, denim, 8 oz./yd., delivered	do	26.100	26.100	26.100	28.332	31.680	31.680	31.680	31.680	31.680	32.220	33.910	33.910	30.425
240	Overcoats, men's double-breasted, 30 ounce fabric, wool, f. o. b. factory.	Each	27.930	27.930	27.930	27.930	27.930	31.000	31.000	31.000	31.000	31.000	31.000	31.000	29.726
	Shirts, men's:														
241	Dress, white broadcloth, f. o. b. factory.	Dozen	15.520	17.974	17.974	18.184	18.323	18.323	18.564	19.846	19.846	20.603	22.072	23.038	19.188
[3] 242.1	Work, blue chambray, 4½ oz./yd., delivered.	do	13.460	13.460	13.460	14.776	16.750	16.750	16.750	16.750	16.750	16.750	16.750	16.750	15.757

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Relative importance, year 1946	INDEXES (1926=100) OF PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	HIDES AND LEATHER PRODUCTS—Continued														
	Other leather products	0.32	115.2	115.2	115.2	115.2	115.2	115.2	115.2	115.8	115.8	118.6	123.5	123.6	117.0
225	Belting, leather, single, 1 inch wide, f. o. b. factory.	.04	94.4	94.4	94.4	94.4	94.4	94.4	111.8	111.8	111.8	111.8	139.7	139.7	108.0
	Gloves, cape, unlined, f. o. b. factory:														
226.1	Men's	.07	70.8	70.8	70.8	70.8	70.8	70.8	70.8	70.8	70.8	100.0	100.0	100.0	78.5
227	Women's	.06	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	126.7	126.7	126.7	107.0
[3] 228.2	Harness, f. o. b. factory (composite price).	.04	(2)	(2)	134.3	134.3	134.3	134.3	134.3	140.7	140.7	140.7	145.6	147.2	(2)
229.2	Gladstone bags, f. o. b. factory (composite price).	.06	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
230.2	Traveling cases, f. o. b. factory (composite price).	.05	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	TEXTILE PRODUCTS	8.65	101.6	102.2	104.7	107.9	108.8	109.2	118.1	124.0	125.7	128.6	131.6	134.7	116.3
	Clothing	2 21	107.4	109.4	109.5	117.4	119.6	120.3	120.5	122.8	122.9	125.5	127.9	129.8	119.3
	Collars:														
231	Soft, and semisoft, delivered (composite price).	.01	59.6	60.5	60.5	60.5	60.5	60.5	60.5	62.2	63.3	63.3	76.0	80.3	64.0
232	Stiff, f. o. b. factory	(6)	114.4	84.8	84.8	85.5	86.0	86.0	88.5	107.0	107.0	108.5	132.1	154.7	103.9
	Handkerchiefs, plain, f. o. b. factory:														
	Cotton:														
233	Men's	.02	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
234	Women's	.02	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	Linen:														
235	Men's	.02	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
236	Women's	.02	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	Hat bodies, f. o. b. factory:														
[3] 237-1	Men's, fur felt	.04	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
[3] 238-1	Women's, wool felt	.03	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
[3] 239-1.1	Overalls, bib, denim, 8 oz./yd. delivered	.23	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
240	Overcoats, men's double-breasted, 30-ounce fabric, wool, f. o. b. factory.	.13	125.5	125.5	125.5	125.5	125.5	139.3	139.3	139.3	139.3	139.3	139.3	139.3	133.6
	Shirts, men's:														
241	Dress, white broadcloth, f. o. b. factory.	.29	102.9	119.2	119.2	120.6	121.6	121.6	123.2	131.6	131.6	136.7	146.4	152.8	127.3
[3] 242.1	Work, blue chambray, 4½ oz./yd., delivered.	.10	130.8	130.8	130.8	143.6	162.7	162.7	162.7	162.7	162.7	162.7	162.7	162.7	153.1

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Unit	AVERAGE PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	TEXTILE PPODUCTS—Continued														
	Clothing—Continued														
	Suits:														
243.2	Boys', 2-piece, wool mixture, f. o. b. New York.	Each	$8.967	$8.967	$8.967	$10.290	$10.290	$10.290	(2)	(2)	(2)	(2)	(2)	(2)	(2)
[3] 244.1	Men's, 3-piece, 13-ounce blue serge, f. o. b. Chicago.	do	32.250	32.250	33.112	35.700	35.650	35.650	$35.650	$35.650	$35.650	$35.650	$37.150	$38.650	$35.282
[3] 245.2	Men's, 3-piece, 15-ounce blue serge, f. o. b. New York.	do	27.680	27.680	27.680	31.850	31.850	31.850	31.850	31.850	34.500	34.500	34.500	34.500	31.727
246.3	Youths', 2-piece, fancy woolen mixtures, f. o. b. New York.	do	11.750	11.750	11.750	13.500	13.500	13.500	(2)	(2)	(2)	(2)	(2)	(2)	(2)
247	Topcoats, 18-ounce fabric, single-breasted, f. o. b. Chicago.	do	26.220	26.220	26.852	28.750	28.750	28.750	29.000	29.000	29.000	29.000	29.000	29.900	28.389
	Trousers:														
248-1.3	Boys' slacks, mixed wool cassimere, f. o. b. New York.	Dozen	48.600	48.600	48.600	48.600	48.600	48.600	48.600	54.000	54.000	54.000	54.000	54.000	50.842
249.3	Men's slacks, part wool, cassimere, f. o. b. factory.	Each	4.500	4.500	4.500	4.500	4.500	4.500	4.500	4.950	4.950	4.950	4.950	4.950	4.687
[3] 250.1	Men's work, 2.50 yd./lb., f. o. b. factory.	Dozen	22.180	22.180	22.180	24.468	27.900	27.900	27.900	27.900	27.900	27.900	31.725	33.000	26.943
	Cotton goods:														
251	Broadcloth, 35 inch, 128 by 68, bleached, white, f. o. b. mill.	Yard	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
252	Damask, table, 58 inch, 66 by 56, mercerized, f. o. b. mill.	do	.597	.597	.597	.597	.622	.622	.622	.731	.731	.766	.766	.775	.669
253	Denim, white back, 28 inch, 2.20 yd./lb., f. o. b. mill.	do	.223	.223	.248	.256	.256	.256	.280	.312	.323	.338	.338	.338	.283
	Drills, f. o. b. mill:														
254	Brown, 30 inch, 72 by 60, 2.50 yd./lb.	do	.184	.184	.197	.211	.211	.211	.221	.254	.261	.277	.277	.277	.231
[3] 255.1	Gray, 30 inch, 72 by 48, 2.85 yd /lb.	do	(2)	(2)	(2)	(2)	(2)	(2)	.183	.220	.223	.239	.241	.241	(2)
	Duck, f. o. b. mill:														
[3] 256.1	Army, 30 inch, 8.42 ounce	do	(2)	(2)	(2)	(2)	(2)	(2)	.327	.365	.382	.394	.394	.394	(2)
257	Number, 36 inch, No. 8	do	.563	.563	.602	.616	.616	.616	.616	.757	.786	.817	.817	(9)	[10] .664
	Flannel, f. o. b. mill:														
258	Bleached, 36 inch, 4.50 yd./lb	do	.147	.147	.157	.160	.160	.160	.177	.191	.193	.206	.206	.202	.175
259	Unbleached, 33 inch, 8 ounce	do	.224	.224	.232	.256	.256	.256	.302	.297	.306	.329	.328	.328	.279

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Relative importance, year 1946	INDEXES (1926=100) OF PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	TEXTILE PRODUCTS—Continued														
	Clothing—Continued														
	Suits:														
243.2	Boys', 2-piece, wool mixture, f. o. b. New York.	0.14	(1)	(1)	(1)	(1)	(1)	(1)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
[3] 244.1	Men's, 3-piece, 13-ounce, blue serge, f. o. b. Chicago.	.26	124.1	124.1	127.4	137.3	137.2	137.2	137.2	137.2	137.2	137.2	142.9	148.7	135.7
[3] 245.2	Men's, 3-piece, 15-ounce blue serge, f. o. b. New York.	.25	115.0	115.0	115.0	132.4	132.4	132.4	132.4	132.4	143.4	143.4	143.4	143.4	131.9
246.3	Youths' 2-piece, fancy woolen mixtures, f. o. b. New York.	.23	(1)	(1)	(1)	(1)	(1)	(1)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
247	Topcoats, 18-ounce fabric, single breasted, f. o. b. Chicago.	.13	116.5	116.5	119.3	127.8	127.8	127.9	128.9	128.9	128.9	128.9	128.9	132.9	126.2
	Trousers:														
248-1.3	Boys' slacks, mixed wool cassimere, f. o. b. New York.	.06	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
249.3	Men's slacks, part wool, cassimere, f. o. b. factory.	.17	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
[3] 250.1	Men's work, 2.50 yd./ft., f. o. b. factory.	.06	110.5	110.5	110.5	121.9	139.0	139.0	139.0	139.0	139.0	139.0	158.0	164.4	134.2
	Cotton goods	2.87	125.8	125.8	132.9	137.6	138.6	139.4	148.6	180.0	186.6	172.9	174.7	181.8	150.5
251	Broadcloth, 35 inch, 128 by 68, bleached, white, f. o. b. mill.	.11	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
252	Damask, table, 58 inch, 66 by 56, mercerized, f. o. b. mill.	.02	161.4	161.4	161.4	161.4	168.2	168.2	168.2	197.6	197.6	206.9	206.9	209.5	180.8
253	Denim, white back, 28 inch, 2.20 yd./lb., f. o. b. mill.	.13	131.9	131.9	146.4	151.3	151.3	151.3	165.5	184.2	191.2	199.6	199.6	199.6	167.3
	Drills, f. o. b. mill:														
254	Brown, 30 inch, 72 by 60, 2.50 yd./lb.	.05	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
[3] 255.1	Gray, 30 inch, 72 by 48, 2.85 yd./lb.	.04	(2)	(2)	(2)	(2)	(2)	(2)	142.9	171.9	174.4	186.7	188.1	188.5	(2)
	Duck, f. o. b. mill:														
[3] 256.1	Army, 30 inch, 8.42 ounce	.07	(2)	(2)	(2)	(2)	(2)	(2)	160.9	179.8	188.0	193.7	193.7	194.0	(2)
257	Number, 36 inch, No. 8	.03	134.7	134.7	144.1	147.3	147.3	147.3	147.3	181.2	188.0	195.5	195.5	(2)	[10] 158.9
	Flannel, f. o. b. mill:														
258	Bleached, 36 inch, 4.50 yd./lb.	.05	131.5	131.5	140.1	143.0	143.0	143.0	158.0	170.5	172.5	183.6	183.6	180.6	156.5
259	Unbleached, 33 inch, 8 ounce	.08	127.5	127.5	132.0	145.4	145.4	145.4	171.6	169.1	174.2	186.9	186.5	186.2	158.7

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Unit	AVERAGE PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	TEXTILE PRODUCTS—Continued														
	Cotton goods—Continued														
[3]260.2	Gingham, carded, 35–36 inch, f. o. b. mill	Yard	$0.290	$0.335	$0.344	$0.366	$0.366	$0.366	(2)	$0.412	$0.412	$0.435	$0.441	$0.441	[10] $0.383
	Muslin, bleached 36 inch, f. o. b. mill:														
261	Carded, 80 by 92, 3.50 yd./lb	do	(2)	.198	(2)	(2)	(2)	(2)	(2)	(2)	.282	.289	.289	(2)	(2)
262	Carded, 80 by 80, 4.00 yd./lb	do	.160	.160	.179	.186	.186	.186	(2)	.222	.232	.247	.248	.260	.206
263	Carded, 80 by 80, 4.00 yd./lb	do	.152	.154	.177	.182	.182	.182	(2)	.214	.225	.232	(2)	(2)	(2)
264	Combed (nainsook), 96 by 100, 7.00 yd./lb.	do	.239	.239	.287	.292	.292	.292	(2)	(2)	.338	.344	.344	.344	(2)
265.1	Osnaburg, 30 inch, 2.35 yd./lb., part waste, f. o. b. mill.	do	.157	.157	.170	.174	.174	.174	$0.174	.205	.216	.230	.230	.250	.192
266.1	Percale, printed, 35–36 inch, 64 by 56, 5.50 yd./lb., f. o. b. mill.	do	.152	.152	.152	.171	.171	.171	.206	.203	.204	.209	.209	.209	.182
	Print cloth, f. o. b. mill:														
[3] 267.2	39 inch, 80 by 80, 4.00 yd./lb	do	.134	.134	.149	.154	.154	.154	.154	.182	.188	.197	.228	.287	.176
[4] 268	38½ inch, 64 by 60, 5.35 yd./lb	do	.099	.099	.110	.114	.114	.114	.126	.134	.140	.146	.147	.185	.128
[3] 269.2	Sateen, filling, 37½ inch, f. o. b. warehouse.	do	.248	.248	.301	.301	.301	.301	.252	.252	.290	.311	.322	.344	.289
	Sheeting, f. o. b. mill:														
	Bleached, 10/4:														
270	64 by 64, 1.38 yd./lb	do	.452	.452	.482	.492	.492	.492	.585	(2)	.600	.620	.620	.620	[10] .532
271	68 by 72, 1.34 yd./lb	do	.528	.528	.564	.575	.575	.575	.640	.666	.700	.720	.720	.723	.627
	Unbleached, 4/4:														
272.2	48 by 44, 2.85 yd./lb	do	.160	.160	.177	.183	.183	.183	.183	.220	.230	.241	.242	.250	.201
273.1	64 by 64, 3.50 yd./lb	do	.140	.140	.155	.160	.160	.160	.160	.193	.201	.210	.210	.240	.178
274.1	56 by 56, 4.00 yd./lb	do	.120	.120	.133	.138	.138	.138	.138	.165	.172	.180	.180	(2)	[10] .146
	Shirting, f. o. b. mill:														
275.1	Broadcloth, 35–36 inch, 116 by 60, striped.	do	.378	.378	.378	.378	.378	.438	(2)	(2)	.528	.534	.536	.536	(2)
276.1	Percale, 35–36 inch, 68 by 64, printed	do	.162	.162	.182	.182	.182	.182	.182	.197	.219	.226	.226	.226	.194
[3] 277.1	Ticking, 32 inch, 8 ounce, f. o. b. mill	do	.266	.266	.285	.291	.291	.291	.291	.339	.352	.368	.368	.368	.315
	Tire fabric, carded, f. o. b. mill:														
[3] 278.2	Cord, 23-5-3	Pound	.440	.440	.440	.440	.440	.440	.440	.440	.440	.440	.440	.440	.440
[3] 279.1	Chafer, 14 ounce, 60 inch, 20/8 ply	do	.480	.480	.480	.480	.480	.480	.537	.537	.537	.637	.537	.537	.509

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Relative importance, year 1946	INDEXES (1926=100) OF PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	TEXTILE PRODUCTS—Continued														
	Cotton goods—Continued														
[3] 260.2	Gingham, carded, 35-36 inch, f. o. b. mill.	0.04	123.1	142.1	146.0	155.4	155.4	155.4	(2)	174.7	174.7	184.4	187.0	187.0	[10] 162.3
	Muslin, bleached, 36 inch, f. o. b. mill:														
261	Carded, 80 by 92, 3.50 yd./lb	.02	(2)	118.2	(2)	(2)	(2)	(2)	(2)	(2)	168.5	172.7	172.7	(2)	(2)
262	Carded, 80 by 80, 4.00 yd./lb	.02	106.0	106.0	118.8	123.0	123.0	123.0	(2)	147.1	154.1	163.7	164.2	172.2	136.9
263	Carded, 80 by 80, 4.00 yd./lb	.02	106.2	107.7	123.7	127.4	127.4	127.4	(2)	149.9	157.2	162.7	(2)	(2)	(2)
264	Combed (nainsook), 96 by 100, 7.00 yd/lb.	.02	104.9	104.9	125.9	128.1	128.1	128.1	(2)	(2)	148.4	151.1	151.1	151.2	(2)
265.1	Osnaburg, 30 inch, 2.35 yd./lb., part waste, f. o. b. mill.	.05	172.0	172.0	185.8	190.4	190.4	190.4	190.4	223.7	236.0	251.6	251.6	273.4	209.5
266.1	Percale, printed, 35-36 inch, 64 by 56, 5.50 yd./lb., f. o. b. mill.	.07	120.0	120.0	120.0	134.4	134.4	134.4	162.0	159.5	160.7	164.4	164.4	164.4	143.7
	Print cloth, f. o. b. mill:														
[3] 267.2	39 inch, 80 by 80, 4.00 yd./lb	.03	141.2	141.2	156.8	162.0	162.0	162.0	162.0	191.6	199.0	207.6	240.4	302.9	185.6
[4] 268	38½ inch, 64 by 60, 5.35 yd./lb	.29	130.9	130.9	145.3	150.2	150.2	150.2	167.1	177.5	184.4	192.6	193.7	244.4	169.0
[3] 269.2	Sateen, filling, 37½″, f. o. b. warehouse	.09	111.0	111.0	134.8	134.8	134.8	134.8	112.9	112.9	130.1	139.3	144.1	153.9	129.6
	Sheeting, f. o. b. mill:														
	Bleached, 10/4:														
270	64 by 64, 1.38 yd./lb	.20	108.5	108.5	115.8	118.2	118.2	118.2	140.6	(2)	144.1	149.0	149.0	149.0	[10] 127.7
271	68 by 72, 1.34 yd./lb	.24	107.7	107.7	114.8	117.2	117.2	117.2	130.4	135.7	142.6	146.7	146.7	147.2	127.7
	Unbleached, 4/4:														
272.2	48 by 44, 2.85 yd./lb	.11	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
273.1	64 by 64, 3.50 yd./lb	.09	122.1	122.1	135.4	139.9	139.9	139.9	139.3	168.2	175.1	183.1	183.1	209.7	155.2
274.1	56 by 56, 4.00 yd./lb	.07	129.2	129.2	143.3	148.0	148.0	148.0	148.0	178.0	185.4	194.0	194.0	(2)	[10] 156.7
	Shirting, f. o. b. mill:														
275.1	Broadcloth, 35-36 inch, 116 by 60, striped.	.11	(1)	(1)	(1)	(1)	(1)	(1)	(2)	(2)	(1)	(1)	(1)	(1)	(2)
276.1	Percale, 35-36 inch, 68 by 64, printed	.04	119.5	119.5	134.2	134.2	134.2	134.2	134.2	145.3	161.8	166.9	166.9	166.9	143.3
[3] 277.1	Ticking, 32 inch, 8 ounce, f. o. b. mill	.02	148.4	148.4	159.1	162.7	162.7	162.7	162.7	189.5	196.7	205.6	205.6	205.6	175.9
	Tire fabric, carded, f. o. b. mill:														
[3] 278.2	Cord, 23-5-3	.11	103.1	103.1	103.1	103.1	103.1	103.1	103.1	103.1	103.1	103.1	103.1	103.1	103.1
[3] 279.1	Chafer, 14 ounce, 60 inch, 20/8 ply	.02	111.2	111.2	111.2	111.2	111.2	111.2	124.3	124.3	124.3	124.3	124.3	124.3	117.9

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Codo No.	Commodity—Description and terms of sale	Unit	AVERAGE PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	TEXTILE PRODUCTS—Continued														
	Cotton goods—Continued														
280	Toweling, 18-inch, bleached, 4 oz./yd., f. o. b. factory.	Yard	$0.175	$0.175	$0.188	$0.192	$0.192	$0.192	$0.192	$0.227	$0.235	$0.245	$0.245	$0.245	$0.209
	Yarn, carded, f. o. b. mill:														
	Single:														
281.1	10/1, cones	Pound	.407	.412	.440	.458	.473	.473	.522	.576	.604	.632	.632	.632	.523
282.1	22/1, cones	do	.470	.476	.504	.525	.543	.543	.599	.643	.671	.699	.699	.699	.590
[3] 283.1	40/1, skeins	do	(2)	(2)	(2)	(2)	(2)	(2)	.716	.762	.800	.819	.819	.819	(2)
	Plied:														
284	20/2, cones	do	.500	.505	.533	.555	.574	.574	.649	.677	.706	.734	.734	.734	.624
285	40/2, cones	do	.657	.662	.690	.717	.741	.741	.811	.844	.874	.903	.903	.903	.788
	Hosiery and underwear:														
	Hosiery, f. o. b. mill:														
	Cotton, seamless:														
286.1	Men's, 176-needle	Dozen	1.600	1.600	1.600	1.600	1.600	1.600	1.840	1.840	1.990	2.000	2.000	2.000	1.776
[3] 287.3	Women's anklets, 188-needle	do	2.058	2.058	2.058	2.058	2.058	2.058	2.058	2.132	2.352	2.391	2.450	2.450	2.184
	Rayon, seamless:														
[3] 288–1.1	Women's, 300-needle	do	3.300	3.300	3.330	3.300	3.300	3.300	3.300	3.300	3.300	3.300	3.300	3.300	3.300
[3] 289.1	Men's, 220-needle	do	2.961	2.961	2.961	2.961	2.961	2.961	2.961	3.337	3.337	3.384	3.572	3.572	3.161
[3] 290–1.1	Nylon, women's, full-fashioned, 45 gauge, 40 denier.	do	10.395	10.395	10.395	10.395	10.395	10.395	10.395	10.395	10.395	10.395	10.395	10.395	10.395
	Underwear, f. o. b. shipping point (composite price):														
	Rayon panties, women's:														
291–1.2	Circular knit	do	3.675	3.675	3.675	3.675	3.675	3.675	3.675	3.675	3.675	3.675	3.675	4.655	3.768
291–2.2	Warp knit	do	6.361	6.361	6.361	6.361	6.361	6.361	6.361	6.361	6.361	6.361	6.361	6.361	6.361
	Cotton:														
291–3.1	Shirts, athletic knit, men's	do	2.622	2.622	2.622	2.688	2.910	2.943	(2)	(2)	(2)	(2)	3.495	3.474	(2)
291–4.3	Shorts, woven, men's	do	3.750	3.733	3.940	3.936	3.936	3.936	3.936	(2)	(2)	(2)	4.602	4.602	(2)
291–5.1	Union suits, knit, boys'	do	8.663	8.663	8.663	8.663	8.663	8.663	(2)	(2)	(2)	(2)	10.535	10.535	(2)
291–6.1	Union suits, knit, men's	do	12.132	12.132	12.132	12.132	12.132	12.132	(2)	(2)	(2)	(2)	15.375	15.375	(2)

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Codo No.	Commodity—Description and terms of sale	Relative importance, year 1946	INDEXES (1926=100) OF PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	TEXTILE PRODUCTS—Continued														
	Cotton goods—Continued														
280	Toweling, 18 inch, bleached, 4 oz./yd., f. o. b. factory.	0.10	129.6	129.6	139.1	142.3	142.3	142.3	142.3	168.5	174.1	181.6	181.6	181.6	154.6
	Yarn, carded, f. o. b. mill:														
	Single:														
281.1	10/1, cones	.07	127.4	129.1	137.7	143.6	148.3	148.3	163.4	180.5	189.3	198.0	198.0	198.0	163.7
282.1	22/1, cones	.08	133.0	134.6	142.4	148.6	153.5	153.5	169.5	181.8	189.0	197.7	197.7	197.7	166.9
[3] 283.1	40/1, skeins	.13	(2)	(2)	(2)	(2)	(2)	(2)	159.1	169.1	177.6	181.9	181.9	181.9	(2)
	Plied:														
284	20/2, cones	.11	154.4	156.1	164.6	171.5	177.2	177.2	200.4	209.0	217.9	226.7	226.7	226.7	192.7
285	40/2, cones	.14	139.1	140.2	146.1	151.9	156.9	156.9	171.8	178.7	185.0	191.2	191.2	191.2	166.9
	Hosiery and underwear	**.72**	**75.2**	**75.3**	**75.5**	**75.5**	**75.7**	**75.8**	**76.3**	**87.7**	**88.7**	**88.8**	**89.3**	**98.9**	**82.1**
	Hosiery, f. o. b. mill:														
	Cotton, seamless:														
286.1	Men's, 176-needle	.03	176.3	176.3	176.3	176.3	176.3	176.3	202.8	202.8	219.3	220.4	220.4	220.4	195.7
[3] 287.3	Women's anklets, 188-needle	.02	100.6	100.6	100.6	100.6	100.6	100.6	100.6	104.1	114.9	116.8	119.7	119.7	106.7
	Rayon, seamless:														
[3] 288-1.1	Women's 300-needle	.08	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
[3] 289.1	Men's, 220-needle	.06	58.4	58.4	58.4	58.4	58.4	58.4	58.4	65.8	65.8	66.7	70.4	70.4	62.3
[3] 290-1.1	Nylon, women's, full-fashioned, 45 gauge, 40 denier.	.24	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
	Underwear, f. o. b. shipping point (composite price):														
	Rayon panties, women's:														
291-1.2	Circular knit	.02	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
291-2.2	Warp knit	(6)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
	Cotton:														
291-3.1	Shirts, athletic, knit, men's	.02	(1)	(1)	(1)	(1)	(1)	(1)	(2)	(2)	(2)	(2)	(1)	(1)	(2)
291-4.3	Shorts, woven, men's	.03	(1)	(1)	(1)	(1)	(1)	(1)	(2)	(2)	(2)	(2)	(1)	(1)	(2)
291-5.1	Union suits, knit, boys'	.03	(1)	(1)	(1)	(1)	(1)	(1)	(2)	(2)	(2)	(2)	(1)	(1)	(2)
291-6.1	Union suits, knit, men's	.19	(1)	(1)	(1)	(1)	(1)	(1)	(2)	(2)	(2)	(2)	(1)	(1)	(2)

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Unit	AVERAGE PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	TEXTILE PRODUCTS—Continued														
	Rayon, f. o. b. producer's plant, minimum freight allowed to destination:														
	Staple fiber, in bales:														
295-1	Acetate, 5 denier	Pound	$0.430	$0.430	$0.430	$0.430	$0.430	$0.430	$0.430	$0.430	$0.430	$0.430	$0.445	$0.460	$0.434
295-2	Viscose, 1½ denier	do	.250	.250	.250	.250	.250	.250	.250	.250	.250	.250	.265	.280	.254
	Yarn, first quality, minimum filament:														
	Acetate, natural cones:														
295-3.1	100 denier	do	.730	.730	.730	.730	.730	.730	.730	.730	.730	.730	.765	.800	.739
295-4.1	150 denier	do	.560	.560	.560	.560	.560	.560	.560	.560	.560	.560	.595	.630	.569
	Viscose, bleached, skeins:														
295-5	100 denier	do	.730	.730	.730	.730	.730	.730	.730	.730	.730	.730	.765	.800	.739
295-6	150 denier	do	.550	.550	.550	.550	.550	.550	.550	.550	.550	.550	.585	.620	.559
	Silk, Japan:														
	Raw silk, in bales, New York spot market:														
	White:														
299-1	13/15 denier, 87 percent	do	(2)	(2)	(2)	(2)	(2)	(2)	13.710	11.960	10.204	9.902	8.780	7.684	(2)
301	13/15 denier, 78 percent	do	(2)	(2)	(2)	(2)	(2)	(2)	7.460	7.045	6.820	7.018	6.405	6.272	(2)
300	20/22 denier, 81 percent	do	(2)	(2)	(2)	(2)	(2)	(2)	(2)	7.810	7.949	7.948	6.980	6.544	(2)
[3] 302.1	20/22 denier, 85 percent	do	(2)	(2)	(2)	(2)	(2)	(2)	9.590	9.315	8.968	8.606	7.860	7.030	(2)
	Yarn, thrown, white; f. o. b. New York:														
	Knitting, 13/15 denier:														
306-1	3-thread, 87 percent, 20 turns	do	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
307-1	4-thread, 85 percent, 15 turns	do	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
308-1	6-thread, 78 percent, 5 turns	do	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
305-1	Weaving, 20/22 denier, 2-thread, 83 percent, 60/65 turns, crepe, on bobbins.	do	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	Woolen and worsted goods:														
	Dress goods, f. o. b. mill:														
311.2	Crepe 8½-9 oz./yd., 60 inch	Yard	1.287	1.287	1.287	1.287	1.287	1.287	1.287	1.287	1.287	1.332	1.374	1.411	1.309
[3] 313.1	Flannel, 7-7½ oz./yd., 54 inch	do	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	1.584	1.603	1.658	(2)
315	Flannel, 8 oz./yd., 54-55 inch	do	1.683	1.683	1.683	1.683	1.683	1.683	1.683	1.683	1.851	1.851	1.851	1.851	1.740

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Relative importance, year 1946	INDEXES (1926=100) OF PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	TEXTILE PRODUCTS—Continued														
	Rayon, f. o. b. producer's plant, minimum freight allowed to destination.	0.30	30.2	30.2	30.2	30.2	30.2	30.2	30.2	30.2	30.2	30.2	32.0	33.8	30.7
	Staple fiber, in bales:														
295-1	Acetate, 5 denier	(6)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
295-2	Viscose, 1½ denier	.01	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
	Yarn, first quality, minimum filament:														
	Acetate, natural cones:														
295-3.1	100 denier	.04	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
295-4.1	150 denier	.04	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
	Viscose, bleached, skeins:														
295-5	100 denier	.06	28.4	28.4	28.4	28.4	28.4	28.4	28.4	28.4	28.4	28.4	29.8	31.2	28.8
295-6	150 denier	.15	30.3	30.3	30.3	30.3	30.3	30.3	30.3	30.3	30.3	30.3	32.2	34.1	30.8
	Silk, Japan	.50	(2)	(2)	(2)	(2)	(2)	(2)	126.7	134.8	126.5	125.7	115.0	103.2	(2)
	Raw silk, in bales, New York spot market:														
	White:														
299-1	13/15 denier, 87 percent	.17	(2)	(2)	(2)	(2)	(2)	(2)	(1)	(1)	(1)	(1)	(1)	(1)	(2)
301	13/15 denier, 78 percent	.10	(2)	(2)	(2)	(2)	(2)	(2)	119.7	113.0	109.4	112.6	102.7	100.6	(2)
300	20/22 denier, 81 percent	.11	(2)	(2)	(2)	(2)	(2)	(2)	(2)	124.1	126.4	126.3	110.9	104.0	(2)
[3] 302.1	20/22 denier, 85 percent	.06	(2)	(2)	(2)	(2)	(2)	(2)	141.0	137.0	131.9	126.6	115.6	103.4	(2)
	Yarn, thrown, white: f. o. b. New York:														
	Knitting, 13/15 denier:														
306-1	3-thread, 87 percent, 20 turns	.01	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
307-1	4-thread, 85 percent, 15 turns	.01	(2)	(2)	(2)	(2)	(2)	(2)	(1)	(2)	(2)	(2)	(2)	(2)	(2)
308-1	6-thread, 78 percent, 5 turns	.02	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
305-1	Weaving, 20/22 denier, 2-thread, 83 83 percent, 60/65 turns, crepe, on bobbins.	.02	(2)	(2)	(2)	(2)	(2)	(1)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	Woolen and worsted goods	1.38	112.7	112.7	112.7	112.7	112.7	121.7	112.7	112.8	113.9	116.6	117.7	119.0	115.7
	Dress goods, f. o. b. mill:														
311.2	Crepe 8½-9 oz./yd., 60 inch	.04	105.4	105.4	105.4	105.4	105.4	105.4	105.4	105.4	105.4	109.0	112.5	115.5	107.2
[3] 313.1	Flannel, 7-7½-oz./yd., 54 inch	.04	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	124.6	126.1	130.5	(2)
315	Flannel, 8 oz./yd., 54-55 inch	(6)	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3	110.3	110.3	110.3	110.3	103.7

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Unit	AVERAGE PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	TEXTILE PRODUCTS—Continued														
	Woolen and worsted goods—Con.														
	Overcoating, f. o. b. mill:														
[3] 310.1	Women's all wool suede, 17 oz./-yd., 54–56 inch.	Yard	$2.500	$2.500	$2.500	$2.500	$2.500	$2.500	$2.500	$2.500	$2.500	$2.500	$2.500	$2.500	$2.500
[3] 316.1	Men's all wool, 28 oz./yd., 54–56 inch.	do	3.193	3.193	3.193	3.193	3.193	3.193	3.193	3.193	3.193	3.193	3.193	3.282	3.201
317–1	Knitted 17 oz./yd., 55 inch	do	2.440	2.440	2.440	2.440	2.440	2.440	2.440	2.440	2.620	2.620	2.620	2.620	2.501
	Suiting, f. o. b. mill:														
[3] 309.1	Fancy mixture, all wool, 14–14½-oz./yd., 59 inch.	do	3.267	3.267	3.267	3.267	3.267	3.267	3.267	3.267	3.663	3.663	3.638	3.638	3.397
312–1.1	Worsted, fancy twist, 13–13½-oz./yd., 58 inch.	do	2.302	2.302	2.302	2.302	2.302	2.302	2.302	2.302	2.426	2.549	2.549	2.549	2.376
[3] 314–1	All wool covert 13–13½-oz./yd., 58–60 inch.	do	2.822	2.822	2.822	2.822	2.822	2.822	2.822	3.069	3.069	3.069	3.106	3.218	2.941
[3] 323 1	All wool shetland type, 14½-oz./yd., 58 inch.	do	1.634	1.634	1.634	1.634	1.634	1.634	1.634	1.634	1.634	1.634	1.683	1.732	1.647
	Serge:														
[3] 318.1	Piece dyed 15–15½-oz./yd., 58 inch.	do	2.698	2.698	2.698	2.698	2.698	2.698	2.698	2.698	2.834	2.970	2.970	2.970	2.780
[3] 319.2	Piece dyed 12–12½-oz./yd., all wool, 58 inch.	do	2.178	2.178	2.326	2.326	2.326	2.326	2.326	2.326	2.326	2.326	2.326	2.326	2.291
	Uniform serge:														
320	Fine grade, 12-oz./yd., 56–58 inch.	do	3.292	3.292	3.292	3.292	3.292	3.292	3.292	3.292	3.453	3.614	3.614	3.614	3.389
321	Medium grade, 12-oz./yd., 56–58 inch.	do	2.797	2.797	2.797	2.797	2.797	2.797	2.797	2.797	2.883	.2.970	2.970	2.970	2.849
322	Unfinished worsted, 13 oz./yd.	do	2.277	2.277	2.277	2.277	2.277	2.277	2.277	2.277	2.401	.2.524	2.524	2.524	2.352
	Yarn, worsted, Bradform system, weaving, f. o. b. mill:														
324	2/32's, crossbred stock, white	Pound	1.900	1.900	1.900	1.900	1.900	1.900	1.900	1.900	1.900	1.900	1.900	1.900	1.900
325	2/40's, halfblood	do	2.150	2.150	2.150	2.150	2.150	2.150	2.150	2.150	2.150	2.150	2.150	(2)	2.150
326	2/50's, fine	do	2.450	2.450	2.450	2.450	2.450	2.450	2.450	2.450	2.450	2.450	2.450	(2)	[1] 2.450
	Other textile products:														
327	Burlap, 10½ ounce, 40 inch, spot carlots, ex-dock or ex-warehouse, New York.	Yard	.118	.118	.118	.118	.118	.118	.118	.116	.116	.116	.218	.222	.135

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Relative importance, year 1946	INDEXES (1926=100) OF PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	TEXTILE PRODUCTS—Continued														
	Woolen and worsted goods—Con.														
	Overcoating, f. o. b. mill:														
[3] 310.1	Women's all wool suede 17 oz./yd., 54–56 inch.	0.03	109.9	109.9	109.9	109.9	109.9	109.9	109.9	109.9	109.9	109.9	109.9	109.9	109.9
[3] 316.1	Men's all wool, 28 oz./yd., 54–56 inch	.10	111.1	111.1	111.1	111.1	111.1	111.1	111.1	111.1	111.1	111.1	111.1	114.2	111.4
317-1	Knitted 17 oz./yd., 55 inch	.10	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
	Suiting, f. o. b. mill:														
[3] 309.1	Fancy mixture all wool, 14–14½ oz./yd., 59 inch.	.07	101.7	101.7	101.7	101.7	101.7	101.7	101.7	101.7	114.1	114.1	113.3	113.3	105.8
312-1.1	Worsted, fancy twist, 13–13½ oz./yd., 58 inch.	.06	97.4	97.4	97.4	97.4	97.4	97.4	97.4	97.4	102.6	107.8	107.8	107.8	100.5
[3] 314-1	All wool covert, 13/13½ oz./yd., 58–60 inch.	.03	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
[3] 323.1	All wool shetland type, 14½ oz./yd., 58 inch.	.03	113.1	113.1	113.1	113.1	113.1	113.1	113.1	113.1	113.1	113.1	116.6	120.0	114.0
	Serge:														
[3] 318.1	Piece dyed 15–15½ oz./yd., 58 inch.	.09	150.3	150.3	150.3	150.3	150.3	150.3	150.3	150.3	157.9	165.5	165.5	165.5	154.9
319.2	Piece dyed 12–12½ oz./yd., all wool, 58 inch.	.13	149.2	149.2	159.3	159.3	159.3	159.3	159.3	159.3	159.3	159.3	159.3	159.3	156.9
	Uniform serge:														
320	Fine grade, 12 oz./yd., 56–58 inch.	.09	119.6	119.6	119.6	119.6	119.6	119.6	119.6	119.6	125.5	131.3	131.3	131.3	123.1
321	Medium grade, 12 oz./yd., 56–58 inch.	.08	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	144.4	148.7	148.7	148.7	142.6
322	Unfinished worsted, 13 oz./yd	.07	113.6	113.6	113.6	113.6	113.6	113.6	113.6	113.6	119.8	125.9	125.9	125.9	117.3
	Yarn, worsted, Bradford system, weaving, f. o. b. mill:														
324	2/32's, crossbred stock, white	.12	132.4	132.4	132.4	132.4	132.4	132.4	132.4	132.4	132.4	132.4	132.4	132.4	132.4
325	2/40's, halfblood	.14	116.0	116.0	116.0	116.0	116.0	116.0	116.0	116.0	116.0	116.0	116.0	(2)	[10] 116.0
326	2/50's, fine	.16	116.3	116.3	116.3	116.3	116.3	116.3	116.3	116.3	116.3	116.3	116.3	(2)	[10] 116.3
	Other textile products	**.67**	**101.9**	**102.0**	**109.6**	**110.5**	**111.9**	**112.3**	**113.5**	**121.7**	**126.7**	**130.6**	**161.3**	**168.1**	**122.8**
327	Burlap, 10½ ounce, 40 inch, spot carlots, ex-dock, or ex-warehouse, New York.	.17	128.7	128.7	128.7	128.7	128.7	128.7	128.7	127.0	126.5	126.5	237.8	242.6	147.2

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Unit	AVERAGE PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	TEXTILE PRODUCTS—Continued														
	Other textile products—Continued.														
328	Hemp, manila, Davao, grade I, c. i. f. New York.	Pound	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	.236	(2)
329	Jute, raw, native firsts, f. o. b. New York.	do	$0.080	$0.078	$0.078	$0.086	$0.086	$0.086	$0.088	$0.088	$0.088	$0.092	$0.160	$0.165	$0.098
	Leather, artificial, f. o. b. mill:														
330	Heavy, 50 inch, pyroxylin coated sateen.	Yard	.720	.720	.720	.740	.817	.817	.817	.817	.817	.866	9.11	1.010	.816
331	Light, 36 inch, pyroxylin coated sheeting.	do	.334	.334	.334	.343	.379	.379	.379	.379	.379	.402	.428	.190	.381
	Rope:														
332	Cotton, 5/16 inch, second grade, f. o. b. factory.	Pound	.331	.331	.358	.378	.394	.394	.394	.496	.523	.552	.552	.552	.438
333	Manila, ¾ inch, f. o. b. New York	do	.176	.176	.176	.176	.176	.176	.224	.236	.236	.236	.236	.236	.206
[3] 334.1	No. 1, all Agaves, ¾ inch, Sisal or Hennequin, f. o. b. New York.	do	.138	.138	.138	.138	.138	.138	.191	.205	.205	.205	.205	.205	.170
[3] 335.1	Sisal, Mexican, grade A, f. o. b. port of entry.	do	.065	.065	.065	.065	.065	.065	.065	.065	.065	.075	.113	.113	.074
	Thread:														
336	Cotton, 6-cord, delivered	100 yards	.028	.028	.035	.035	.035	.035	.035	.039	.041	.041	.044	.044	.037
337	Linen, shoe, 10's, f. o. b. New York	Pound	2.450	2.450	2.450	2.450	2.450	2.450	2.509	2.744	2.744	2.744	2.744	2.744	2.578
	Twine:														
338	Binder, standard, f. o. b. mill	50-lb. bale	5.819	5.819	5.819	5.819	5.819	5.819	5.819	5.819	5.819	6.412	8.788	8.788	6.379
339	Cotton, No. 1 wrapping, f. o. b. mill	Pound	.424	.429	.457	.476	.491	.491	.491	.574	.600	.629	.629	.629	.527
341	Yarn, carpet. jute, f. o. b. mill	do	.195	.195	.195	.195	.195	.195	.195	.195	.195	.195	.232	.253	.203
	FUEL AND LIGHTING:														
	Anthracite, on tracks, destination (composite price):														
343	Chestnut	Net ton	12.452	12.467	12.467	12.467	12.482	12.726	13.622	13.584	13.593	13.593	13.597	13.620	13.056
344	Egg	do	12.297	12.320	12.320	12.320	12.334	12.580	13.473	13.438	13.446	13.446	13.450	13.484	12.909
345	Pea	do	10.963	10.959	10.959	10.959	10.969	11.198	11.993	1.951	11.965	11.965	11.970	11.988	11.487
	Bituminous coal, on tracks, destination (composite price):														
346	Mine run	do	5.413	5.447	5.451	5.454	5.740	5.832	5.949	5.972	5.976	5.989	5.998	6.014	5.775
347	Prepared sizes	do	5.709	5.709	5.709	5.709	5.976	6.094	6.186	6.194	6.199	6.200	6.212	6.305	6.017
348	Screenings	do	4.537	4.537	4.537	4.537	4.740	4.862	5.023	5.026	5.030	5.030	5.030	5.082	4.831

See footnotes at end of table.

Table 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Relative importance, year 1946	INDEXES (1926=100) OF PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	TEXTILE PRODUCTS—Continued														
	Other textile products—Continued														
328	Hemp, manila, Davao, grade 1, c. i. f. New York.	0.02	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	160.0	(2)
329	Jute, raw, native firsts, f. o. b. New York	.02	88.8	87.3	87.3	96.2	96.2	96.2	97.7	97.7	97.7	103.2	178.6	184.2	109.7
	Leather, artificial, f. o. b. mill:														
330	Heavy, 50 inch, pyroxylin coated sateen.	.03	105.2	105.2	105.2	108.0	119.3	119.3	119.3	119.3	119.3	126.5	133.1	147.5	119.1
331	Light, 36 inch, pyroxylin coated sheeting.	.01	96.7	96.7	96.7	99.2	109.6	109.6	109.6	109.6	109.6	116.3	123.9	141.8	110.2
	Rope:														
332	Cotton, 5/8 inch, second grade, f. o. b. factory.	.01	120.3	120.3	130.3	137.4	143.1	143.1	143.1	180.5	190.1	200.8	200.8	200.8	159.3
333	Manila, 3/4 inch, f. o. b. New York	.03	78.5	78.5	78.5	78.5	78.5	78.5	99.9	105.3	105.3	105.3	105.3	105.3	91.6
[3] 334.1	No. 1, all Agaves, 3/4 inch, Sisal or Hennequin, f. o. b. New York.	.03	91.8	91.8	91.8	91.8	91.8	91.8	127.5	136.5	136.5	136.5	136.5	136.5	113.6
[3] 335.1	Sisal, Mexican, grade A, f. o. b. port of entry.	.02	66.2	66.2	66.2	66.2	66.2	66.2	66.2	66.2	66.2	76.1	115.4	115.4	75.5
	Thread:														
336	Cotton, 6-cord, delivered	.21	76.7	76.7	95.9	95.9	95.9	95.9	95.9	107.9	120.0	120.0	120.0	120.0	101.6
337	Linen, shoe, 10's, f. o. b. New York	.01	125.9	125.9	125.9	125.9	125.9	125.9	128.9	141.0	141.0	141.0	141.0	141.0	132.5
	Twine:														
338	Binder, standard, f. o. b. mill	.04	89.1	89.1	89.1	89.1	89.1	89.1	89.1	89.1	89.1	98.2	134.5	134.5	97.7
339	Cotton, No. 1 wrapping, f. o. b. mill	.05	150.8	152.8	162.6	169.3	174.8	174.8	174.8	204.1	213.5	224.0	224.0	224.0	187.6
341	Yarn, carpet, jute, f. o. b. mill	.02	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	116.2	126.5	101.6
	FUEL AND LIGHTING	**13.07**	**84.9**	**85.1**	**85.0**	**86.1**	**86.1**	**87.8**	**90.3**	**94.4**	**94.3**	**94.2**	**94.5**	**96.1**	**90.1**
	Anthracite, on tracks, destination (composite price).	**1.19**	**103.9**	**104.0**	**104.0**	**104.0**	**104.1**	**106.1**	**114.5**	**113.4**	**113.5**	**113.5**	**113.5**	**113.7**	**109.0**
343	Chestnut	.63	101.3	101.4	101.4	101.4	101.5	103.5	110.8	110.5	110.6	110.6	110.6	110.8	106.2
344	Egg	.14	103.6	103.8	103.8	103.8	104.0	106.0	113.5	113.3	113.3	113.3	113.4	113.6	108.8
345	Pea	.42	115.3	115.2	115.2	115.2	115.3	117.7	126.1	125.7	125.8	125.8	125.9	126.0	120.8
	Bituminous coal, on tracks, destination (composite price).	**3.87**	**125.1**	**125.1**	**125.2**	**125.2**	**125.3**	**132.8**	**136.1**	**136.7**	**137.0**	**137.2**	**137.4**	**138.9**	**132.5**
346	Mine run	1.98	126.2	126.3	126.4	126.4	133.1	135.2	137.9	138.4	138.5	138.8	139.0	140.1	133.9
347	Prepared sizes	1.21	119.1	119.1	119.1	119.1	124.7	127.1	129.0	129.2	129.3	129.3	129.6	131.5	125.5
348	Screenings	.68	132.6	132.6	132.6	132.6	138.5	142.1	146.8	146.9	147.0	147.0	147.0	148.5	141.2

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Unit	AVERAGE PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	FUEL AND LIGHTING—Continued														
	Coke:														
349	Beehive, Connellsville furnace, f. o. b. oven.	Net ton	$7.500	$7.500	$7.500	$7.500	$7.500	$7.500	$8.750	$8.000	$8.750	$8.750	$8.750	$8.750	$8.053
	Byproduct, foundry delivered:														
350.1	Birmingham, Ala., switching area	do	10.900	10.900	10.900	10.900	10.900	10.900	12.250	12.250	12.250	12.250	12.250	12.250	11.575
351	Newark, N. J	do	13.725	13.725	13.725	13.725	13.725	13.725	15.075	15.075	15.075	15.375	15.075	15.075	14.400
352	Chicago (outside)	do	13.000	13.000	13.000	13.000	13.000	13.000	14.350	14.350	14.350	14.350	14.350	14.350	13.675
353	**Electricity, commercial and industrial sales of light and power, all consumers (composite price).**	**100 kw-hr**	**1.498**	**1.543**	**1.479**	**1.441**	**1.451**	**1.455**	**1.420**	**1.384**	**1.400**	**1.388**	**1.411**	**1.424**	**1.438**
[3] 354.1	Gas (composite of 354.1A and 354.1B)	Dekatherm	.190	.194	.196	.196	.197	.196	.193	.196	.202	.204	.208	.204	.198
[3] 354.1A	Gas, manufactured, sales by utilities for industrial consumption and electric power generation (adjusted for seasonal variations).	do	.948	.912	.982	.979	.942	.959	.932	.943	.929	.937	.948	.942	.946
[3] 354.1B	**Gas, natural, sales by utilities for industrial consumption and electric power generation (adjusted for seasonal variations).**	do	**.164**	**.169**	**.168**	**.168**	**.171**	**.169**	**.172**	**.169**	**.177**	**.178**	**.181**	**.178**	**.172**
	Petroleum and products:														
	Fuel oil, f. o. b. refinery:														
355	Oklahoma, No. 2 straw	Gallon	.036	.041	.041	.041	.041	.041	.041	.045	.045	.045	.045	.048	.043
356	Pennsylvania 36–40 gravity	do	.058	.058	.058	.058	.058	.058	.058	.062	.062	.062	.062	.066	.060
	Gasoline, f. o. b. refinery:														
357	Natural, Oklahoma group 3, grade 26–70.	do	.041	.032	.028	.028	.029	.032	.034	.043	.045	.046	.048	.050	.038
[3] 358.1	Motor, California	do	.070	.070	.070	.070	.070	.070	.070	(2)	(2)	(2)	(2)	(2)	(2)
359	North Texas, regular grade	do	.060	.060	.060	.060	.060	.060	.061	.070	.070	.070	.971	.072	.065
360	Oklahoma, regular grade	do	.055	.053	.050	.050	.054	.058	.060	.068	.070	.070	.070	.070	.061
361-1	Pennsylvania, regular grade	do	.070	.069	.068	.068	.068	.070	.070	.075	.075	.075	.072	.072	.071
	Kerosene, water white, f. o. b. refinery:														
362	Bayonne, 41°–43° gravity, for export	do	.061	.061	.061	.061	.061	.061	.061	.061	.061	.061	.061	.061	.061
363	Western Pennsylvania, other Districts, 47° gravity.	do	.066	.070	.070	.070	.070	.070	.071	.074	.074	.074	.074	.075	.072

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Relative importance, year 1946	INDEXES (1926=100) OF PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	FUEL AND LIGHTING—Continued														
	Coke	0.95	134.9	134.9	134.9	133.5	133.5	133.5	147.5	147.0	147.5	147.5	147.5	147.5	140.4
349	Beehive, Connellsville furnace, f. o. b. oven.	.03	182.6	182.6	182.6	182.6	182.6	182.6	213.1	194.8	213.1	213.1	213.1	213.1	196.1
	Byproduct, foundry delivered:														
350.1	Birmingham, Ala. switching area	.14	177.2	177.2	177.2	177.2	177.2	177.2	199.2	199.2	199.2	199.2	199.2	199.2	188.2
351	Newark, N. J.	.76	129.2	129.2	129.2	129.2	129.2	129.2	141.9	141.9	141.9	141.9	141.9	141.9	135.6
352	Chicago (outside)	.02	130.1	130.1	130.1	130.1	130.1	130.1	143.6	143.6	143.6	143.6	143.6	143.6	136.8
353	**Electricity, commercial and industrial sales of light and power, all consumers (composite price).**	1.40	69.2	71.3	68.3	86.6	67.0	67.2	65.8	63.9	64.7	64.1	85.2	65.8	88.8
[3] 354.1	**Gas (composite of 354.1A and 354.1B)**	.83	77.4	79.1	79.8	79.7	80.2	79.6	80.7	79.5	82.3	82.8	84.4	83.1	80.7
[3] 354.1A	**Gas, manufactured, sales by utilities for industrial consumption and electric power generation (adjusted for seasonal variations).**		(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
[3] 354.1B	**Gas, natural, sales by utilities for industrial consumption and electric power generation (adjusted for seasonal variations).**		(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
	Petroleum and products	5.03	81.5	81.6	81.2	82.8	83.5	84.0	65.1	72.8	73.0	73.1	73.4	75.8	87.5
	Fuel oil, f. o. b. refinery:														
355	Oklahoma, No. 2 straw	.39	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
356	Pennsylvania 36–40 gravity	.67	89.7	89.7	89.7	89.7	89.7	89.7	89.7	97.5	97.5	97.5	97.5	103.0	93.6
	Gasoline, f. o. b. refinery:														
357	Natural, Oklahoma group 3, grade 26–70.	.12	46.1	35.7	30.8	30.8	32.9	35.7	38.0	48.2	50.3	51.7	53.8	55.9	42.6
[3] 358.1	Motor, California	.31	50.8	50.8	50.8	50.8	50.8	50.8	50.8	(2)	(2)	(2)	(2)	(2)	(2)
359	North Texas, regular grade	.57	58.5	58.5	58.5	58.5	58.5	58.5	59.5	68.3	68.3	68.3	68.9	70.7	63.0
360	Oklahoma, regular grade	.24	52.9	51.0	48.3	48.5	52.6	55.8	57.8	65.2	67.4	67.6	67.6	67.6	58.6
361-1	Pennsylvania, regular grade	.54	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
	Kerosene, water white, f. o. b. refinery:														
362	Bayonne, 41°–43° gravity, for export	.09	71.1	71.1	71.1	71.1	71.1	71.1	71.1	71.1	71.1	71.1	71.1	71.1	71.1
363	Western Pennsylvania, other Districts, 47° gravity.	.11	63.0	67.8	67.8	67.8	67.8	67.8	68.5	71.0	71.0	71.0	71.0	72.3	68.9

See footnotes at end of table.

Table 12.—*Primary market prices, index numbers and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Unit	AVERAGE PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	FUEL AND LIGHTING—Continued														
	Petroleum and products—Continued														
	Petroleum, crude, f. o. b. well:														
364	California, Signal Hill, 20°-20.9° gravity.	Barrel	$0.930	$0.930	$0.930	$1.010	$1.030	$1.030	$1.030	$1.240	$1.240	$1.240	$1.240	$1.240	$1.094
365	Kansas-Oklahoma 33°-33.9° gravity	do	1.110	1.110	1.110	1.190	1.210	1.210	1.260	1.460	1.460	1.460	1.485	1.560	1.307
366	Pennsylvania, Bradford District, 44.6° gravity.	do	3.000	3.000	3.000	3.100	3.100	3.100	3.100	3.350	3.410	3.410	3.410	3.550	3.213
	METALS AND METAL PRODUCTS:														
	Agricultural implements:														
	Farm machinery, f. o. b. shipping point (composite price):														
	Binder:														
367-1	Corn	Each	206.000	206.000	208.300	208.300	213.688	229.655	229.655	229.196	229.130	229.130	242.535	250.860	223.656
367-2.1	Grain	do	230.600	230.600	230.600	230.600	236.462	254.220	254.220	253.719	253.650	253.650	268.565	277.740	248.025
367-3.2	Corn picker-husker	do	417.500	417.500	417.500	417.500	428.562	460.275	460.275	459.344	459.210	459.210	487.775	505.760	449.470
	Cultivator:														
[3] 368-1.4	1- and 2-row riding	do	(2)	(2)	(2)	(2)	(2)	72.127	72.127	71.742	71.965	71.965	75.620	79.280	(2)
[3] 368-2.1	2-row, tractor-drawn	do	(2)	(2)	(2)	100.750	104.863	109.725	109.725	110.851	110.820	110.820	113.645	119.580	(2)
369-1	Drill, grain, horse-drawn	do	150.960	150.960	154.053	154.053	158.904	168.071	168.071	167.841	167.800	167.800	174.463	179.053	163.548
	Engine:														
370-1.2	Less than 5 horsepower	do	72.800	72.800	72.800	72.800	72.800	79.600	79.600	81.760	82.480	82.480	87.520	90.260	79.033
[3] 370-2.1	5-10 horsepower, inclusive	do	107.800	107.800	107.800	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
370-3.1	More than 10 horsepower	do	502.600	502.600	502.600	502.600	522.330	568.660	568.660	568.660	568.660	568.660	568.660	539.371	533.076
370-4.2	Ensilage cutter (silo filler)	do	312.000	312.000	312.000	312.000	319.515	337.750	337.750	343.200	343.200	343.200	350.900	369.867	332.990
[3] 370-5.1	Feed grinder, power, burr type	do	38.400	38.400	38.400	38.400	38.400	42.340	42.340	42.240	42.240	42.240	45.060	46.000	41.231
	Harrow:														
[3] 372-1.2	Disk, horse-drawn	do	(2)	(2)	(2)	(2)	(2)	55.568	55.568	55.480	55.467	55.467	57.487	58.853	(2)
373-1	Spike-tooth	do	18.893	18.893	19.073	19.580	20.546	21.449	21.449	21.447	21.443	21.443	22.224	23.188	20.843
374-1	Spring-tooth	do	23.520	23.520	23.773	23.773	24.754	25.739	25.739	26.197	26.183	26.183	27.168	28.547	25.437
375-1.3	Harvester-thresher (combine)	do	1508.016	1508.016	1533.192	1533.192	1582.780	1665.783	1665.783	1680.580	1680.236	1680.236	1742.880	1818.600	1634.019
377-1.2	Hayloader	do	124.200	124.200	124.200	124.200	127.438	136.915	136.915	136.639	136.600	136.600	144.595	149.580	133.582
[3] 377-2.2	Manure spreader	do	(2)	(2)	155.290	155.290	162.655	171.935	171.935	171.598	171.550	171.550	178.472	185.152	(2)
377-3.3	Milking machine	do	170.392	170.392	170.392	170.392	170.392	172.805	172.805	174.492	174.492	174.492	177.470	(2)	(2)
378-1	Mower, horse-drawn	do	81.500	81.500	81.500	81.500	83.575	89.840	89.840	89.655	89.630	89.630	94.865	98.100	87.644

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Relative importance, year 1946	INDEXES (1926=100) OF PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	FUEL AND LIGHTING—Continued														
	Petroleum and products—Continued														
	Petroleum, crude, f. o. b. well:														
364	California, Signal Hill, 20°-20.9° gravity.	0.43	85.2	85.2	85.2	92.5	94.4	94.4	94.4	113.6	113.6	113.6	113.6	113.6	100.2
365	Kansas-Oklahoma 33°-33.9° gravity	1.37	58.9	58.9	58.9	63.2	64.2	64.2	66.9	77.5	77.5	77.5	78.8	82.8	69.4
366	Pennsylvania, Bradford District, 44.6° gravity.	.19	79.7	79.7	79.7	82.3	82.3	82.3	82.3	88.9	90.5	90.5	90.5	94.3	85.3
	METALS AND METAL PRODUCTS	13.32	105.7	108.8	108.4	108.8	109.4	112.2	113.3	114.0	114.2	125.8	130.2	134.7	115.5
	Agricultural implements	.35	98.1	98.1	98.5	98.6	101.7	107.0	107.2	108.5	108.6	108.7	112.5	117.1	105.5
	Farm machinery, f. o. b. shipping point (composite price).	.32	99.1	99.2	99.6	99.6	102.7	108.4	108.7	109.7	109.8	109.9	113.8	118.6	108.7
	Binder:														
367-1	Corn	(6)	123.9	123.9	125.3	125.3	128.5	138.1	138.1	137.9	137.8	137.8	145.9	150.9	134.5
367-2.1	Grain	.01	115.9	115.9	115.9	115.9	118.8	127.7	127.7	127.5	127.5	127.5	135.0	139.6	124.6
367-3.2	Corn picker-husker	(6)	96.3	96.3	96.3	96.3	98.8	106.1	106.1	105.9	105.9	105.9	112.5	116.6	103.6
	Cultivator:														
[3] 368-1.4	1- and 2-row riding	.01	(2)	(2)	(2)	(2)	(2)	119.1	119.1	118.4	118.8	118.8	124.8	130.9	(2)
[3] 368-2.1	2-row, tractor-drawn	(6)	(2)	(2)	(2)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(2)
369-1	Drill, grain, horse-drawn	.01	129.7	129.7	132.4	132.4	136.5	144.5	144.5	144.2	144.2	144.2	149.9	153.8	140.6
	Engine:														
370-1.2	Less than 5 horsepower	.01	101.5	101.5	101.5	101.5	101.5	110.9	110.9	113.9	114.9	114.9	122.0	125.8	110.1
[3] 370-2.1	5-10 horsepower, inclusive	(6)	111.2	111.2	111.2	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
370-3.1	More than 10 horsepower	(6)	95.2	95.2	95.2	95.2	98.9	107.7	107.7	107.7	107.7	107.7	107.7	101.0	102.2
370-4.2	Ensilage cutter (silo filler)	(6)	105.7	105.7	105.7	105.7	108.4	114.5	114.5	116.3	116.3	116.3	118.9	125.4	112.9
[3] 370-5.1	Feed grinder, power, hurr type	(6)	113.0	113.0	113.0	113.0	113.0	124.6	124.6	124.3	124.3	124.3	132.6	135.4	121.4
	Harrow:														
[3] 372-1.2	Disk, horse-drawn	.01	(2)	(2)	(2)	(2)	(2)	117.4	117.4	117.2	117.2	117.2	121.4	124.3	(2)
373-1	Spike-tooth	(6)	105.4	105.4	106.4	109.1	114.6	119.6	119.6	119.6	119.5	119.5	123.9	129.3	116.0
374-1	Spring-tooth	(6)	94.2	94.2	95.2	95.2	99.2	103.1	103.1	105.0	104.9	104.9	108.9	114.4	101.9
375-1.3	Harvester-thresher (combine)	.03	82.8	82.8	84.2	84.2	86.9	91.4	91.4	92.2	92.2	92.2	95.7	99.8	89.7
377-1.2	Hayloader	(6)	112.1	112.1	112.1	112.1	115.1	123.6	123.6	123.4	123.4	123.4	130.6	135.1	120.7
377-2.2	Manure spreader	.01	(2)	(2)	111.6	111.6	116.9	123.6	123.6	123.4	123.3	123.3	128.3	133.1	(2)
377-3.3	Milking machine	(6)	84.9	84.9	84.9	84.9	84.9	86.1	86.1	86.9	86.9	86.9	88.4	(2)	(2)
378-1	Mower, horse-drawn	.01	130.4	130.4	130.4	130.4	133.7	143.7	143.7	143.4	143.4	143.4	151.8	156.9	140.2

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Unit	AVERAGE PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	METALS AND METAL PRODUCTS—Continued														
	Agricultural implements—Con.														
	Farm machinery, f. o. b. shipping point—Continued														
	Planter, corn:														
[3]380-1.2	1-row, 1-horse	Each	(2)	(2)	(2)	(2)	(2)	$19.550	$20.045	$20.026	$20.020	$20.020	$21.022	$22.020	(2)
380-2	2-row	do	$71.600	$71.600	$71.600	$71.600	$73.475	78.925	78.925	78.762	78.740	78.740	83.400	86.300	$77.016
	Plow:														
380-3.2	Gang, 2-bottom	do	93.000	93.000	93.000	93.000	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
[3]380-4.5	Sulky, 1-bottom	do	(2)	(2)	(2)	(2)	(2)	65.814	65.814	65.800	65.800	65.800	65.800	65.800	(2)
381-1	Tractor, disk, 4-bottom	do	208.000	208.000	208.000	208.000	218.650	229.300	229.300	228.925	228.800	228.800	240.240	251.680	224.086
381-2	Tractor, moldboard, 2-bottom	do	98.780	98.780	98.780	98.780	101.342	108.905	108.905	108.691	108.660	108.660	115.040	119.000	106.253
381-3.1	Tractor, moldboard, 3-bottom	do	133.840	133.840	133.840	133.840	138.493	146.404	146.404	147.805	147.785	147.785	151.980	158.270	143.420
381-4.1	Tractor, moldboard, 4-bottom	do	199.040	199.040	199.040	199.040	205.866	217.614	217.614	219.732	219.700	219.700	226.118	235.700	213.281
382-1.2	Walking, 1-horse	do	9.335	9.335	9.515	9.682	10.080	10.379	10.321	10.312	10.310	10.310	10.605	11.242	10.124
[3]383-1.3	Walking, 2-horse	do	(2)	(2)	(2)	15.890	17.038	17.643	17.507	17.487	17.480	17.480	19.150	20.820	(2)
383-2	Potato digger, elevator type	do	145.100	145.100	145.100	145.400	149.438	160.315	160.315	160.001	159.950	159.950	169.235	175.220	156.349
	Rake:														
383-3	Side delivery	do	95.700	95.700	95.700	99.700	102.388	109.915	109.915	109.701	109.670	109.670	116.060	120.120	106.265
383-4	Sulky (dump)	do	41.800	41.800	41.800	41.800	42.888	46.070	46.070	45.981	45.970	45.970	48.685	50.380	44.960
388-1.2	Separator	do	78.452	78.452	78.452	78.452	78.452	83.290	84.228	84.128	84.128	86.190	89.010	89.950	82.830
[3]388-2.3	Spraying outfit, power	do	(2)	(2)	(2)	(2)	(2)	(2)	437.771	448.340	448.340	448.340	448.340	448.334	(2)
	Thresher, grain:														
393-1.2	Large	do	1125.933	1125.933	1152.187	1152.187	1200.529	1248.871	1248.871	1265.580	1265.340	1265.340	1286.347	1348.493	1224.213
[3]393-2.2	Small	do	(2)	(2)	(2)	(2)	(2)	(2)	1073.878	1071.648	1071.433	1071.433	1112.767	1139.187	(2)
	Tractor:														
394-1	2-plow	do	707.000	707.000	707.000	707.000	735.595	779.873	779.873	796.853	796.740	796.740	817.142	854.170	765.750
394-2.2	3-4 plow	do	1044.267	1044.267	1044.267	1044.267	1069.167	1132.253	1132.253	1148.878	1148.687	1148.687	1191.633	1257.213	1117.925
394-3.1	Crawler	do	2970.507	2970.507	2970.507	3006.240	3185.093	3296.893	3296.893	3296.893	3303.057	3321.547	3361.547	3501.443	3206.069
396-1.3	Wagon, 2-horse, with bed, no brake	do	127.432	127.432	128.483	129.534	131.998	139.971	142.247	139.929	139.915	139.915	142.605	154.386	137.149
	Other agricultural implements, f. o. b. factory:														
371	Forks, hay, freight equalized	Dozen	9.580	9.580	9.580	9.580	9.580	9.580	9.580	10.530	10.530	10.530	11.070	11.250	10.083
376.2	Hoes, freight equalized	do	7.330	7.330	7.330	7.330	7.330	7.330	7.330	8.060	8.060	8.060	8.855	9.120	7.793
384	Pumps, pitcher spout	Each	2.367	2.367	2.367	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
385.1	Rakes, hand, freight equalized	Dozen	7.980	7.980	7.980	7.980	7.980	7.980	7.980	8.780	8.780	8.780	9.035	9.120	8.363

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Relative importance, year 1946	INDEXES (1926=100) OF PRIMARY MARKET PRICES, 1946 January	February	March	April	May	June	July	August	September	October	November	December	Year
	METALS AND METAL PRODUCTS—Continued														
	Agricultural implements—Con.														
	Farm machinery, f. o. b. shipping point—Continued														
	Planter, corn:														
[3]380-1.2	1-row, 1-horse	(6)	(2)	(2)	(2)	(2)	(2)	110.2	112.9	112.8	112.8	112.8	118.5	124.1	(2)
380-2	2-row	0.01	115.1	115.1	115.1	115.1	118.0	126.9	126.9	126.6	126.5	126.5	134.0	138.7	123.8
	Plow:														
380-3.2	Gang, 2-bottom	(6)	95.7	95.7	95.7	95.7	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
[3]380-4.5	Sulky, 1-bottom	.01	(2)	(2)	(2)	(2)	(2)	102.4	102.4	102.4	102.4	102.4	102.4	102.4	(2)
381-1	Tractor, disk, 4-bottom	(6)	114.8	114.8	114.8	114.8	120.6	126.6	126.6	126.3	126.2	126.2	132.5	138.9	123.6
381-2	Tractor, moldboard, 2-bottom	.01	110.7	110.7	110.7	110.7	113.6	122.1	122.1	121.8	121.8	121.8	128.9	133.4	119.1
381-3.1	Tractor, moldboard, 3-bottom	(6)	118.0	118.0	118.0	118.0	122.1	129.1	129.1	130.4	130.3	130.3	134.0	139.6	126.5
381-4.1	Tractor, moldboard, 4-bottom	(6)	120.2	120.2	120.2	120.2	124.3	131.4	131.4	132.7	132.7	132.7	136.6	142.3	128.8
382-1.2	Walking, 1-horse	(6)	122.4	122.4	124.8	127.0	132.2	136.1	135.4	135.3	135.2	135.2	139.1	147.5	132.8
[3]383-1.3	Walking, 2-horse	(6)	(2)	(2)	(2)	101.7	109.0	112.9	112.0	111.9	111.9	111.9	122.6	133.2	(2)
383-2	Potato digger, elevator type	(6)	134.9	134.9	134.9	135.1	138.9	149.0	149.0	148.8	148.6	148.6	157.2	162.9	145.2
	Rake:														
383-3	Side delivery	(6)	112.4	112.4	112.4	117.1	120.3	129.1	129.1	128.9	128.8	128.8	136.3	141.1	124.8
383-4	Sulky (dump)	(6)	116.9	116.9	116.9	116.9	120.0	128.9	128.9	128.6	128.6	128.6	136.2	140.9	125.8
388-1.2	Separator	.01	114.9	114.9	114.9	114.9	114.9	121.9	123.3	123.2	123.2	126.2	130.3	131.7	121.3
[3]388-2.3	Spraying outfit, power	.01	(2)	(2)	(3)	(2)	(2)	(2)	113.5	116.2	116.2	116.2	116.2	116.2	(2)
	Thresher, grain:														
393-1.2	Large	.01	108.4	108.4	110.9	110.9	115.5	120.2	120.2	121.8	121.8	121.8	123.8	129.8	117.8
[3]393-2.2	Small	(6)	(2)	(2)	(2)	(2)	(2)	(2)	119.5	119.2	119.2	119.2	123.8	126.7	(3)
	Tractor:														
394-1	2-plow	.07	91.1	91.1	91.1	91.1	94.7	100.5	100.5	102.7	102.7	102.7	105.3	110.1	103.4
394-2.2	3-4 plow	.06	89.6	89.6	89.6	89.6	91.7	97.1	97.1	98.5	98.5	98.5	102.2	107.8	95.8
394-3.1	Crawler	.02	79.6	79.6	79.6	80.5	85.4	88.3	88.3	88.3	88.5	89.0	90.0	93.8	85.9
396-1.3	Wagon, 2-horse, with bed, no brake	.01	125.9	125.9	127.0	128.0	130.4	138.4	140.6	138.3	138.3	138.3	140.9	152.5	135.6
	Other agricultural implements, f. o. b. factory.	.03	------	------	------	------	------	------	------	------	------	------	------	------	------
371	Forks, hay, freight equalized	.01	105.5	105.5	105.5	105.5	105.5	105.5	105.5	115.9	115.9	115.9	121.9	123.8	111.0
376.2	Hoes, freight equalized	(6)	109.4	109.4	109.4	109.4	109.4	109.4	109.4	120.3	120.3	120.3	132.2	136.1	116.3
384	Pumps, pitcher spout	(6)	130.5	130.5	130.5	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
385.1	Rakes, band, freight equalized	(6)	114.3	114.3	114.3	114.3	114.3	114.3	114.3	125.7	125.7	125.7	129.4	130.5	119.7

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Unit	AVERAGE PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	METAL AND METAL PRODUCTS—Continued														
	Other agricultural implements, f. o. b. factory—Continued.														
390	Shovels, freight equalized	Dozen	$15.000	$15.000	$15.000	$15.270	$16.350	$16.350	$16.350	$17.100	$17.100	$17.100	$17.100	$17.320	$16.249
391.1	Spades, freight equalized	do	10.250	10.250	10.250	10.434	11.172	11.172	11.172	11.685	11.685	11.685	11.685	11.685	11.089
397	Windmill	Each	41.060	41.060	41.060	41.060	42.090	44.965	45.580	45.580	45.558	45.550	45.550	50.400	44.183
	Iron and steel:														
398	Angle bars, railroad, f. o. b. mill	100 pounds	2.700	2.775	2.850	2.850	2.850	2.850	2.850	2.850	2.850	2.850	2.850	2.940	2.839
399	Augers, f. o. b. factory, freight allowed up to 50 cents per hundredweight.	Each	.850	.850	.850	.898	.970	.970	.970	.970	.970	.970	.985	1.000	.938
400.1	Axes, f. o. b. factory, freight equalized up to 50 cents per hundredweight.	Dozen	16.538	16.538	16.538	16.538	16.538	16.538	16.538	16.538	16.538	16.538	18.375	18.375	16.850
	Bar:														
401-1	Tool steel, high speed, f. o. b. Pittsburgh, Bethlehem, and Syracuse.	Pound	.670	.698	.725	.725	.725	.725	.725	.725	.725	.725	.725	.725	.718
402	Alloy steel No. 3100, nickel-chromium, f. o. b. Pittsburgh basing point.	100 pounds	3.550	3.621	3.692	3.694	3.694	3.782	3.841	3.841	3.841	3.841	3.841	3.873	3.760
403	Concrete reinforcing, f. o. b. Pittsburgh basing point.	do	2.150	2.250	2.350	2.350	2.350	2.350	2.350	2.350	2.350	2.350	2.350	2.410	2.329
404	Steel, finished, f. o. b. Pittsburgh, basing point.	do	2.250	2.375	2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.540	2.471
405	Sheet, steel, f. o. b. Pittsburgh basing point.	Gross ton	36.000	37.000	38.000	38.000	38.000	38.000	38.000	38.000	38.000	38.000	38.000	38.000	37.736
[3] 406.1	Steel, cold finished, f. o. b. Pittsburgh.	100 pounds	2.750	2.925	3.100	3.100	3.100	3.100	3.100	3.100	3.100	3.100	3.100	3.100	3.054
407	Barrels, steel, f. o. b. factory	Each	2.500	2.500	2.500	2.500	2.980	2.980	2.980	2.980	2.980	2.980	2.980	2.980	2.817
408	Billets, steel, rerolling, f. o. b. Pittsburgh basing point.	Gross ton	36.000	37.500	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	38.604
[3] 409.1	Boiler tubes, 2 to 2¼ inches, f. o. b. Pittsburgh basing point (composite price).	100 feet	16.740	17.569	18.398	18.400	18.400	18.400	18.400	18.400	18.400	18.400	18.400	18.400	18.208
	Bolts:														
410.1	Machine, ½ by 6 inches, square head, square nut, cut thread, f. o. b. Pittsburgh basing point.	100 bolts	2.624	2.624	2.624	2.771	2.807	2.807	2.912	2.938	2.938	2.938	2.938	3.064	2.835

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Relative importance, year 1946	INDEXES (1926=100) OF PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	METALS AND METAL PRODUCTS—Continued														
	Other agricultural implements, f. o. b. factory—Continued														
390	Shovels, freight equalized	0.01	117.3	117.3	117.3	119.4	127.8	127.8	127.8	133.7	133.7	133.7	133.7	135.4	127.0
391.1	Spades, freight equalized	.01	156.2	156.2	156.2	159.1	170.3	170.3	170.3	178.1	178.1	178.1	178.1	178.1	169.0
397	Windmill	(6)	130.3	130.3	130.3	130.3	133.6	142.7	144.7	144.7	144.6	144.6	144.6	160.0	140.3
	Iron and steel	5.83	101.2	103.3	107.0	107.4	107.8	110.1	111.3	113.3	113.5	113.7	114.0	117.4	110.3
398	Angle bars, railroad, f. o. b. mill	.03	98.2	100.9	103.6	103.6	103.6	103.6	103.6	103.6	103.6	103.6	103.6	106.9	103.2
399	Augers, f. o. b. factory, freight allowed up to 50 cents per hundred weight.	(6)	105.9	105.9	105.9	111.9	120.9	120.9	120.9	120.9	120.9	120.9	122.7	124.6	116.8
400.1	Axes, f. o. b. factory, freight equalized up to 50 cents per hundred weight.	(6)	105.5	105.5	105.5	105.5	105.5	105.5	105.5	105.5	105.5	105.5	117.3	117.3	107.5
	Bar:														
401-1	Tool steel, high speed, f. o. b. Pittsburgh, Bethlehem, and Syracuse.	.01	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
402	Alloy steel No. 3100, nickel-chromium, f. o. b. Pittsburgh basing point.	.01	101.7	103.8	105.8	105.8	105.8	108.4	110.1	110.1	110.1	110.1	110.1	111.0	107.8
403	Concrete reinforcing, f. o. b. Pittsburgh basing point.	.07	109.8	115.0	120.1	120.1	120.1	120.1	120.1	120.1	120.1	120.1	120.1	123.1	119.0
404	Steel, finished, f. o. b. Pittsburgh basing point.	.30	112.7	119.0	125.2	125.2	125.2	125.2	125.2	125.2	125.2	125.2	125.2	127.2	123.8
405	Sheet, steel, f. o. b. Pittsburgh basing point.	.16	99.9	102.7	105.5	105.5	105.5	105.5	105.5	105.5	105.5	105.5	105.5	105.5	104.8
[3] 406.1	Steel, cold finished, f. o. b. Pittsburgh.	.06	111.8	118.9	126.0	126.0	126.0	126.0	126.0	126.0	126.0	126.0	126.0	126.0	124.1
407	Barrels, steel, f. o. b. factory	.08	111.1	111.1	111.1	111.1	132.4	132.4	132.4	132.4	132.4	132.4	132.4	132.4	125.2
408	Billets, steel, rerolling, f. o. b. Pittsburgh basing point.	.12	102.9	107.1	111.4	111.4	111.4	111.4	111.4	111.4	111.4	111.4	111.4	111.4	110.3
[3] 409.1	Boiler tubes, 2 to 2¼ inches, f. o. b. Pittsburgh basing point (composite price).	.05	107.8	113.1	118.5	118.5	118.5	118.5	118.5	118.5	118.5	118.5	118.5	118.5	117.2
	Bolts:														
410.1	Machine, ½ by 6 inches, square head, square nut, cut thread, f. o. b. Pittsburgh basing point.	.03	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Unit	AVERAGE PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	METALS AND METAL PRODUCTS—Continued														
	Iron and steel—Continued														
	Bolts—Continued														
411	Plow, Nos. 3 and 7 heads, 2 by 3/8 inch, f. o. b. Pittsburgh basing point.	100 Bolts	$1.120	$1.120	$1.120	$1.179	$1.198	$1.198	$1.254	$1.254	$1.254	$1.254	$1.254	$1.308	$1.210
412	Stove, square nut, f. o. b. Cleveland, Chicago, or New York basing point, freight allowed up to 65 cents per 100 pounds.	do	.180	.180	.180	.190	.193	.193	.200	.202	.202	.202	.202	.202	.194
413	Track, f. o. b. mill	100 pounds	4.750	4.750	4.750	4.999	5.082	5.082	5.142	6.205	6.500	6.500	6.500	6.500	5.575
414	Butts, 3½ by 3½ inches, f. o. b. factory	Dozen pairs	3.100	3.100	3.155	3.210	3.210	3.210	3.210	3.585	3.710	3.710	3.710	3.710	3.385
415	Cans, sanitary, No. 2, f. o. b. factory	1,000	19.000	19.000	19.000	19.000	19.000	19.000	19.000	19.000	19.000	19.000	19.000	19.000	19.000
[3] 416.3	Castings, gray iron, f. o. b. foundry (composite price).	Pound	(2)	(2)	.084	.091	.095	.098	.099	.099	.100	.101	.102	.105	(2)
417	Chisels, f. o. b. factory, freight allowed up to 50 cents per hundredweight.	Each	.522	.522	.522	.553	.598	.598	.598	.598	.598	.598	.608	.617	.578
418	Files, f. o. b. factory, freight allowed on 150 pounds.	Dozen	1.690	1.690	1.690	1.748	1.980	1.980	1.980	1.980	1.980	1.980	1.980	1.980	1.887
419.1	Hammers, carpenters', 1 pound, f. o. b. factory, freight equalized, plus freight allowance up to 50 cents per hundredweight from equalization point.	do	7,938	7,938	7.938	7.938	7.938	7.938	7.938	7.938	7.938	7.938	(2)	(2)	(2)
420.2	Hatchets, f. o. b. factory, freight equalized, plus freight allowance up to 50 cents per hundred-weight from equalization point.	do	9.996	9.996	9.996	9.996	9.996	9.996	9.996	9.996	9.996	9.996	(2)	(2)	(2)
421	Hooks, corn, f. o. b. factory, freight allowed up to 50 cents per hundredweight	do	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
422	Knobs, door, f. o. b. factory	Pair	.400	.400	.400	.400	.400	.400	.400	.450	.450	.450	.450	.450	.421
423	Locks, mortise, 3½ inches, f. o. b. factory	Each	.400	.400	.400	.400	.400	.400	.400	.450	.450	.450	.450	.450	.421
424	Nails, wire, base price, f. o. b. Pittsburgh basing point.	100 pounds	2.900	3.075	3.250	3.250	3.250	3.500	3.750	3.750	3.750	3.750	3.750	3.750	3.477
	Ore, iron, Mesabi, f. o. b. lower Lakes ports:														
425	Bessemer	Gross ton	4.700	4.700	4.700	4.700	4.700	4.825	5.200	5.200	5.200	5.200	5.200	5.200	4.964
426	Nonbessemer	do	4.550	4.550	4.550	4.550	4.550	4.675	5.050	5.050	5.050	5.050	5.050	5.050	4.814

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Relative importance, year 1946	INDEXES (1926=100) OF PRIMARY MARKET PRICES 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	METALS AND METAL PRODUCTS—Continued														
	Iron and steel—Continued														
411	Plow, Nos. 3 and 7 heads, 2 by ⅜ inch, f. o. b. Pittsburgh basing point.	0.03	108.2	108.2	108.2	113.9	115.8	115.8	121.2	121.2	121.2	121.2	121.2	126.4	117.0
412	Stove, square nut, f. o. b. Cleveland, Chicago, or New York basing point, freight allowed up to 65 cents per 100 pounds.	.03	119.3	119.3	119.3	126.0	127.6	127.6	132.4	133.6	133.6	133.6	133.6	133.6	128.4
413	Track, f. o. b. mill	.04	112.6	112.6	112.6	118.5	120.5	120.5	121.9	147.1	154.1	154.1	154.1	154.1	132.2
414	Butts, 3½ by 3½ inches, f. o. b. factory	.05	122.1	122.1	124.3	126.5	126.5	126.5	126.5	141.2	146.1	146.1	146.1	146.1	133.4
415	Cans, sanitary, No. 2, f. o. b. factory	.34	85.4	85.4	85.4	85.4	85.4	85.4	85.4	85.4	85.4	85.4	85.4	85.4	85.4
[3] 416.3	Castings, gray iron, f. o. b. foundry (composite price).	1.02	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
417	Chisels, f. o. b. factory, freight allowed up to 50 cents per hundredweight.	.01	117.4	117.4	117.4	124.2	134.4	134.4	134.4	134.4	134.4	134.4	136.5	138.6	129.8
418	Files, f. o. b. factory, freight allowed on 150 pounds.	.02	100.0	100.0	100.0	103.4	117.2	117.2	117.2	117.2	117.2	117.2	117.2	117.2	111.7
419.1	Hammers, carpenters', 1 pound, f. o. b. factory, freight equalized, plus freight allowance up to 50 cents per hundredweight from equalization point.	.01	105.3	105.3	105.3	105.3	105.3	105.3	105.3	105.3	105.3	105.3	(2)	(2)	(2)
420.2	Hatchets, f. o. b. factory, freight equalized, plus freight allowance up to 50 cents per hundredweight from equalization point.	.04	126.3	126.3	126.3	126.3	126.3	126.3	126.3	126.3	126.3	126.3	(2)	(2)	(2)
421	Hooks, corn, f. o. b. factory, freight allowed up to 50 cents per hundredweight.	.01	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
422	Knobs, door, f. o. b. factory	.06	114.3	114.3	114.3	114.3	114.3	114.3	114.3	128.6	128.6	128.6	128.6	128.6	120.2
423	Locks, mortise, 3½ inches, f. o. b. factory	.05	120.3	120.3	120.3	120.3	120.3	120.3	120.3	135.3	135.3	135.3	135.3	135.3	126.6
424	Nails, wire, base price, f. o. b. Pittsburgh, basing point.	.06	109.4	116.0	122.6	122.6	122.6	132.1	141.5	141.5	141.5	141.5	141.5	141.5	131.2
	Ore, iron, Mesabi, f. o. b. lower Lakes ports:														
425	Bessemer	.10	106.8	106.8	106.8	106.8	106.8	109.7	118.2	118.2	118.2	118.2	118.2	118.2	112.8
426	Nonbessemer	.30	107.1	107.1	107.1	107.1	107.1	110.0	118.8	118.8	118.8	118.8	118.8	118.8	113.3

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Unit	AVERAGE PRIMARY MARKET PRICES 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	METALS AND METAL PRODUCTS—Continued														
	Iron and steel—Continued														
	Pig iron:														
427	Basic, f. o. b. Valley furnace	Gross ton	$25.250	$25.250	$25.625	$26.000	$26.000	$28.000	$28.000	$28.000	$28.000	$28.000	$28.000	$29.600	$27.165
428.1	Bessemer, f. o. b. Neville Island, Pennsylvania base.	do	26.250	26.250	26.700	27.000	27.000	29.000	29.000	29.000	29.000	29.000	29.000	31.000	28.240
429	Ferromanganese, lumps, 78 to 82 percent, Mn., f. o. b. seaboard Atlantic ports.	do	135.000	135.000	135.000	135.000	135.000	135.000	135.000	135.000	135.000	135.000	135.000	135.000	135.000
	Foundry, No. 2:														
430.1	Northern, f. o. b. Neville Island, Pa., base.	do	25.750	25.750	26.200	26.500	26.500	28.500	28.500	28.500	28.500	28.500	28.500	30.500	27.740
431	Southern, f. o. b. Birmingham base.	do	21.750	21.750	22.125	22.500	22.500	24.500	24.500	24.500	24.500	24.500	24.500	26.100	23.665
432	Malleable, f. o. b. furnace	do	25.750	25.750	26.125	26.500	26.500	28.500	28.500	28.500	28.500	28.500	28.500	30.100	27.665
433	Spiegeleisen, 19 to 21 percent, f. o. b. furnace.	do	36.000	36.000	36.000	36.000	36.000	36.000	36.000	36.000	36.000	36.000	38.000	40.000	36.528
	Pipe:														
[3] 434.1	Cast-iron, 4 inch, delivered New York.	Ton	70.513	70.513	70.513	70.513	71.516	74.526	79.112	77.464	76.533	76.533	78.539	82.839	75.018
435	Black-steel, ¾ inch, f. o. b. Pittsburgh basing point.	100 feet	3.660	3.824	3.988	3.988	3.988	3.988	3.988	3.988	3.988	3.988	3.988	4.097	3.955
436	Galvanized-steel, ¾ inch, f. o. b. Pittsburgh or Lorain basing point, mills.	do	4,916	5.080	5.244	5.244	5.244	5.244	5.244	5.244	5.244	5.244	5.244	5.397	5.215
437	Planes, jack, f. o. b. factory	Each	2.548	2.548	2.548	2.548	2.548	2.548	2.548	2.548	2.548	2.548	2.940	2.940	2.615
[3] 438.1	Plates, steel, f. o. b. Pittsburgh basing point.	Pound	2.250	2.375	2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.467
439	Rails, steel, standard, f. o. b. mill	Gross ton	43.000	45.800	48.598	48.597	48.597	48.597	48.597	48.597	48.597	48.597	48.597	(2)	(2)
	Rivets:														
440	Large, ½ inch and up, f. o. b. Pittsburgh or Cleveland basing point.	100 pounds	3.750	3.750	3.750	3.960	4.012	4.012	4.162	4.612	4.750	4.750	4.750	4.750	4.253
[3] 441.1	Small, 7/16 inch and smaller, f. o. b. Pittsburgh basing point.	do	5.600	5.600	5.600	6.050	6.050	6.050	6.330	6.330	6.330	6.330	6.330	7.270	6.170
442	Rods, wire, Nos. 4 and 5, f. o. b. Pittsburgh basing point.	Gross ton	48.160	49.840	51.520	51.520	51.520	51.520	51.520	51.520	51.520	51.520	51.520	53.760	51.288

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Relative importance, year 1946	INDEXES (1926=100) OF PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	METALS AND METAL PRODUCTS—Continued														
	Iron and steel—continued														
	Pig iron:														
427	Basic, f. o. b. Valley furnace	0.07	136.1	136.1	138.2	140.2	140.2	151.0	151.0	151.0	151.0	151.0	151.0	159.6	146.5
428.1	Bessemer, f. o. b. Neville Island, Pennsylvania base.	.01	127.8	127.8	130.0	131.5	131.5	141.3	141.3	141.3	141.3	141.3	141.3	151.0	137.6
429	Ferromanganese, lumps, 78 to 82 percent Mn., f. o. b. seaboard Atlantic ports.	.06	142.4	142.4	142.4	142.4	142.4	142.4	142.4	142.4	142.4	142.4	142.4	142.4	142.4
	Foundry, No. 2:														
430.1	Northern, f. o. b. Neville Island, Pa., base.	.07	136.6	136.6	139.0	140.5	140.5	151.2	151.2	151.2	151.2	151.2	151.2	161.8	147.1
431	Southern, f. o. b. Birmingham base.	.05	102.8	102.8	104.6	106.4	106.4	115.8	115.8	115.8	115.8	115.8	115.8	123.4	111.9
432	Malleable, f. o. b. furnace	.06	136.2	136.2	138.2	140.1	140.1	150.7	150.7	150.7	150.7	150.7	150.7	159.2	146.3
433	Spiegeleisen, 19 to 21 percent, f. o. b. furnace.	.01	106.6	106.6	106.6	106.6	106.6	106.6	106.6	106.6	106.6	106.6	112.5	118.5	108.2
	Pipe:														
[3] 434.1	Cast-iron, 4 inch, delivered New York.	.21	170.8	170.8	170.8	170.8	173.2	180.5	191.6	187.6	185.3	185.3	190.2	200.6	181.7
435	Black-steel, ¾ inch, f. o. b. Pittsburgh basing point.	.13	85.9	89.7	93.6	93.6	93.6	93.6	93.6	93.6	93.6	93.6	93.6	96.2	92.8
436	Galvanized-steel, ¾ inch, f. o. b. Pittsburgh or Lorain basing point, mill.	.07	90.0	93.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	98.8	95.5
437	Planes, jack, f. o. b. factory	(6)	113.5	113.5	113.5	113.5	113.5	113.5	113.5	113.5	113.5	113.5	131.0	131.0	116.5
[3] 438.1	Plates, steel, f. o. b. Pittsburgh basing point.	.30	119.7	126.3	133.0	133.0	133.0	133.0	133.0	133.0	133.0	133.0	133.0	133.0	131.2
439	Rails, steel, standard, f. o. b. mill	.14	100.0	106.5	113.0	113.0	113.0	113.0	113.0	113.0	113.0	113.0	113.0	(2)	(2)
	Rivets:														
440	Large, ½ inch and up, f. o. b. Pittsburgh or Cleveland basing point.	.03	147.1	147.1	147.1	155.4	157.4	157.4	163.3	181.0	186.4	186.4	186.4	186.4	166.9
[3] 441.1	Small, 7/16 inch and smaller, f. o. b. Pittsburgh basing point.	.03	123.9	123.9	123.9	130.9	132.7	132.7	137.5	138.8	138.8	138.8	138.8	159.4	135.3
442	Rods, wire, Nos. 4 and 5, f. o. b. Pittsburgh basing point.	.05	107.0	110.8	114.5	114.5	114.5	114.5	114.5	114.5	114.5	114.5	114.5	119.5	114.0

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Unit	AVERAGE PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	METALS AND METAL PRODUCTS—Continued														
	Iron and steel—Continued														
	Saws:														
[3] 443.2	Crosscut, 6 foot, f. o. b. factory	Each	(2)	(2)	(2)	(2)	(2)	$3.800	$3.800	$3.800	$3.800	$3.800	$3.800	$3.800	(2)
[3] 444.1	Hand, 26 inch, f. o. b. factory	Dozen	(2)	(2)	(2)	(2)	$26.400	26.400	26.400	26.400	26.400	26.400	26.400	26.400	(2)
445.1	Scrap, steel, heavy melting, f. o. b. Pittsburgh.	Gross ton	$20.000	$20.000	$20.000	$20.000	20.000	20.000	20.000	20.000	20.000	20.000	22.000	28.188	$20.822
	Sheets, steel, f. o. b. Pittsburgh basing point:														
[3] 446.1	Annealed, box, No. 27	100 pounds	3.250	3.362	3.475	3.475	3.475	3.475	3.475	3.475	3.475	3.475	3.475	3.535	3.452
[3] 447.1	Auto body, No. 20	do	3.050	3.162	3.275	2.375	3.275	3.275	3.275	3.275	3.275	3.275	3.275	(2)	(2)
[3] 448.1	Galvanized, No. 24	do	3.700	3.875	4.050	4.050	4.050	4.050	4.050	4.050	4.050	4.050	4.050	4.530	4.049
449	Skelp, grooved, f. o. b. Pittsburgh basing point.	do	1.900	1.975	2.050	2.050	2.050	2.050	2.050	2.050	2.050	2.050	2.050	2.050	2.030
450	Spikes (track equipment), cut, f. o. b. Pittsburgh basing point.	do	3.250	3.450	3.650	3.650	3.650	3.650	3.650	3.650	3.650	3.650	3.650	4.500	3.677
[3] 451.1	Strip, cold-rolled, f. o. b. Pittsburgh basing point.	do	2.800	2.925	3.050	3.050	3.050	3.050	3.050	3.050	3.050	3.050	3.050	3.170	3.028
452	Structural steel, shapes, f. o. b. Pittsburgh basing point.	do	2.100	2.225	2.350	2.350	2.350	2.350	2.350	2.350	2.350	2.350	2.350	2.350	2.317
453	Terneplate, 8 pound, I. C., f. o. b. Pittsburgh basing point.	200-224 pound base box.	12.000	12.250	12.500	12.500	12.500	12.500	12.500	12.500	12.500	12.500	12.500	12.500	12.434
454	Tie plates, steel, f. o. b. Pittsburgh basing point.	100 pounds	2.300	2.425	2.550	2.550	2.550	2.550	2.550	2.550	2.550	2.550	2.550	2.700	2.531
455	Tin plate, f. o. b. Pittsburgh basing point.	100-pound base box.	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000
[3] 456.1	Vises, solid box, 50 pounds, f. o. b. factory, freight allowed up to 65 cents on 200 pounds.	Each	8.310	8.310	8.310	8.310	8.640	8.970	8.970	8.970	9.720	9.720	9.720	10.216	9.022
	Wire, f. o. b. Pittsburgh basing point:														
457	Annealed, smooth, Nos. 6 to 9 gage	100 pounds	3.200	3.350	3.500	3.500	3.500	3.500	3.500	3.500	3.500	3.500	3.500	3.700	3.479
458	Galvanized, barbed	do	3.600	3.775	3.950	3.950	3.950	3.950	3.950	3.950	3.950	3.950	3.950	4.350	3.942
459	Galvanized, fence	do	3.550	3.700	3.850	3.850	3.850	3.850	3.850	3.850	3.850	3.850	3.850	3.850	3.815
460	Woven, fence, 9 to 12½ gage	Net ton	67.000	69.500	72.000	72.000	72.000	72.000	72.000	72.000	72.000	72.000	72.000	77.600	71.962
461	Wood screws, 1 inch, f. o. b. New York	Gross	.256	.256	.256	.271	.274	.274	.285	.287	.287	.287	.287	.352	.282

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Relative importance, year 1946	INDEXES (1926=100) OF PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	METALS AND METAL PRODUCTS—Continued														
	Iron and steel—continued														
	Saws:														
[3] 443.2	Crosscut, 6 foot, f. o. b. factory	0.01	(2)	(2)	(2)	(2)	(2)	117.0	117.0	117.0	117.0	117.0	117.0	117.0	(2)
[3] 444.1	Hand, 26 inch, f. o. b. factory	(6)	(2)	(2)	(2)	(2)	114.9	114.9	114.9	114.9	114.9	114.9	114.9	114.9	(2)
445.1	Scrap, steel, heavy melting, f. o. b. Pittsburgh.	.06	116.5	116.5	116.5	116.5	116.5	116.5	116.5	116.5	116.5	116.5	128.2	164.2	121.3
	Sheets, steel, f. o. b. Pittsburgh basing point:														
[3] 446.1	Annealed, box, No. 27	.26	102.5	106.1	109.8	109.8	109.8	109.8	109.8	109.8	109.8	109.8	109.8	111.7	108.8
[3] 447.1	Auto body, No. 20	.08	71.6	74.2	76.9	76.9	76.9	76.9	76.9	76.9	76.9	76.9	76.9	(2)	(2)
[3] 448.1	Galvanized, No. 24	.14	93.7	98.1	102.5	102.5	102.5	102.5	102.5	102.5	102.5	102.5	102.5	114.7	102.5
449	Skelp, grooved, f. o. b. Pittsburgh basing point.	.03	100.0	103.9	107.9	107.9	107.9	107.9	107.9	107.9	107.9	107.9	107.9	107.9	106.9
450	Spikes (track equipment), cut, f. o. b. Pittsburgh basing point.	.01	111.4	118.3	125.2	125.2	125.2	125.2	125.2	125.2	125.2	125.2	125.2	154.3	126.1
[3] 451.1	Strip, cold-rolled, f. o. b. Pittsburgh basing point.	.07	76.7	80.1	83.6	83.6	83.6	83.6	83.6	83.6	83.6	83.6	83.6	86.8	83.0
452	Structural steel, shapes, f. o. b. Pittsburgh basing point.	.26	107.3	113.7	120.1	120.1	120.1	120.1	120.1	120.1	120.1	120.1	120.1	120.1	118.4
453	Terneplate, 8 pound, I. C., f. o. b. Pittsburgh basing point.	.02	102.6	104.7	106.8	106.8	106.8	106.8	106.8	106.8	106.8	106.8	106.8	106.8	106.3
454	Tie plates, steel, f. o. b. Pittsburgh basing point.	.02	99.5	104.9	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3	116.8	109.5
455	Tin plate, f. o. b. Pittsburgh basing point.	.29	98.3	98.3	98.3	98.3	98.3	98.3	98.3	98.3	98.3	98.3	98.3	98.3	98.3
[3] 456.1	Vises, solid box, 50 pounds, f. o. b. factory, freight allowed up to 65 cents on 200 pounds.	.01	124.6	124.6	124.6	124.6	129.5	134.5	134.5	134.5	145.7	145.7	145.7	153.1	135.3
	Wire, f. o. b. Pittsburgh basing point:														
457	Annealed, smooth, Nos. 6 to 9 gage	.08	120.8	126.4	132.1	132.1	132.1	132.1	132.1	132.1	132.1	132.1	132.1	139.6	131.3
458	Galvanized, barbed	.02	105.9	111.0	116.2	116.2	116.2	116.2	116.2	116.2	116.2	116.2	116.2	127.9	115.9
459	Galvanized, fence	.02	114.5	119.4	124.2	124.2	124.2	124.2	124.2	124.2	124.2	124.2	124.2	124.2	123.1
460	Woven, fence, 9 to 12½ gage	.04	103.1	106.9	110.8	110.8	110.8	110.8	110.8	110.8	110.8	110.8	110.8	119.4	110.7
461	Wood screws, 1 inch, f. o. b. New York	.03	165.5	165.5	165.5	174.8	177.1	177.1	183.7	185.4	185.4	185.4	185.4	227.4	182.1

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Unit	AVERAGE PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	METALS AND METAL PRODUCTS—Continued														
	Motor vehicles														
462 to 467	Passenger cars														
468	Trucks														
	Nonferrous metals:														
469	Aluminum, virgin, ingot, delivered	Pound	$0.150	$0.150	$0.150	$0.150	$0.150	$0.150	$0.150	$0.150	$0.150	$0.150	$0.150	$0.150	$0.150
[3] 470.1	Antimony, f. o. b. Laredo, Tex	do	.145	.145	.145	.145	.145	.145	.145	.145	.145	.145	.212	.264	.162
471	Babbitt metal, special grade, f. o. b. plant.	do	.190	.190	.190	.190	.190	.214	.222	.214	.214	.215	.260	.291	.216
472.1	Copper, electrolytic, delivered Connecticut Valley.	do	.120	.120	.120	.120	.120	.144	.144	.144	.144	.144	.172	.195	.141
473	Lead, pig, desilverized, f. o. b. New York.	do	.065	.065	.065	.065	.065	.082	.092	.082	.082	.082	.106	.122	.082
474	Nickel, electrolytic cathode, f. o. b. refinery.	do	.350	.350	.350	.350	.350	.350	.350	.350	.350	.350	[2]	[2]	[2]
475	Pipe, lead, ⅜ inch to 6 inches, I. D., f. o. b. New York.	100 pounds	8.250	8.250	8.250	8.250	8.250	10.000	10.750	10.000	10.000	10.000	12.788	14.690	9.997
476	Quicksilver, domestic, 76-pound flasks, delivered New York.	Flask	106.500	103.500	104.800	104.5000	102.200	99.875	97.625	97.000	97.000	96.250	91.600	88.375	99.067
	Rods, round, base sizes, freight prepaid on 100 pounds:														
477	Yellow brass, ⅝ inch to 2 inches	Pound	.150	.150	.150	.160	.177	.185	.185	.185	.185	.185	.207	.223	.178
478	Copper, drawn, ⅝ inch to 2½ inches	do	.184	.184	.184	.196	.208	.232	.232	.232	.232	.232	.260	.283	.222
	Sheets:														
479	Yellow brass, freight prepaid on 100 pounds.	Pound	.195	.195	.195	.208	.221	.237	.237	.237	.237	.237	.259	.275	.228
480	Copper, hot-rolled, freight prepaid on 100 pounds.	do	.209	.209	.209	.221	.234	.258	.258	.258	.258	.258	.286	.309	.248
481	Zinc, f. o. b. mill	100 pounds	11.923	11.923	11.923	11.923	11.923	11.923	12.326	[2]	[2]	[2]	[2]	[2]	[2]
482	Silver, bar, fine, f. o. b. New York	Ounce	.708	.708	.708	.708	.708	.708	.853	.901	.901	.901	.901	.866	.797
483.1	Solder, delivered, New York metropolitan area.	Pound	.312	.312	.312	.312	.313	.339	.358	.339	.339	.344	.428	.456	.348
484	Tin, pig, f. o. b. New York	do	.520	.520	.520	.520	.520	.520	.520	.520	.520	.520	.655	.700	.547
485	Tubes, yellow brass, base size, f. o. b. mill, freight prepaid on 100 pounds or more.	do	.222	.222	.222	.236	.248	.264	.264	.264	.264	.264	.286	.303	.255

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Relative importance, year 1946	INDEXES (1926=100) OF PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	METALS AND METAL PRODUCTS—Continued														
	Motor vehicles	5.21	118.5	120.5	122.0	125.3	131.1	135.5	135.5	138.6	140.8	141.4	146.0	148.9	133.7
462 to 467	Passenger cars		121.4	123.9	125.7	129.8	137.2	142.8	142.8	146.2	148.0	148.6	153.5	156.6	139.7
468	Trucks		103.2	103.4	103.9	104.1	104.3	104.3	104.3	106.5	109.8	110.4	113.5	115.8	107.0
	Nonferrous metals	1.69	85.7	85.7	86.1	87.1	89.0	99.2	102.7	101.4	101.4	101.8	118.4	129.3	99.7
469	Aluminum, virgin, ingot, delivered	.06	54.4	54.4	54.4	54.4	54.4	54.4	54.4	54.4	54.4	54.4	54.4	54.4	54.4
[3] 470.1	Antimony, f. o. b., Laredo, Tex	.01	96.3	96.3	96.3	96.3	96.3	96.3	96.3	96.3	96.3	96.3	141.1	175.0	107.7
471	Babbitt metal, special grade, f. o. b. plant.	.04	76.3	76.3	76.3	76.3	76.3	86.1	89.0	86.1	86.1	86.2	104.3	116.9	86.6
472.1	Copper, electrolytic, delivered Connecticut Valley.	.47	85.4	85.4	85.4	85.4	85.4	102.3	102.3	102.3	102.3	102.3	122.6	138.8	100.3
473	Lead, pig, desilverized, f. o. b. New York	.15	77.1	77.1	77.1	77.1	77.1	97.9	109.7	97.9	97.9	97.9	125.6	145.3	96.9
474	Nickel, electrolytic cathode, f. o. b. refinery.	.03	89.7	89.7	89.7	89.7	89.7	89.7	89.7	89.7	89.7	89.7	(2)	(2)	(2)
475	Pipe, lead, ⅜ inch to 6 inches, I. D., f. o. b. New York.	.01	83.2	83.2	83.2	83.2	83.2	100.8	108.4	100.8	100.8	100.8	129.0	148.1	100.8
476	Quicksilver, domestic, 76-pound flasks, delivered New York.	(6)	143.6	111.1	112.5	111.9	109.7	107.2	104.8	104.2	104.2	103.4	98.4	94.9	106.4
	Rods, round, base sizes, freight prepaid on 100 pounds:														
477	Yellow brass, ⅝ inch to 2 inches	.07	89.5	89.5	89.5	95.6	101.7	110.5	110.5	110.5	110.5	110.5	123.4	132.9	106.4
478	Copper, drawn, ⅝ inch to 2½ inches	.11	82.6	82.6	82.6	88.1	93.4	104.1	104.1	104.1	104.1	104.1	116.9	127.1	99.6
	Sheets:														
479	Yellow brass, freight prepaid on 100 pounds.	.12	102.4	102.4	102.4	109.4	116.1	124.4	124.4	124.4	124.4	124.4	136.1	144.7	119.8
480	Copper, hot-rolled, freight prepaid on 100 pounds.	.07	96.6	96.6	96.6	102.2	108.5	119.4	119.4	119.4	119.4	119.4	132.6	143.1	114.6
481	Zinc, f. o. b. mill	.02	112.6	112.6	112.6	112.6	112.6	112.6	116.4	(2)	(2)	(2)	(2)	(2)	(2)
482	Silver, bar, fine, f. o. b. New York	.05	113.3	113.3	113.3	113.3	113.3	113.3	136.6	141.4	144.4	144.4	144.4	138.7	127.7
483.1	Solder, delivered, New York metropolitan area.	.04	79.6	79.6	79.6	79.6	79.6	86.4	91.2	86.4	86.4	87.6	109.2	116.1	88.7
484	Tin, pig, f. o. b. New York	.14	79.6	79.6	79.6	79.6	79.6	79.6	79.6	79.6	79.6	79.6	100.2	107.1	83.7
485	Tubes, yellow brass, base size, f. o. b. mill, freight prepaid on 100 pounds or more.	.05	93.6	93.6	93.6	99.1	104.6	111.2	111.2	111.2	111.2	111.2	120.5	127.5	107.5

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Unit	AVERAGE PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	METALS AND METAL PRODUCTS—Continued														
	Nonferrous metals—Continued														
	Wire:														
486	Yellow brass, No. 4, round, base sizes, f. o. b. mill, freight prepaid on 100 pounds.	Pound	$0.197	$0.197	$0.197	$0.210	$0.224	$0.240	$0.240	$0.240	$0.240	$0.240	$0.262	$0.278	$0.231
487	Copper, solid, carlots, f. o. b. basing point.	do	.153	.153	.153	.153	.167	.198	.198	.198	.198	.198	.229	.254	.188
488	Zinc, pig, slab, f. o. b. New York	do	.086	.086	.086	.086	.086	.086	.094	.087	.087	.093	.106	.109	.092
	Plumbing and heating:														
	Boilers:														
489.2	Heating, f. o. b. factory (composite price).	Each	138.802	138.802	138.802	138.802	144.002	159.600	159.600	159.600	159.600	159.600	159.600	(2)	[10]150.501
490	Range, 30 gallons, galvanized, f. o. b. Chicago.	do	9.940	9.940	9.940	10.180	10.240	10.240	10.240	10.240	10.240	10.240	10.240	11.890	10.316
491	Closets, water, without fittings, f. o. b. factory.	do	9.300	9.300	9.300	9.300	9.300	9.300	9.300	9.300	9.300	9.300	9.766	10.231	9.423
492.2	Lavatories, f. o. b. factory (composite price).	do	9.423	9.540	9.876	10.212	10.212	9.927	9.927	9.927	9.927	9.927	10.258	10.804	10.003
493.2	Radiation, steam or water system, f. o. b. factory.	Square foot	.313	.313	.313	.368	.372	.384	.384	.384	.384	.384	.384	.384	.364
494.2	Sinks, vitreous china, flat rim, without fittings f. o. b. factory.	Each	4.988	4.988	5.361	5.733	5.733	5.733	5.733	5.733	5.733	5.733	6.012	6.292	5.652
	Tubs:														
495	Bath, 5-foot, no fittings, f. o. b. factory.	do	29.753	29.753	29.753	29.753	29.753	29.753	29.753	30.358	32.173	32.173	34.574	36.975	31.255
496.1	Laundry, 2-part, cement, with fittings, f. o. b. Chicago.	do	11.907	11.907	11.907	11.907	11.907	11.907	11.907	11.907	11.907	11.907	11.907	14.151	12.119
	BUILDING MATERIALS:														
	Brick and tile:														
497	Blocks, concrete, 8 by 8 by 16 inches, f. o. b. plant.	Each	.147	.147	.147	.147	.149	.157	.163	.157	.157	.157	.167	.176	.156

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Relative importance, year 1946	INDEXAS (1926=100) OF PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	METALS AND METAL PRODUCTS—Continued														
	Nonferrous metals—Continued														
	Wire:														
486	Yellow brass, No. 4, round, base sizes, f. o. b. mill, freight prepaid on 100 pounds.	0.02	101.1	101.1	101.1	107.8	114.7	122.7	122.7	122.7	122.7	122.7	134.1	142.5	118.1
487	Copper, solid, carlots, f. o. b. basing point.	.10	97.5	97.5	97.5	97.5	106.6	126.1	126.1	126.1	126.1	126.1	146.0	161.8	119.8
488	Zinc, pig, slab, f. o. b. New York	.13	112.2	112.2	112.2	112.2	112.2	112.2	122.2	112.7	112.7	120.5	137.9	141.9	118.7
	Plumbing and heating	.24	95.0	95.1	95.1	100.8	100.8	108.0	106.0	106.3	107.2	107.2	107.2	114.9	103.8
	Boilers:														
489.2	Heating, f. o. b. factory (composite price).	.07	119.0	119.0	119.0	119.0	123.5	136.9	136.9	136.9	136.9	136.9	136.9	(2)	[10] 129.1
490	Range, 30 gallons, galvanized, f. o. b. Chicago.	.01	123.7	123.7	123.7	126.7	127.5	127.5	127.5	127.5	127.5	127.5	127.5	148.0	128.4
491	Closets, water, without fittings, f. o. b. factory.	.02	71.9	71.9	71.9	71.9	71.9	71.9	71.9	71.9	71.9	71.9	75.5	79.1	72.9
492.2	Lavatories, f. o. b. factory (composite price).	.02	91.5	92.6	95.9	99.1	99.1	96.4	96.4	96.4	96.4	96.4	99.6	104.9	97.1
493.2	Radiation, steam or water system, f. o. b. factory.	.06	123.1	123.1	123.1	145.0	146.5	151.2	151.2	151.2	151.2	151.2	151.2	151.2	143.3
494.2	Sinks, vitreous china, flat rim, without fittings, f. o. b. factory.	.02	52.0	52.0	55.9	59.7	59.7	59.7	59.7	59.7	59.7	59.7	62.6	65.6	58.9
	Tubs:														
495	Bath, 5 foot, no fittings, f. o. b. factory.	.04	74.9	74.9	74.9	74.9	74.9	74.9	74.9	76.5	81.0	81.0	87.1	93.1	78.7
496.1	Laundry, 2-part, cement, with fittings, f. o. b. Chicago.	(6)	107.8	107.8	107.8	107.8	107.8	107.8	107.8	107.8	107.8	107.8	107.8	128.2	109.7
	BUILDING MATERIALS	5.91	120.0	120.9	124.9	126.5	127.8	129.9	132.1	132.7	133.8	134.8	145.5	157.8	132.6
	Brick and tile	.44	116.9	116.9	117.4	119.9	120.5	121.3	122.5	126.0	127.7	127.8	129.1	130.0	122.9
497	Blocks, concrete, 8 by 8 by 16 inches, f. o. b. plant.	.03	77.0	77.0	77.0	77.0	78.3	82.1	85.2	82.1	82.1	82.1	87.3	92.4	81.8

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Unit	AVERAGE PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	BUILDING MATERIALS—Continued														
	Brick and tile—Continued														
	Brick:														
498	Common building (composite price), f. o. b. plant.	1,000	$17.196	$17.213	$17.328	$17.399	$17.646	$17.932	$18.074	$18.218	$18.519	$18.551	$19.010	$19.095	$18.015
499	Fire clay, straights, f. o. b. plant	do	51.680	51.680	51.680	57.380	57.380	57.380	57.380	61.750	61.750	61.750	61.750	61.750	57.796
500.1	Front, light-colored, f. o. b. New York.	do	39.500	39.500	39.500	39.500	39.500	39.500	39.500	42.750	42.750	42.750	42.750	42.750	40.849
501	Paving, 3 inch, f. o. b. St. Louis	do	39.000	39.000	40.000	40.000	40.000	40.000	(2)	(2)	42.000	42.000	42.000	42.000	(2)
502.2	Sand-lime, f. o. b. plant	do	19.355	19.355	19.355	19.355	19.355	19.355	19.355	19.355	19.355	19.355	19.355	19.355	19.355
503	Silica, standard, carlots, f. o. b. plant.	do	54.400	54.400	54.400	60.400	60.400	60.400	60.400	65.000	65.000	65.000	65.000	65.000	60.838
	Tile:														
504	Drain, 4 inch, f. o. b. New York	M linear ft	60.300	60.300	61.200	64.800	64.800	64.800	64.800	64.800	66.300	67.800	67.800	67.800	63.391
505	Floor, standard, f. o. b. factory, freight equalized.	Square foot	.225	.225	.225	.225	.225	.225	.256	.225	.225	.225	.225	.225	.228
506	Hollow, building, f. o. b. Chicago	Each	.092	.092	.092	.092	.092	.092	(2)	(2)	.098	.098	.098	.098	(2)
508	Wall, glazed, white, f. o. b. factory	Square foot	.270	.270	.270	.270	.270	.270	.306	.270	.270	.270	.270	.270	.273
	Cement:														
509	Portland, f. o. b. destination (composite price).	Barrel	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------
	Lumber:														
510	Douglas fir, lath, plaster, No. 1, 1½ by ⅜ by 4 inches, dry, carlot or mixed car, f. o. b. mill (rail shipment).	1,000 pieces	4.900	4.900	7.840	8.820	8.820	8.820	8.820	8.820	8.820	8.036	8.622	10.890	8.187
511-1	Birch, No. 1 common, 4/4 rough, R. L. and R. W., carlot, f. o. b. Wausau, Wis. (basing point).	M board feet.	76.440	76.440	76.440	76.440	76.440	76.440	76.440	76.440	76.440	76.440	76.440	76.440	76.440
	Gum:														
512-1	Red, plain, No. 1 common and selects, 4/4, rough, R. W., loose, carlot or mixed car, f. o. b. mill.	do	57.820	57.820	57.820	61.740	62.720	62.720	62.720	62.720	62.720	62.720	62.720	(2)	61.201
[4] 512-2	Sap, plain, No. 1 common and and selects, 4/4, rough, R. W. and R. L., loose, carlot, f. o. b. mill.	do	52.430	52.430	52.430	55.958	56.840	56.840	56.840	56.840	56.840	56.840	56.840	(2)	55.554

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Relative importance, year 1946	INDEXES (1926=100) OF PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	BUILDING MATERIALS—Continued														
	Brick and tile—Continued														
	Brick:														
498	Common building (composite price), f. o. b. plant.	0.11	129.6	129.8	130.6	131.2	133.0	135.2	136.2	137.4	139.6	139.9	143.4	144.0	135.8
499	Fire clay, straights, f. o. b. plant	.06	131.1	131.1	131.1	145.5	145.5	145.5	145.5	156.6	156.6	156.6	156.6	156.6	146.6
500.1	Front, light-colored, f. o. b. New York.	.11	127.4	127.4	127.4	127.4	127.4	127.4	127.4	137.9	137.9	137.9	137.9	137.9	131.7
501	Paving, 3 inch, f. o. b. St. Louis	.01	91.8	91.8	94.1	94.1	94.1	94.1	(2)	(2)	98.8	98.8	98.8	98.8	(2)
502.2	Sand-lime, f. o. b. plant	.01	115.3	115.3	115.3	115.3	115.3	115.3	115.3	115.3	115.3	115.3	115.3	115.3	115.3
503	Silica, standard, carlots, f. o. b. plant	.02	132.7	132.7	132.7	147.3	147.3	147.3	147.3	158.5	158.5	158.5	158.5	158.5	148.4
	Tile:														
504	Drain, 4 inch, f. o. b. New York	.02	115.0	115.0	116.8	123.6	123.6	123.6	123.6	123.6	126.5	129.4	129.4	129.4	120.9
505	Floor, standard, f. o. b. factory, freight equalized.	.01	96.8	96.8	96.8	96.8	96.8	96.8	110.0	96.8	96.8	96.8	96.8	96.8	98.1
506	Hollow, building, f. o. b. Chicago	.05	117.1	117.1	117.1	117.1	117.1	117.1	(2)	(2)	125.7	125.7	125.7	125.7	(2)
508	Wall, glazed, white, f. o. b. factory	.01	50.5	50.5	50.5	50.5	50.5	50.5	57.4	50.5	50.5	50.5	50.5	50.5	51.2
	Cement	.43	101.1	101.5	102.3	102.4	102.6	102.6	104.0	105.8	106.5	106.5	107.0	106.9	104.1
509	Portland, f. o. b. destination (composite price).	.43	101.1	101.5	102.3	102.4	102.6	102.6	104.0	105.8	106.5	106.5	107.0	106.9	104.1
	Lumber	2.56	158.5	160.1	167.6	171.4	172.5	176.0	177.3	177.6	178.2	178.9	192.1	227.2	178.4
510	Douglas fir, lath, plaster, No. 1, 1½ by ⅜ by 4 inches, dry, carlot or mixed car, f. o. b. mill (rail shipment).	(6)	129.4	129.4	207.0	232.9	232.9	232.9	232.9	232.9	232.9	212.2	227.7	287.6	216.2
511-1	Birch, No. 1 common, 4/4 rough, R. L. and R. W., carlot, f. o. b. Wausau, Wis. (basing point).	.01	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
	Gum:														
512-1	Red, plain, No. 1 common and selects, 4/4, rough, R. W., loose, carlot or mixed car, f. o. b. mill.	(6)	118.6	118.6	118.6	126.6	128.6	128.6	128.6	128.6	128.6	128.6	128.6	(2)	125.7
[4]512-2	Sap, plain, No. 1 common and selects, 4/4, rough, R. W. and R. L., loose, carlot, f. o. b. mill.	(6)	164.6	164.6	164.6	175.7	178.5	178.5	178.5	178.5	178.5	178.5	178.5	(2)	174.4

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Unit	AVERAGE PRIMARY MARKET PRICES 1926												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	BUILDING MATERIALS—Continued														
	Lumber—Continued														
	Maple:														
514-1	Hard, No. 1 common, 4/4, rough, R. W., loose, carlot, f. o. b. Wausau, Wis. (basing point).	M board feet	$67.620	$67.620	$67.620	$67.620	$67.620	$67.620	$67.620	$67.620	$67.620	$67.620	$67.620	$67.620	$67.620
514-2	Flooring, second grade, 25/32 by 2¼-inch face, standard lengths, bundled, carlot, f. o. b. cars, Cadillac, Mich. (basing point).	do	97.510	97.510	101.038	106.330	106.330	106.330	106.330	111.720	111.720	111.720	111.720	(2)	[10]103.590
	Douglas fir:														
515	Boards and shiplap, No. 1 common, 1 by 8 inches, R. L., dried, S4S, loose, mixed carlots, f. o. b. mill.	do	33.810	33.810	33.810	36.946	37.730	41.772	43.120	43.120	43.120	43.120	43.340	46.728	40.102
515-1	Boards and shiplap, No. 2 common, 1 by 8 inches, R. L., dried, S4S, mixed carlot, f. o. b. mill (rail shipment).	do	32.340	32.340	32.340	35.476	36.260	40.302	41.650	41.650	41.650	41.650	41.862	45.243	38.630
515-2	Dimension, No. 1 common, 2 by 4 inches by 16 feet, dried, S4S, S1E, or rough, mixed carlot, f. o. b. mill (rail shipment).	do	34.790	34.790	37.362	38.220	38.220	41.528	42.630	42.630	42.630	42.630	44.085	48.312	40.75
515-3	Drop siding, C grade, 1 by 6 inches, R. L., dried, pattern 106, mixed carlot, f. o. b. mill (rail shipment).	do	47.040	47.040	54.390	56.840	56.840	61.250	62.720	62.720	62.720	62.720	63.040	66.924	58.740
515-4	Flooring, B and better, F. G., 1 by 4 inches, R. L., dried, mixed carlot, f. o. b. mill (rail shipment).	do	44.100	44.100	51.450	53.900	53.900	58.310	59.780	59.780	59.780	59.780	59.780	63.308	55.712
515-5	Flooring, C grade, F. G., 1 by 4 inches, R. L., dried, mixed carlot, f. o. b. mill (rail shipment).	do	42.140	41.140	49.490	51.940	51.940	56.350	57.820	57.820	57.820	57.820	58.115	61.974	53.833
515-6	Timbers, No. 1 common, 12 by 12 inches by 40 feet and under, green, S1S1E or S4S, straight carlot, f. o. b. mill (rail shipment).	do	28.910	28.910	30.380	30.870	30.870	30.870	30.870	30.870	30.870	30.870	33.008	41.778	31.691
516	Drop siding, B and better, 1 by 6 inches, R. L., pattern 106, mixed carlot, f. o. b. mill (rail shipment).	do	49.000	49.000	56.350	58.800	58.800	63.210	64.680	64.680	64.680	64.680	65.010	68.904	60.703

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Relative importance, year 1946	INDEXES (1926=100) OF PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	BUILDING MATERIALS—Continued														
	Lumber—Continued														
	Maple:														
514-1	Hard, No. 1 common, 4/4, rough, R. W., loose, carlot, f. o. b. Wausau, Wis. (basing point).	.01	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
514-2	Flooring, second grade, 25/32- by 2¼-inch face, standard lengths, hundled, carlot, f. o. b. cars, Cadillac, Mich. (basing point).	0.03	147.4	147.4	152.7	160.7	160.7	160.7	160.7	168.9	168.9	168.9	168.9	(2)	[10] 156.6
	Douglas fir:														
515	Boards and shiplap, No. 1 common, 1 by 8 inches, R. L., dried, S4S, loose, mixed carlots, f. o. b. mill.	.06	205.9	205.9	205.9	225.0	229.7	254.4	262.6	262.6	262.6	262.6	263.9	284.5	244.2
515-1	Boards and shiplap, No. 2 common, 1 by 8 inches, R. L., dried, S4S, mixed carlot, f. o. b. mill (rail shipment).	.02	239.9	239.9	239.9	263.1	268.9	298.9	308.9	308.9	308.9	308.9	310.5	335.6	286.5
515-2	Dimension, No. 1 common, 2 by 4 inches by 16 feet, dried, S4S, S1E, or rough, mixed carlot, f. o. b. mill (rail shipment).	.24	198.1	198.1	212.8	217.7	217.7	236.5	242.8	242.8	242.8	242.8	251.1	275.2	231.9
515-3	Drop siding, C grade, 1 by 6 inches, R. L., dried, pattern 106, mixed carlot, f. o. b. mill (rail shipment).	.01	170.2	170.2	196.8	205.7	205.7	221.7	227.0	227.0	227.0	227.0	228.1	242.2	212.6
515-4	Flooring, B and better, F. G., 1 by 4 inches, R. L., dried, mixed carlot f. o. b. mill (rail shipment).	.07	160.5	160.5	187.3	196.2	196.2	212.3	217.6	217.6	217.6	217.6	218.7	232.8	203.1
515-5	Flooring, C grade, F. G., 1 by 4 inches, R. L., dried, mixed carlot, f. o. b. mill (rail shipment).	.02	194.0	194.0	227.8	239.1	239.1	259.4	266.2	266.2	266.2	266.2	267.5	285.3	247.8
515-6	Timbers, No. 1 common, 12 by 12 inches by 40 feet and under, green, S1S1E or S4S, straight carlot, f. o. b. mill (rail shipment).	.14	114.2	114.2	120.0	121.9	121.9	121.9	121.9	121.9	121.9	121.9	130.4	165.0	125.2
516	Drop siding, B and better, 1 by 6 inches, R. L., pattern 106, mixed carlot, f. o. b. mill (rail shipment).	.07	145.9	145.9	167.8	175.1	175.1	188.2	192.6	192.6	192.6	192.6	193.6	205.2	180.8

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Unit	AVERAGE PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	BUILDING MATERIALS—Continued														
	Lumber—Continued														
	Oak:														
517-1.1	Red, flooring, select, plain, 25/32 inch thickness, 2¼ inch face average length 4 feet, bundled, carlot, f. o. b. Memphis, Johnson City, or Alexandria (basing points).	M board feet	$92.120	$96.775	$101.430	$101.430	$103.635	$105.840	$105.840	$107.163	$111.206	$111.230	$115.395	$127.890	$106.761
518-1.1	White, plain, No. 1 common, 4/4, rough, R. W., loose, mixed carlot, f. o. b. mill.	do	63.700	63.700	66.640	66.640	66.640	66.640	70.070	70.070	70.070	70.070	70.070	79.870	68.813
519-1.1	Poplar, yellow, Appalachian, No. 1 common, 4/4, rough, R. W., mixed carlot, f. o. b. mill.	do	60.760	60.760	60.760	64.288	66.640	66.640	66.640	66.640	66.640	66.640	70.070	73.500	65.882
	Cedar, red, western:														
520-1.1	Bevel siding, clear, ½ by 6 inches, f. o. b. mill (Seattle market).	do	42.140	42.140	42.140	44.492	48.020	48.020	48.020	48.020	48.020	48.020	48.020	58.800	47.262
520-2	Shingles, No. 1, 16-inch, R. W., green and/or dried, bundled, straight and mixed cars and cargo, f. o. b. mill.	Square	4.420	4.700	4.775	5.000	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
521-1	Hemlock, northern dimension, No. 1 piece stuff, 2 by 4 inches by 16 feet, S4S, carlot, f. o. b. Wausau, Wis. (basing point).	M board feet	47.040	47.040	47.040	47.040	47.040	52.920	52.920	52.920	52.920	52.920	52.920	52.920	50.479
	Pine, yellow, southern (composite price):														
[9] 522-1.3	Boards, No. 2 common, 1 by 6 inches by 12 feet and 1 by 8 inches by 12 feet, S. L., S4S, dried, loose, carlot or mixed cars, f. o. b. mill.	do	42.837	43.465	46.029	46.029	46.029	46.029	46.083	46.083	46.083	46.083	53.182	67.163	48.086
[9] 522-3.2	Dimension, No. 1, 2 by 4 inches by 16 feet, S4S, S. L., dried, loose, carlot or mixed cars, f. o. b. mill.	do	44.182	44.980	47.498	47.498	47.498	47.498	47.498	47.498	47.498	47.498	55.299	68.600	49.574
522-4.2	Dimension, No. 2, 2 by 4 inches by 16 feet, S4S, S. L., dried, carlot or mixed car, f. o. b. mill.	do	41.370	42.586	44.555	44.555	44.555	44.555	44.695	44.695	44.695	44.695	53.489	(2)	[10] 46.610

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Relative importance, year 1946	INDEXES (1926=100) OF PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	BUILDING MATERIALS—Continued														
	Lumber—Continued														
	Oak:														
517-1.1	Red, flooring, select, plain, 25/32 inch thickness, 2¼-inch face average length 4 feet, bundled, carlot, f. o. b. Memphis, Johnson City, or Alexandria (basing points).	0.07	135.5	142.3	149.2	149.2	152.4	155.7	155.7	157.6	163.5	163.6	169.7	188.1	157.0
518-1.1	White, plain, No. 1 common, 4/4, rough, R. W., loose, mixed carlot, f. o. b. mill.	.05	85.9	85.9	89.9	89.9	89.9	89.9	94.5	94.5	94.5	94.5	94.5	107.7	92.8
519-1.1	Poplar, yellow, Appalachian, No. 1 common, 4/4, rough, R. W., mixed carlot, f. o. b. mill.	(6)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
	Cedar, red, western:														
520-1.1	Bevel siding, clear, ½ by 6 inches, f. o. b. mill (Seattle market).	.02	125.6	125.6	125.6	132.6	143.1	143.1	143.1	143.1	143.1	143.1	143.1	175.2	140.8
520-2	Shingles, No. 1, 16-inch, R. W., green and/or dried, bundled, straight and mixed cars and cargo, f. o. b. mill.	.12	181.9	193.4	196.5	205.8	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
521-1	Hemlock, northern dimension, No. 1 piece stuff, 2 by 4 inches by 16 feet, S4S, carlot, f. o. b. Wausau, Wis. (basing point).	.06	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
	Pine, yellow, southern (composite price):														
[3] 522-1.3	Boards, No. 2 common, 1 by 6 inches by 12 feet and 1 by 8 inches by 12 feet, S. L. S4S, dried, loose, carlot or mixed cars f. o. b. mill.	.58	197.2	200.0	211.8	211.8	211.8	211.8	212.1	212.1	212.1	212.1	244.8	309.1	221.3
[3] 522-3.2	Dimension, No. 1, 2 by 4 inches by 16 feet, S4S, S. L., dried, loose, carlot or mixed cars f. o. b. mill.	.06	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
522-4.2	Dimension, No. 2, 2 by 4 inches by 16 feet, S4S, S. L., dried, carlot or mixed car, f. o. b. mill.	.17	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(2)	(1)

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Unit	AVERAGE PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	BUILDING MATERIALS—Continued														
	Lumber—Continued														
	Pine, yellow, southern—Continued														
[3] 522–5.3	Drop siding, B and better, 1 by 6 inches by 12 to 14 feet, patterns 105 and 106, S. L., KD., carlot or mixed car, f. o. b. mill.	M broad feet	$59.902	$60.701	$63.098	$63.098	$63.098	$63.098	$63.098	$63.098	$63.098	$63.098	$72.673	$96.283	$66.468
[3] 522–5–1.2	Drop siding, C grade, 1 by 6 inches by 12 to 14 feet, pattern 105. S. L., KD., carlot or mixed car, f. o. b. mill.	do	57.134	57.930	60.515	60.515	60.515	60.515	60.515	60.515	60.515	60.515	74.406	97.264	64.516
[3] 522–6.3	Finish, B and better, 1 by 6 inches, S4S. S. L., KD, carlot or mixed car, f. o. b. mill.	do	62.512	63.211	65.430	65.430	65.430	65.430	65.430	65.430	65.430	65.430	75.230	97.752	68.776
[3] 522–7.5	Flooring, B and better, 1 by 4 inches by 12 to 14 feet, P. E., KD, bundled, S. L., carlot or mixed car, f. o. b. mill.	do	60.056	61.131	65.091	65.091	65.091	65.091	65.091	65.091	65.091	65.091	74.723	96.546	68.012
522–7–1.1	Flooring, No. 2 common, 1 by 4 inches by 12 to 14 feet, F. G., P. E., D, bundled, S. L., carlot or mixed car, f. o. b. mill.	do	44.415	45.999	49.490	49.490	49.490	49.560	49.490	49.490	49.490	49.490	56.455	71.867	51.390
522–9.1	Timbers, No. 1 common, 4 by 6 inches by 8 to 16 feet, S. L., S4S, dried, carlot or mixed car, f. o. b. mill.	do	44.296	45.092	47.873	47.873	47.873	47.873	47.873	37.873	47.873	47.873	55.113	62.720	49.273
522–9–1	Timbers, No. 1 common 4 by 6 inches by 8 to 16 feet, green, rough, S. L., carlot or mixed car, f. o. b. mill.	do	36.260	37.056	39.445	39.445	39.445	39.445	39.445	39.445	39.445	39.445	44.076	59.099	41.168
523–1	Pine, sugar, shop, No. 2, 6/4, R. W., R. L., S2S loose, carlot or mixed car, f. o. b. mill.	do	41.740	41.300	40.830	44.880	46.210	46.820	46.550	45.920	47.800	53.610	54.610	59.840	47.680
	Pine, Ponderosa:														
524	Boards, No. 2 common, 1 by 8 inches, S2 or 4S, loose, carlot or mixed car, f. o. b. mill.	do	39.810	39.890	40.020	42.840	44.280	41.190	45.320	44.130	44.710	44.600	43.870	46.980	43.436
524–1	Boards, No. 3 common, 1 by 8 inches, R. L., S2 or 4S, loose, carlot or mixed car, f. o. b. mill.	do	35.090	36.160	35.770	39.150	40.650	40.070	40.930	40.190	40.350	40.380	40.360	43.300	39.490

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Relative importance, year 1946	INDEXES (1926=100) OF PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	BUILDING MATERIALS—Continued														
	Lumber—Continued														
	Pine, yellow, southern—Continued														
[3] 522-5.3	Drop siding, B and better, 1 by 6 inches by 12 to 14 feet, patterns 105 and 106, S. L., KD., carlot or mixed car, f. o. b. mill.	0.05	117.8	119.4	124.1	124.1	124.1	124.1	124.1	124.1	124.1	124.1	143.0	189.4	130.8
[3] 522-5-1.2	Drop siding, C grade, 1 by 6 inches by 12 to 14 feet, pattern 105, S. L., KD., car-lot or mixed car, f. o. b. mill.	.04	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
[3] 522-6.3	Finish, B and better, 1 by 6 inches, S4S, S. L., KD, carlot or mixed car, f. o. b. mill.	.04	136.8	138.3	143.2	143.2	143.2	143.2	143.2	143.2	143.2	143.2	164.6	213.9	150.5
[3] 522-7.5	Flooring, B and better, 1 by 4 inches by 12 to 14 feet, P. E., KD, bundled, S. L., carlot or mixed car, f. o. b. mill.	.03	135.6	138.1	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	168.8	218.0	153.6
522-7-1.1	Flooring, No. 2 common, 1 by 4 inches by 12 to 14 feet, F. G., P. E., D, bundled, S. L., carlot or mixed car, f. o. b. mill.	.07	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
522-9.1	Timbers, No. 1 common, 4 by 6 inches by 8 to 16 feet, S. L., S4S, dried, carlot or mixed car, f. o. b. mill.	.02	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
522-9-1	Timbers, No. 1 common 4 by 6 inches by 8 to 16 feet, green, rough, S. L., carlot or mixed car, f. o. b. mill.	.03	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
523-1	Pine, sugar, shop, No. 2, 6/4, R. W., R. L., S2S, loose, carlot or mixed car, f. o. b. mill.	.02	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
	Pine, Ponderosa:														
524	Boards, No. 2 common, 1 by 8 inches, S2 or 4S, loose, carlot or mixed car, f. o. b. mill.	.06	155.4	155.8	156.3	167.3	172.9	172.5	177.0	172.3	174.6	174.1	171.3	183.4	169.6
524-1	Boards, No. 3 common, 1 by 8 inches, R. L., S2 or 4S, loose, carlot or mixed car, f. o. b. mill.	.10	182.8	183.7	181.7	198.9	206.5	203.5	207.9	204.1	205.0	205.1	205.0	219.9	200.6

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Unit	AVERAGE PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	BUILDING MATERIALS—Continued														
	Pine, Ponderosa—Continued														
524-2	Shop, No. 2, 6/4, R. W., R. L., S2S, loose carlot or mixed car, f. o. b. mill.	M board feet	$37.930	$38.030	$38.070	$41.340	$42.300	$42.340	$42.150	$42.810	$45.320	$49.970	$50.550	$51.570	$43.632
	Pine, white:														
525-1	Idaho, boards, No. 2 common, 1 x 8 inches, R. L., S2 or 4S, loose carlot or mixed car, f. o. b. mill.	do	46.240	46.390	45.930	48.330	50.080	50.740	49.730	50.590	50.710	50.660	50.750	55.190	49.651
526-1	Northern, boards, No. 3, 1 by 8 inches by 14 feet, carlot delivered Chicago and vicinity.	do	55.125	55.125	56.840	56.840	56.840	56.840	57.330	57.330	57.330	57.330	(2)	(2)	(2)
527	Spruce, eastern random, No. 1, 2 by 3 and 4 inches, carlot, delivered by rail on Boston rate of freight.	do	52.000	52.000	52.000	52.000	52.000	53.400	55.500	55.500	55.500	55.500	55.500	71.500	54.417
	Redwood:														
528-1	Boards, No. 1 heart common, 1 by 12 inches, R. L., 10 to 20 feet, rough, green loose, carlot or mixed car, f. o. b. mill (California basis).	do	59.780	59.780	59.780	59.780	59.780	59.780	(2)	(2)	(2)	(2)	(2)	(2)	(2)
528-2	Bungalow siding, clear all heart, ¾ by 10 inches, R. L., 4 to 20 feet (not more than 10 percent 4 to 7 feet lengths per car), mixed grain, S1S2E, dry, surface measure, bundled, carlot or mixed car, f. o. b. mill.	do	66.885	66.885	66.885	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
528-3	Finish, clear all heart, 1 by 12 inches, R. L., S2 or 4S, dry, loose, carlot or mixed car, f. o. b. mill (eastern basis).	do	93.835	93.835	93.835	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	Cypress, red:														
529-1	Beveled siding, A grade, ½ by 6 inches, R. L., bundled carlot or mixed car, f. o. b. cars, Chicago.	do	46.305	46.305	46.305	47.971	50.470	50.470	50.470	50.470	50.470	50.470	64.006	87.220	53.701

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Relative importance, year 1946	INDEXES (1926=100) OF PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	BUILDING MATERIALS—Continued														
	Pine, Ponderosa—Continued														
524-2	Shop, No. 2, 6/4, R. W., R. L., S2S, loose carlot or mixed car, f. o. b. mill.	0.08	138.9	139.2	139.4	151.3	154.9	155.0	154.3	156.7	165.9	182.9	185.1	188.8	159.7
	Pine, white,														
525-1	Idaho, boards, No. 2 common, 1 by 8 inches, R. L., S2 or 4S, loose carlot or mixed car, f. o. b. mill.	.03	112.7	113.1	111.9	117.8	122.0	123.7	121.2	123.3	123.6	123.5	123.7	134.5	121.0
526-1	Northern, boards, No. 3, 1 by 8 inches by 14 feet, carlot delivered Chicago and vicinity.	.04	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(2)	(2)	(2)
527	Spruce, eastern random, No. 1, 2 by 3 and 4 inches, carlot, delivered by rail on Boston rate of freight.	.05	157.5	157.5	157.5	157.5	157.5	161.7	168.1	168.1	168.1	168.1	168.1	216.6	164.8
	Redwood:														
528-1	Boards, No. 1 heart common, 1 by 12 inches, R. L., 10 to 20 feet, rough, green loose, carlot or mixed car, f. o. b. mill (California basis).	.02	(1)	(1)	(1)	(1)	(1)	(1)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
528-2	Bungalow siding, clear all heart, ¾ by 10 inches, R. L., 4 to 20 feet (not more than 10 percent 4- to 7-foot lengths per car), mixed grain, S1S2E, dry, surface measure, bundled, carlot or mixed car, f. o. b. mill.	.01	(1)	(1)	(1)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
528-3	Finish, clear all heart, 1 by 12 inches, R. L., S2 or 4S, dry, loose, carlot or mixed car, f. o. b. mill (eastern basis).	.02	(1)	(1)	(1)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	Cypress, red:														
529-1	Beveled siding, A grade, ½ by 6 inches, R. L., bundled carlot or mixed car, f. o. b. cars, Chicago.	(6)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Unit	AVERAGE PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	BUILDING MATERIALS—Continued														
	Cypress, red—continued														
529-2	Finish, C grade, 4/4, 4 to 12 inches, R. W., R. L., dressed, loose carlot or mixed car, f. o. b. cars, Chicago.	M board feet.	$88.935	$88.935	$88.935	$92.071	$96.775	$96.775	$96.775	$96.775	$96.775	$96.775	$108.351	$136.955	$99.072
529-3	Shop, No. 1 4/4, R. W. and R. L., rough, loose, carlot or mixed car, f. o. b. cars, Chicago.	do	67.375	67.375	67.375	69.531	72.765	72.765	72.765	72.765	72.765	72.765	87.342	108.045	75.566
	Paint and paint materials:														
	Paint, prepared, f. o. b. plant:														
530	Enamel, white, gloss, drums	Gallon	2.574	2.574	2.574	2.574	2.574	2.574	2.574	2.574	2.574	2.574	[2]	[2]	[2]
531.1	Inside, flat, house, all colors, 1's	do	1.624	1.624	1.624	1.624	1.624	1.624	1.624	1.624	1.624	1.655	2.069	2.069	1.702
532	Outside, white and regular colors, gloss, house, drums.	do	2.317	2.317	2.317	2.317	2.317	2.317	2.317	2.317	2.317	2, 412	3, 406	3.406	2.510
533	Porch and deck, all colors, drums	do	2.297	2.297	2.297	2.297	2.297	2.297	2.297	2.297	2.297	2.360	2.703	3.366	2.434
534	Roof and barn, red, drums	do	1.287	1.287	1.287	1.287	1.287	1.287	1.287	1.287	1.287	1.374	1.851	1.851	1.391
535	Varnish, floor, bulk, 5's	do	2.871	2.871	2.871	2.871	2.871	2.871	2.871	2.871	2.871	2.871	3.267	3.267	2.938
	Paint materials:														
536	Barytes, western, f. o. b. New York.	Ton	34.000	34.000	34.000	34.000	34.000	34.000	34.000	34.000	34.000	34.000	41.160	41.950	35.300
537.1	Butyl acetate, carlots, f. o. b. New York, freight allowed east.	Pound	.186	.190	.192	.204	.210	.204	.204	.213	.230	.230	.234	.260	.215
	Colors:														
	Black:														
538	Bone, powdered, grade 4, carlots, f. o. b. work freight allowed east.	do	.085	.085	.085	.085	.085	.085	.085	.085	.121	.120	.120	.120	.096
539	Carbon, regular, uncompressed, carlots, f. o. b. works.	do	.036	.036	.036	.036	.036	.036	.056	.060	.063	.065	.065	.065	.049
540	Iron oxide, magnetic, f. o. b. factory.	do	.084	.084	.084	.084	.084	.084	.084	.084	.084	.084	.084	.087	.084
541.1	Lamp. domestic, type 1, cartons, carlot, works.	do	.085	.085	.085	.085	.085	.085	.085	.085	.085	.085	.085	.085	.085
542	Blue, prussian, delivered north eastern territory.	do	.360	.360	.360	.360	.360	.360	.360	.360	.360	.360	.360	.360	.360

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Relative importance, year 1946	INDEXES (1926=100) OF PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	BUILDING MATERIALS—Continued														
	Cypress, red—Continued														
529-2	Finish, C grade, 4/4, 4 to 12 inches, R. W., R. L., dressed, loose carlot or mixed car, f. o. b. cars, Chicago.	0.03	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
529-3	Shop, No. 1 4/4, R. W. and R. L., rough, loose, carlot or mixed car, f. o. b. cars, Chicago.	.01	124.2	124.2	121.2	128.2	134.1	134.1	134.1	134.1	134.1	134.1	161.0	199.2	139.3
	Paint and paint materials	1.27	107.8	107.8	107.8	108.0	108.2	108.6	114.9	113.9	116.7	119.2	151.3	155.4	118.5
	Paint, prepared, f. o. b. plant	.58	99.3	99.3	99.3	99.3	99.3	99.3	99.3	99.3	99.3	101.0	125.8	126.9	104.0
530	Enamel, white, gloss, drums	.07	102.4	102.4	102.4	102.4	102.4	102.4	102.4	102.4	102.4	102.4	(2)	(2)	(2)
531.1	Inside, flat, house, all colors, 1's	.09	82.5	82.5	82.5	82.5	82.5	82.5	82.5	82.5	82.5	84.2	105.1	105.1	86.5
532	Outside, white and regular colors, gloss, house, drums.	.18	104.9	104.9	104.9	104.9	104.9	104.9	104.9	104.9	104.9	109.2	154.3	154.3	113.7
533	Porch and deck, all colors, drums	.02	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	109.0	124.8	155.4	112.4
534	Roof and barn, red, drums	.01	134.3	134.3	134.3	134.3	134.3	134.3	134.3	134.3	134.3	143.4	193.2	193.2	145.2
535	Varnish, floor, bulk, 5's	.21	112.6	112.6	112.6	112.6	112.6	112.6	112.6	112.6	112.6	112.6	128.1	128.1	115.2
	Paint materials	.69	119.1	119.1	119.2	119.5	119.9	120.9	134.2	132.1	137.9	141.3	182.1	189.7	136.5
536	Barytes, western, f. o. b. New York.	.02	95.2	95.2	95.2	95.2	95.2	95.2	95.2	95.2	95.2	95.2	115.3	117.6	98.9
537.1	Butyl acetate, carlots, f. o. b. New York, freight allowed east	.01	101.7	103.6	105.2	111.3	115.1	111.3	111.3	126.5	125.5	125.8	127.9	142.2	117.4
	Colors:														
	Black:														
538	Bone, powdered, grade 4, carlots, f. o. b. works, freight allowed east.	.01	154.5	154.5	154.5	154.5	154.5	154.5	154.5	154.5	220.4	218.2	218.2	218.2	175.5
539	Carbon, regular, uncompressed, carlots, f. o. b. works.	.02	45.2	45.2	45.2	45.2	45.2	45.2	70.2	75.2	78.9	81.2	81.2	81.2	61.8
540	Iron oxide, magnetic, f. o. b. factory.	.01	79.8	79.8	79.8	79.8	79.8	79.8	79.8	79.8	79.8	79.8	79.8	82.7	80.1
541.1	Lamp, domestic, type 1, cartons, carlot, works.	(6)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
542	Blue, prussian, delivered northeastern territory.	(6)	111.2	111.2	111.2	111.2	111.2	111.2	111.2	111.2	111.2	111.2	111.2	111.2	111.2

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Unit	AVERAGE PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	BUILDING MATERIALS—Continued														
	Paint and paint materials—Con.														
	Paint materials—Continued														
543	Green, chrome, 21 to 25 percent blue content, delivered northeastern territory.	Pound	$0.260	$0.260	$0.260	$0.260	$0.260	$0.262	$0.270	$0.270	$0.287	$0.292	$0.298	$0.322	$0.275
544	Yellow, chrome, delivered northeastern territory.	do	.160	.160	.160	.160	.160	.162	.170	.172	.184	.188	.197	.235	.175
545	Ethyl acetate, 95-98 percent, f. o. b. works, freight allowed.	do	.098	.098	.098	.098	.106	.120	.120	.120	.120	.143	.168	.195	.124
546	Gum, copal, Manila, f. o. b. New York.	do	.118	.118	.118	.118	.118	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	Lead:														
547	Red, dry, delivered	do	.100	.100	.100	.100	.100	.115	.129	.120	.118	.118	.138	.156	.116
548	White, in oil, delivered east of Rocky Mountains.	do	.132	.132	.132	.135	.138	.144	.158	.152	.150	.150	.188	.234	.154
549	Litharge, commercial, delivered	do	.090	.090	.090	.090	.090	.090	.120	.110	.108	.108	.126	.144	.105
550	Lithopone, domestic, l. c. l., delivered east.	do	.045	.045	.045	.045	.045	.045	.045	.046	.046	.046	.049	.052	.046
	Oil:														
551	China wood, drums, carlots, f. o. b. Atlantic coast.	do	.390	.390	.390	.390	.390	.390	.390	.390	.390	.390	.390	395	.390
552	Linseed, raw drums, carlots, f. o. b. New York.	do	.155	.155	.155	.155	.155	.155	.176	.168	.178	.188	.354	.358	.197
553	Putty, commercial, f. o. b. New York	do	.050	.050	.050	.050	.050	.050	.050	.050	.050	.050	.050	.050	.050
554.1	Rosin, H grade, f. o. b. Savannah	100 pounds	6.760	6.760	6.760	6.760	6.760	6.760	6.952	6.760	7.400	7.800	7.830	8.066	7.128
555.1	Shellac, T. N., f. o. b. New York	Pound	.365	.365	.365	.365	.365	.365	.605	.715	.702	.646	.642	.649	.514
556.1	Turpentine, gum, f. o. b. Savannah	Gallon	.835	.835	.835	.835	.835	.835	.962	.835	.996	1.050	1.301	1.240	.953
557	Whiting, commercial, imported chalk, f. o. b. factory.	100 pounds	1.100	1.100	1.100	1.100	1.100	1.100	1.100	1.100	1.100	1.100	1.100	1.200	1.109
558	Zinc oxide, American process, 5 percent leaded, carlots, delivered.	Pound	.075	.075	.075	.075	.075	.075	.081	.088	.088	.084	.084	.090	.080
	Plumbing and heating. (See Metals and metal products, code Nos. 489.1 through 496.)														

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Relative importance, year 1946	INDEXES (1926=100) OF PRIMARY MARKET PRICES, 1946 January	February	March	April	May	June	July	August	September	October	November	December	Year
	BUILDING MATERIALS—Continued														
	Paint and paint materials—Con.														
	Paint materials—Continued														
543	Green, chrome, 21 to 25 percent blue content, delivered northeastern territory.	0.01	93.6	93.6	93.6	93.6	93.6	94.5	97.2	97.2	103.2	105.3	107.4	116.0	99.0
544	Yellow, chrome, delivered northeastern territory.	(6)	92.8	92.8	92.8	92.8	92.8	94.2	98.6	99.4	106.6	108.7	114.2	136.2	101.6
545	Ethyl acetate, 95–98 percent, f. o. b. works, freight allowed.	.01	95.6	95.6	95.6	95.6	104.4	117.6	117.6	117.6	117.6	140.2	165.1	191.2	121.1
546	Gum, copal Manila, f. o. b. New York.	.01	113.2	113.2	113.2	113.2	113.2	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	Lead:														
547	Red, dry, delivered	.01	85.3	85.3	85.3	85.3	85.3	98.0	109.8	102.7	100.2	100.2	117.6	133.2	98.9
548	White, in oil, delivered east of Rocky Mountains.	.06	87.1	87.1	87.1	88.7	90.3	94.9	103.9	100.2	98.6	98.6	123.5	153.6	101.1
549	Litharge, commercial, delivered	.02	80.1	80.1	80.1	80.1	80.1	80.1	106.9	98.0	95.7	95.7	112.6	128.0	93.1
550	Lithopone, domestic, l. c. l., delivered east.	.02	82.1	82.1	82.1	82.1	82.1	82.1	82.1	84.3	84.9	84.9	89.2	95.8	84.5
	Oil:														
551	China wood, drums, carlots, f. o. b. Atlantic coast.	.06	286.1	286.1	286.1	286.1	286.1	286.1	286.1	286.1	286.1	286.1	286.1	289.8	286.4
552	Linseed, raw drums, carlots, f. o. b. New York.	.20	139.0	139.0	139.0	139.0	139.0	139.0	158.3	150.7	159.6	168.6	317.8	321.1	176.7
553	Putty, commercial, f. o. b. New York	.01	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0
554.1	Rosin, H grade, f. o. b. Savannah	.10	128.2	128.2	128.2	128.2	128.2	128.2	131.9	128.2	140.4	148.0	148.5	153.0	135.2
555.1	Shellac, T. N., f. o. b. New York	.02	97.5	97.5	97.5	97.5	97.5	97.5	161.6	191.0	187.5	172.6	171.6	173.4	137.3
556.1	Turpentine, gum, f. o. b. Savannah	.05	107.3	107.3	107.3	107.3	107.3	107.3	123.6	107.3	128.0	134.9	167.2	159.3	122.4
557	Whiting, commercial, imported chalk, f. o. b. factory.	(6)	129.4	129.4	129.4	129.4	129.4	129.4	129.4	129.4	129.4	129.4	129.4	141.2	130.5
558	Zinc oxide, American process, 5 percent leaded, carlots, delivered.	.04	102.0	102.0	102.0	102.0	102.0	102.0	110.5	119.0	119.0	114.0	114.3	122.4	109.2
	Plumbing and heating. (See Metals and metal products, code Nos. 189.1 through 498.)		95.0	95.1	95.1	100.8	100.8	106.0	106.0	106.3	107.2	107.2	107.2	114.9	103.8

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Unit	AVERAGE PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	BUILDING MATERIALS—Continued													
	Structural steel. (See Metals and metal products, code No. 452.)													
	Other building materials:													
559	Asphalt, bulk, f. o. b. refinery	Ton	$10.900	$10.900	$10.900	$10.900	$10.900	$11.750	(2)	(2)	$11.750	$11.750	$11.750	$11.750	(2)
	Bars, reinforcing. (See Metals and metal products, code No. 403.)													
	Board, f. o. b. cars, destination:													
560	Plaster	M square feet.	18.257	18.257	18.238	18.238	18.238	18.238	$18.365	$18.395	18.395	18.395	18.395	19.894	$18.460
561	Insulation, 48 inches wide	do	32.340	32.340	32.340	32.340	32.340	32.340	32.830	34.790	34.790	34.790	36.110	37.620	33.770
	Butts. (See Metals and metal products, code No. 414.)													
562	Doors, Ponderosa pine, 5-panel, No. 1, delivered.	Each	5.027	5.027	5.027	5.027	5.831	5.831	5.831	5.831	5.978	6.341	6.341	6.341	5.704
	Frames, Ponderosa pine, f. o. b. Chicago:													
[3] 563.1	Door	Set	3.548	3.548	3.548	3.548	4.498	4.498	4.498	4.498	4.498	4.616	4.645	4.645	4.211
[3] 564.1	Window	do	2.519	2.519	2.519	2.519	3.175	3.175	3.175	3.175	3.175	3.261	3.283	3.283	2.979
	Glass:													
	Plate, f. o. b., New York:													
565	3 to 5 square feet	Square foot	.275	.275	.275	.275	.275	.275	.275	.275	.275	.275	.324	.340	.285
566	5 to 10 square feet	do	.290	.290	.290	.290	.290	.290	.290	.290	.290	.290	.350	.370	.302
	Window, f. o. b. New York:													
567	Single A	50 square feet	3.871	4.108	4.108	4.108	4.108	4.108	4.108	4.108	4.478	4.848	4.889	4.930	4.320
568	Single B	do	3.216	3.386	3.386	3.386	3.386	3.386	3.386	3.386	3.690	3.995	4.047	4.099	3.568
569	Gravel, building, f. o. b. plant (composite price).	Ton	.937	.937	.937	.936	.934	.938	.945	.950	.949	.956	.961	.976	.916
	Knobs, door. (See Metals and metal products, code No. 422.)													
	Lime, building:													
570	Common, f. o. b. plant (composite price).	do	7.688	7.688	7.688	7.688	7.688	7.688	8.150	8.512	8.512	8.543	8.579	8.642	8.089
571.1	Hydrated, f. o. b. plant (composite price).	do	9.250	9.250	9.250	9.250	9.250	9.250	9.970	10.225	10.225	10.260	10.356	10.504	9.753
	Locks. (See Metals and metal products, code No. 423.)													
	Nails. (See Metals and metal products, code No. 421.)													

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Relative importance, year 1946	INDEXES (1926=100) OF PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	BUILDING MATERIALS—Continued														
	Structural steel (See Metals and metal products, code No. 452.)	....	107.3	113.7	120.1	120.1	120.1	120.1	120.1	120.1	120.1	120.1	120.1	120.1	118.4
	Other building materials	1.21	106.6	107.2	112.3	112.8	115.7	118.4	119.9	120.9	121.4	122.5	125.3	131.8	118.6
559	Asphalt, bulk, f. o. b. refinery	.08	90.8	90.8	90.8	90.8	90.8	97.9	(2)	(2)	97.9	97.9	97.9	97.9	(2)
	Bars, reinforcing. (See Metals and metal products, code No. 403.)														
	Board, f. o. b. cars, destination:														
560	Plaster	.01	99.8	99.8	99.7	99.7	99.7	99.7	100.4	100.6	100.6	100.6	100.6	108.8	100.9
561	Insulation 48 inches wide	.05	75.9	75.9	75.9	75.9	75.9	75.9	77.0	81.6	81.6	81.6	84.7	88.2	79.2
	Butts. (See Metals and metal products, code No. 414.)														
562	Doors, Ponderosa pine, 5-panel, No. 1, delivered.	.11	138.7	138.7	138.7	138.7	160.8	160.8	160.8	160.8	164.9	174.9	174.9	174.9	157.3
	Frames, Ponderosa pine, f. o. b. Chicago:														
[3] 563.1	Door	.03	110.4	110.4	110.4	110.4	140.0	140.0	140.0	140.0	140.0	143.7	144.6	144.6	131.1
[3] 564.1	Window	.02	108.2	108.2	108.2	108.2	136.4	136.4	136.4	136.4	136.4	140.1	141.0	141.0	122.9
	Glass:														
	Plate, f. o. b., New York:														
565	3 to 5 square feet	.03	69.0	69.0	69.0	69.0	69.0	69.0	69.0	69.0	69.0	69.0	81.3	85.4	71.5
566	5 to 10 square feet	.03	60.6	60.6	60.6	60.6	60.6	60.6	60.6	60.6	60.6	60.6	73.2	77.4	63.2
	Window, f. o. b. New York:														
567	Single A	.02	90.9	96.5	96.5	96.5	96.5	96.5	96.5	96.5	105.2	113.8	114.8	115.7	101.4
568	Single B	.02	93.8	98.6	98.6	98.6	98.6	98.6	98.6	98.6	107.5	116.4	118.0	119.4	104.0
569	Gravel, building, f. o. b. plant (composite price).	.12	99.6	99.6	99.7	99.6	99.3	99.8	100.4	101.0	100.9	101.6	102.2	103.8	100.6
	Knobs, door. (See Metals and metal products, code No. 422.)														
	Lime, building:														
570	Common, f. o. b. plant (composite price).	.02	85.6	85.6	85.6	85.6	85.6	85.6	90.7	94.8	94.8	95.1	95.5	96.2	90.0
571.1	Hydrated, f. o. b. plant (composite price).	.02	89.5	89.5	89.5	89.5	89.5	89.5	96.4	98.9	98.9	99.2	100.2	101.6	94.3
	Locks. (See Metals and metal products, code No. 423.)														
	Nails. (See Metals and metal products, code No. 424.)														

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Unit	AVERAGE PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	BUILDING MATERIALS—Continued														
	Other building materials—Con.														
	Pipe:														
	Black-steel. (See Metals and metal products, code No. 435.)														
	Cast-iron. (See Metals and metal products, code No. 434.)														
	Galvanized. (See Metals and metal products, code No 436.)														
	Lead. (See Metals and metal products, code No. 475.)														
572.1	Sewer, f. o. b., New York	Foot	$0.293	$0.293	$0.293	$0.306	$0.326	$0.326	$0.339	$0.339	$0.339	$0.339	$0.339	$0.339	$0.323
573	Plaster, f. o. b. cars, destination	Ton	13.740	13.740	13.749	13.740	13.740	13.740	13.896	13.916	13.985	14.249	14.269	14.279	13.926
	Roofing:														
	Prepared (composite price), f. o. b. factory:														
574.3	Individual shingles	Square	4.668	4.668	4.668	4.668	4.845	4.905	4.905	4.905	4.905	4.905	5.069	5.233	4.863
575.3	Smooth surface	do	1.135	1.135	1.135	1.135	1.164	1.185	1.188	1.188	1.188	1.188	1.212	1.294	1.180
576.2	Slate-surfaced	do	1.580	1.580	1.580	1.580	1.668	1.728	1.755	1.755	1.755	1.755	1.790	1.895	1.703
577.2	Strip shingles	do	3.834	3.834	3.834	3.834	3.929	4.005	4.022	4.022	4.022	4.022	4.116	4.394	3.992
579	Sand, building, f. o. b. plant (composite price).	Ton	.695	.695	.697	.697	.697	.697	.698	.698	.698	.701	.705	.739	.701
	Sheets:														
	Copper. (See Metals and metal products, code No. 480.)														
	Zinc. (See Metals and metal products, code No. 481.)														
581	Stone, crushed, 1½-inch, f. o. b. New York.	Cubic yard	1.800	1.800	1.800	1.800	1.800	1.800	1.800	1.800	1.800	1.800	1.800	1.800	1.800
582.1	Tar, pine, retort, delivered eastern cities.	Gallon	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	.334	.430	(2)
	Terneplate. (See Metals and metal products, code No. 453.)														
580	Windows, 2-light, open, Ponderosa pine, delivered.	Each	1.225	1.225	1.225	1.225	1.411	1.411	1.411	1.411	1.490	1.578	1.578	1.578	1.398
	Wire, copper. (See Metals and metal products, code No. 487.)														
	Wood screws. (See Metals and metal products code No. 461.)														

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Relative importance, year 1946	INDEXES (1926=100) OF PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	BUILDING MATERIALS—Continued														
	Pipe:														
	Black-steel. (See Metals and metal products, code No. 435.)														
	Cast-iron. (See Metals and metal products, code No. 434.)														
	Galvanized. (See Metals and metal products, code No 436.)														
	Lead. (See Metals and metal products code No. 475.)														
572.1	Sewer, f. o. b., New York	0.08	92.5	92.5	92.5	96.7	103.0	103.0	107.2	107.2	107.2	107.2	107.2	107.2	102.0
573	Plaster, f. o. b. cars, destination	.04	105.2	105.2	105.3	105.2	105.2	105.2	106.4	106.5	107.1	109.1	109.2	109.3	106.6
	Roofing:														
	Prepared (composite price), f. o. b. factory:														
574.3	Individual shingles	.03	86.4	86.4	86.4	86.4	89.7	90.8	90.8	90.8	90.8	90.8	93.8	96.9	90.0
575.3	Smooth surface	.03	78.2	78.2	78.2	78.2	80.2	81.6	81.9	81.9	81.9	81.9	83.5	88.0	81.2
576.2	Slate-surfaced	.04	91.0	91.0	91.0	91.0	96.1	99.5	101.1	101.1	101.1	101.1	103.1	109.1	98.1
577.2	Strip shingles	.05	81.5	81.5	81.5	81.5	83.5	85.1	85.5	85.5	85.5	85.7	87.5	93.4	84.9
579	Sand, building, f. o. b. plant (composite price).	.03	109.4	109.4	109.8	109.8	109.8	109.8	110.0	109.9	109.9	110.4	111.0	114.9	110.4
	Sheets:														
	Copper. (See Metals and metal products, code No. 480.)														
	Zinc. (See Metals and metal products, code No. 481.)														
581	Stone, crushed, 1½-inch, f. o. b. New York.	.13	101.6	101.6	101.6	101.6	101.6	101.6	101.6	101.6	101.6	101.6	101.6	101.6	101.6
582.1	Tar, pine, retort, delivered eastern cities	.17	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	104.4	134.4	(2)
	Terneplate. (See Metals and metal products, code No. 453.)														
580	Windows, 2-light, open, Ponderosa pine, delivered.	.05	156.2	156.2	156.2	156.2	180.0	180.0	180.0	180.0	190.0	201.2	201.2	201.2	178.3
	Wire, copper. (See Metals and metal products, code No. 487.)														
	Wood screws. (See Metals and metal products, code No. 461.)														

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Unit	AVERAGE PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	CHEMICALS AND ALLIED PRODUCTS:														
	Chemicals:														
583-1	Acetone, chemically pure, tank, carlots, delivered east.	Pound	$0.060	$0.060	$0.060	$0.060	$0.060	$0.060	$0.060	$0.060	$0.060	$0.070	$0.070	$0.070	$0.062
583-2	Acid:														
	Acetic, 99.5 percent, glacial, synthetic, barrels, carlots, works.	100 pounds	9.150	9.150	9.150	9.150	9.150	9.150	9.150	9.150	9.150	9.150	9.150	9.150	9.150
586.1	Hydrochloric (muriatic), 20°, tanks, large lots, f. o. b. eastern works.	Ton	22.000	22.000	22.000	22.000	22.000	22.000	22.000	22.000	22.000	22.000	22.000	22.000	22.000
587	Nitric, 42°, commercial, carboys, carlots, f. o. b. eastern works.	100 pounds	6.500	6.500	6.500	6.500	6.500	6.500	6.500	6.500	6.500	6.500	6.500	6.500	6.500
588	Oleic (red oil), single distilled, tanks, large lots delivered east of Rockies.	Pound	.125	.125	.125	.125	.125	.142	.125	.125	.125	.125	.285	.285	.149
589-1	Phosphoric, 75 percent, technical, barrels, carlots, delivered east of Buffalo, Pittsburgh, and Washington, D. C.	do	.050	.050	.050	.050	.050	.050	.050	.050	.050	.050	.050	.050	.050
591	Stearic, distilled, triple pressed, bags, large lots delivered east of Rockies.	do	.186	.186	.186	.186	.186	.186	.212	.186	.186	.186	.362	.362	.216
592	Sulfuric, 66°, commercial, tanks, large lots, f. o. b. eastern works.	Ton	16.500	16.500	16.500	16.500	16.500	16.500	16.500	16.500	16.500	16.500	16.500	16.500	16.500
	Alcohol:														
592-1	Butyl, normal synthetic, tanks, f. o. b. works, freight allowed east.	Pound	.108	.108	.108	.108	.108	.108	.108	.108	.108	.108	.145	.145	.114
593-1	Specially denatured, formula No. 1, 190 proof, tank carlots, f. o. b. eastern works.	Gallon	.542	.542	.542	.542	.542	.542	.542	.542	.542	.542	.712	.825	.580
594-1	Methyl, synthetic, pure, tanks, large lots, f. o. b. works, freight allowed, zone 1.	do	.240	.240	.240	.240	.240	.240	.240	.240	.240	.240	.240	.240	.240
595	Aluminum sulfate, commercial, bags, carlots f. o. b. works, freight equalized.	100 pounds	1.150	1.150	1.150	1.150	1.150	1.150	1.150	1.150	1.150	1.150	1.150	1.150	1.150
	Ammonia:														
596	Anhydrous (liquid ammonia), pure, cylinders, large lots, delivered metropolitan New York.	Pound	.145	.145	.145	.145	.145	.145	.145	.145	.145	.145	.145	.145	.145

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Relative importance, year 1946	INDEXES (1926=100) OF PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	CHEMICALS AND ALLIED PRODUCTS.	1.68	96.0	95.9	96.0	96.1	96.5	96.4	99.3	98.4	98.4	99.9	118.9	125.7	101.4
	Chemicals	.89	97.1	97.0	97.0	97.1	97.0	98.0	98.5	98.4	98.6	98.8	106.9	111.8	99.8
583-1	Acetone, chemically pure, tank, carlots, delivered east.	(6)	51.1	51.1	51.1	51.1	51.1	51.1	51.1	51.1	51.1	59.6	59.6	59.6	53.2
583-2	Acid: Acetic, 99.5 percent, glacial, synthetic, barrels, carlots, works.	.01	79.5	79.5	79.5	79.5	79.5	79.5	79.5	79.5	79.5	79.5	79.5	79.5	79.5
586.1	Hydrochloric (muriatic), 20°, tanks, large lots, f. o. b. eastern works.	(6)	123.7	123.7	123.7	123.7	123.7	123.7	123.7	123.7	123.7	123.7	123.7	123.7	123.7
587	Nitric, 42°, commercial, carboys, carlots, f. o. b. eastern works.	.01	101.4	101.4	101.4	101.4	101.4	101.4	101.4	101.4	101.4	101.4	101.4	101.4	101.4
588	Oleic (red oil), single distilled, tanks, large lots delivered east of Rockies.	.01	134.8	134.8	134.8	134.8	134.8	134.8	153.7	134.8	134.8	134.8	307.4	307.4	160.5
589-1	Phosphoric, 75 percent, technical, barrels, carlots, delivered east of Buffalo, Pittsburgh, and Washington, D. C.	(6)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
591	Stearic, distilled, triple pressed, bags, large lots delivered east of Rockies.	.01	114.4	114.4	114.4	114.4	114.4	114.4	130.6	114.4	114.4	114.4	222.8	222.8	132.8
592	Sulfuric, 66°, commercial, tanks, large lots, f. o. b. eastern works.	.07	113.7	113.7	113.7	113.7	113.7	113.7	113.7	113.7	113.7	113.7	113.7	113.7	113.7
592-1	Alcohol: Butyl, normal synthetic, tanks, f. o. b. works, freight allowed east.	.01	58.4	58.4	58.4	58.4	58.4	58.4	58.4	58.4	58.4	58.4	78.7	78.7	61.9
593-1	Specially denatured, formula No. 1, 190 proof, tank carlots, f. o. b. eastern works.	.10	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
594-1	Methyl, synthetic, pure, tanks, large lots, f. o. b. works, freight allowed, zone 1.	(6)	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0
595	Aluminum sulfate, commercial, bags, carlots, f. o. b. works, freight equalized.	.01	82.1	82.1	82.1	82.1	82.1	82.1	82.1	82.1	82.1	82.1	82.1	82.1	82.1
596	Ammonia: Anhydrous (liquid ammonia), pure, cylinders, large lots, delivered metropolitan New York.	.04	110.4	110.4	110.4	110.4	110.4	110.4	110.4	110.4	110.4	110.4	110.4	110.4	110.4

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Unit	AVERAGE PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	CHEMICALS AND ALLIED PRODUCTS—Continued														
	Chemicals—Continued														
	Ammonia—Continued														
597	Aqua, 26°, drums, carlots, f. o. b. New York.	Pound	$0.022	$0.022	$0.022	$0.022	$0.022	$0.022	$0.022	$0.022	$0.022	$0.022	$0.022	$0.022	$0.022
598.1	Anilin oil, drums, carlots, f. o. b. works, freight allowed.	do	.115	.115	.115	.115	.115	.115	.120	.120	.120	.120	.120	.120	.118
599	Arsenic, white (arsenous oxide), powdered, barrels, carlots, f. o. b. New York.	do	.040	.040	.040	.040	.040	.040	.040	.044	.050	.050	.050	.060	.044
602	Benzene (benzol), pure, 90 percent nitration, tanks, large lots, f. o. b. works, freight allowed east of Omaha.	Gallon	.150	.150	.150	.150	.150	.150	.150	.150	.150	.150	.150	.170	.152
604	Borax (sodium borate), 99½ percent, technical, granulated, bags, carlots, f. o. b. works, freight allowed.	Ton	45.000	45.000	45.000	45.000	45.000	45.000	45.000	45.000	45.000	45.000	45.000	45.000	45.000
	Calcium compounds:														
606.1	Arsenate, carlots, drums, f. o. b. works, freight allowed.	Pound	.075	.075	.075	.075	.075	.075	.075	.075	.075	.075	.079	.085	.076
607	Carbide, drums, large lots, delivered	do	.044	.044	.044	.044	.044	.044	.044	.044	.044	.044	.044	.044	.044
608-1.1	Chloride, flake, 77-80 percent, domestic, paper bags, carlots, delivered.	Ton	18.500	18.500	18.500	18.500	18.500	18.500	18.500	18.500	18.500	18.500	18.500	18.500	18.500
608-2	Carbon bisulfide, drums, carlots, f. o. b. works, freight allowed east of Mississippi and north of Ohio River.	Pound	.050	.050	.050	.050	.050	.050	.050	.050	.050	.050	.050	.050	.050
608-3	Carbon dioxide, cylinders, large lots, f. o. b. New York.	do	.060	.060	.060	.060	.060	.060	.060	.060	.060	.060	.060	.060	.060
608-4	Carbon tetrachloride, drums, carlots, f. o. b. works, freight allowed east of Mississippi and north of Ohio Rivers.	do	.055	.055	.055	.052	.052	.052	.052	.052	.055	.055	.055	.055	.054
608-5	Chestnut extract, clarified, 25 percent tannin, tank, carlots, f. o. b. works	do	.026	.026	.026	.026	.031	.032	.032	.032	.032	.032	.032	.032	.030
608-6	Chlorine, liquid, single unit, tank carlots, f. o. b. works, freight equalized	100 pounds	1.750	1.750	1.750	1.750	1.750	1.750	1.750	1.750	1.794	1.838	1.902	2.000	1.794
608-7	Coal tar, coal-gas, refined, carlots, barrel, f. o. b. works.	50 gal. barrel.	8.750	8.750	8.750	8.750	8.750	8.750	8.750	8.750	8.750	8.750	8.800	9.000	8.774

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Relative importance, year 1946	INDEXES (1926=100) OF PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	CHEMICALS AND ALLIED PRODUCTS—Continued														
	Chemicals—Continued														
	Ammonia—Continued														
597	Aqua, 26°, drums, carlots, f. o. b. New York.	(6)	68.4	68.4	68.4	68.4	68.4	68.4	68.4	68.4	68.4	68.4	68.4	68.4	68.4
598.1	Anilin oil, drums, carlots, f. o. b. works, freight allowed.	(6)	91.4	91.4	91.4	91.4	91.4	91.4	95.3	95.3	95.3	95.3	95.3	95.3	93.3
599	Arsenic, white (arsenous oxide), powdered, barrels, carlots, f. o. b. New York.	(6)	114.3	114.3	114.3	114.3	114.3	114.3	114.3	125.7	142.9	142.9	142.9	171.4	126.9
602	Benzene (benzol), pure, 90 percent nitration, tanks, large lots, f. o. b. works, freight allowed east of Omaha.	(6)	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.0	70.3	62.6
604	Borax (sodium borate), 99½ percent, technical, granulated, bags, carlots, f. o. b. works, freight allowed.	.01	46.3	46.3	46.3	46.3	46.3	46.3	46.3	46.3	46.3	46.3	46.3	46.3	46.3
	Calcium compounds:														
606.1	Arsenate, carlots, drums, f. o. b. works, freight allowed.	(6)	94.7	94.7	94.7	94.7	94.7	94.7	94.7	94.7	94.7	94.7	99.8	107.4	96.2
607	Carbide, drums, large lots, delivered.	.01	85.3	85.3	85.3	85.3	85.3	85.3	85.3	85.3	85.3	85.3	85.3	85.3	85.3
608-1.1	Chloride, flake, 77-80 percent, domestic, paper bags, carlots, delivered.	.01	69.5	69.5	69.5	69.5	69.5	69.5	69.5	69.5	69.5	69.5	69.5	69.5	69.5
608-2	Carbon bisulfide, drums, carlots, f. o. b. works, freight allowed east of Mississippi and north of Ohio River.	.01	90.3	90.3	90.3	90.3	90.3	90.3	90.3	90.3	90.3	90.3	90.3	90.3	90.3
608-3	Carbon dioxide, cylinders, large lots, f. o. b. New York.	.01	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
608-4	Carbon tetrachloride, drums, carlots, f. o. b. works, freight allowed east of Mississippi and north of Ohio Rivers.	(6)	86.1	86.1	85.2	81.3	81.3	81.3	81.3	81.3	86.1	86.1	86.1	86.1	84.0
608-5	Chestnut extract, clarified, 25 percent tannin, tank, carlots, f. o. b. works.	.01	149.7	149.7	149.7	149.7	177.1	184.0	184.0	184.0	184.0	184.0	184.0	184.0	172.0
608-6	Chlorine, liquid, single unit, tank carlots, f. o. b. works, freight equalized.	.01	43.8	43.8	43.8	43.8	43.8	43.8	43.8	43.8	44.8	45.9	47.6	50.0	44.8
608-7	Coal tar, coal-gas, refined, carlots, barrel, f. o. b. works.	.07	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Unit	AVERAGE PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	CHEMICALS AND ALLIED PRODUCTS—Continued														
	Chemicals—Continued														
	Coal-tar dyes, large lots, f. o. b. New York, barrels.														
609	Black, direct, color index No. 582	Pound	$0.350	$0.350	$0.350	$0.350	$0.350	$0.350	$0.350	$0.350	$0.350	$0.350	$0.350	$0.350	$0.350
609-1	Black, sulfur	do	.200	.200	.200	.200	.200	.200	.200	.200	.200	.200	.200	.200	.200
610	Brown, sulfur	do	.250	.250	.250	.250	.250	.250	.250	.250	.250	.250	.250	.250	.250
611	Indigo, 20 percent paste, color index No. 1177.	do	.150	.150	.150	.150	.150	.150	.150	.150	.150	.150	.150	.150	.150
612	Jet nigrosine, color index No. 845	do	.350	.350	.350	.350	.350	.350	.350	.350	.350	.350	.350	.350	.350
613	Copperas, crystals and granular, bulk, carlots, f. o. b. works.	Ton	14.000	14.000	14.000	14.000	14.000	14.000	14.000	14.000	14.000	14.000	14.000	14.000	14.000
614	Copper sulfate (blue vitriol), 99 percent, crystals, bags, carlots, f. o. b. works.	100 pounds	5.000	5.000	5.000	5.000	5.000	5.162	5.650	5.650	5.650	5.650	6.430	7.100	5.524
614-1	Cream of tartar, powdered, barrels, small lots, f. o. b. New York.	Pound	.565	.520	.520	.520	.520	.520	.520	.520	.505	.460	.460	.460	.507
615	Creosote oil, crude, tanks, large lots, f. o. b. works.	Gallon	.155	.155	.155	.155	.155	.155	.155	.155	.155	.155	.157	.165	.156
[3] 615-1.1	Epsom salts, technical, bags, large lots, f. o. b. New York.	100 pounds	1.800	1.800	1.800	1.800	1.800	1.800	1.800	1.800	1.800	1.800	1.800	1.800	1.800
	Explosives:														
	Blasting powder:														
615-2	Grain B, carlots, kegs, delivered Pittsburgh district.	25 pounds	1.800	1.800	1.800	1.800	2.050	2.050	2.050	2.350	2.350	2.350	2.350	2.350	2.090
615-3	Pellets, wooden cases, carlots, delivered Pittsburgh district.	100 pounds	7.800	7.800	7.800	7.800	8.800	8.800	8.800	10.400	10.400	10.400	10.400	10.400	9.124
615-4	Dynamite, 40 percent low-freezing ammonia, wooden cases, carlots, delivered Pittsburgh district.	do	10.000	10.000	10.000	10.000	11.000	11.000	11.000	11.000	11.500	12.000	12.000	12.000	10.962
616.1	Formaldehyde, tank car, f. o. b. works	Pound	.032	.032	.032	.032	.032	.032	.032	.032	.032	.032	.032	.032	.032
616-1	Glycerine, high gravity, drums, carlots, delivered, zones A and C.	do	.175	.175	.175	.175	.175	.175	.190	.175	.175	.175	.402	.552	.227
616-2	Hydrogen peroxide, 100 volume, carboys, less than carlots, delivered east of Mississippi River.	do	.185	.185	.185	.185	185	.185	.185	.185	.185	.185	.185	.185	.185

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Relative importance, year 1946	INDEXES (1926=100) OF PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	CHEMICALS AND ALLIED PRODUCTS—Continued														
	Chemicals—Continued														
	Coal-tar dyes, large lots, f. o. b. New York, barrels:														
609	Black, direct, color index No. 582	0.01	101.7	101.7	101.7	101.7	101.7	101.7	101.7	101.7	101.7	101.7	101.7	101.7	101.7
609-1	Black, sulfur	.01	105.7	105.7	105.7	105.7	105.7	105.7	105.7	105.7	105.7	105.7	105.7	105.7	105.7
610	Brown, sulfur	(6)	117.8	117.8	117.8	117.8	117.8	117.8	117.8	117.8	117.8	117.8	117.8	117.8	117.8
611	Indigo, 20 percent paste, color index No. 1177.	.01	107.1	107.1	107.1	107.1	107.1	107.1	107.1	107.1	107.1	107.1	107.1	107.1	107.1
612	Jet nigrosine, color index No. 845	.01	76.8	76.8	76.8	76.8	76.8	76.8	76.8	76.8	76.8	76.8	76.8	76.8	76.8
613	Copperas, crystals and granular, bulk, carlots f. o. b. works.	(6)	112.7	112.7	112.7	112.7	112.7	112.7	112.7	112.7	112.7	112.7	112.7	112.7	112.7
614	Copper sulfate (blue vitriol), 99 percent, crystals, bags, carlots, f. o. b. works.	.01	106.4	106.4	106.4	106.4	106.4	109.8	120.2	120.2	120.2	120.2	136.8	151.1	117.5
614-1	Cream of tartar, powdered, barrels, small lots, f. o. b. New York.	.01	264.4	243.3	243.3	243.3	243.3	253.3	243.3	243.3	236.3	215.3	215.3	215.3	237.4
615	Creosote oil, crude, tanks, large lots, f. o. b. works.	.04	110.1	110.1	110.1	110.1	110.1	110.1	110.1	110.1	110.1	110.1	111.5	117.2	110.8
[3] 615-1.1	Epsom salts, technical, bags, large lots, f. o. b. New York.	(6)	112.7	112.7	112.7	112.7	112.7	112.7	112.7	112.7	112.7	112.7	112.7	112.7	112.7
	Explosives:														
	Blasting powder:														
615-2	Grain B, carlots, kegs, delivered Pittsburgh district.	.01	105.9	105.9	105.9	105.9	120.6	120.6	120.6	138.2	138.2	138.2	138.2	138.2	122.9
615-3	Pellets, wooden cases, carlots, delivered Pittsburgh district.	(6)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
615-4	Dynamite, 40 percent low-freezing ammonia, wooden cases, carlots, delivered Pittsburgh district.	.04	75.5	75.5	75.5	75.5	83.0	83.0	83.0	83.0	86.8	90.6	90.6	90.6	82.7
616.1	Formaldehyde, tank car, f. o .b. works	(6)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
616-1	Glycerine, high gravity, drums, carlots, delivered, zones A and C.	.01	63.6	63.6	63.6	63.6	63.6	63.6	69.1	63.6	63.6	63.6	145.9	200.8	82.5
616-2	Hydrogen peroxide, 100 volume, carboys, less than carlots, delivered east of Mississippi River.	.03	66.7	66.7	66.7	66.7	66.7	66.7	66,7	66.7	66.7	66.7	66.7	66.7	66.7

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Unit	AVERAGE PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	CHEMICALS AND ALLIED PRODUCTS—Continued														
	Chemicals—Continued														
[3] 616-3. 2	Lead arsenate, powdered, standard, bags, carlots, f. o. b. plant, freight allowed on 96 pounds or more (composite price).	Pound	$0. 109	$0. 109	$0. 109	$0. 109	$0. 109	$0. 109	$0. 112	$0. 114	$0. 116	$0. 117	$0. 122	$0. 150	$0. 116
617. 1	Logwood extract, solid, boxes, No. 1, f. o. b. New York.	do	. 280	. 280	. 280	. 280	. 280	. 280	. 280	. 280	. 280	. 280	. 280	. 280	. 280
618-1	Naphthalene, crude, 74°, domestic, tanks, carlots, f. o. b. works, freight equalized.	100 pounds	2. 750	2. 750	2. 750	2. 750	2. 750	2. 750	2. 750	2. 750	2. 750	2. 750	2. 900	3. 500	2. 822
618-2. 1	Nicotine sulfate, 40 percent, drums, f. o. b. plant or warehouses, freight prepaid on lots of 100 pounds or more.	Pound	. 798	. 798	. 798	. 798	. 798	. 798	. 798	. 798	. 798	. 798	. 798	. 900	. 806
618-3	Nitrocellulose, 5-6, 15-20 second viscosity, ester soluble, barrels, carlots, f. o. b. plant.	do	. 195	. 195	. 195	. 195	. 200	. 200	. 200	. 200	. 200	. 200	. 200	. 260	. 204
618-4	Phenol (carbolic acid), U. S. P., drums, carlots, f. o. b. works, freight equalized.	do	. 105	. 105	. 105	. 105	. 105	. 105	. 111	. 105	. 105	. 105	. 106	. 112	. 106
618-5	Phthalic anhydride, refined, barrels, carlots, f. o. b. works, freight allowed east of Denver.	do	. 130	. 130	. 130	. 130	. 130	. 130	. 130	. 130	. 130	. 130	. 133	. 145	. 131
620-1	Potash, caustic, solid, 88-92 percent, domestic, drums, carlots, f. o. b. works.	do	. 062	. 062	. 062	. 062	. 062	. 062	. 062	. 062	. 062	. 062	. 062	. 062	. 062
621	Quebracho extract, 63 percent, solid, bags, carlots, ex-dock New York, excluding duty.	do	. 056	. 056	. 056	. 061	. 063	. 063	. 063	. 063	. 063	. 063	. 063	. 063	. 061
623. 1	Salt cake, ground, bulk, large lots, f. o. b. works.	Ton	15. 000	15. 000	15. 000	15. 000	15. 000	15. 000	15. 000	15. 000	15. 000	15. 000	15. 000	15. 000	15. 000
624	Salt, granulated, bulk, carlots, f. o. b. Chicago.	do	9. 700	9. 700	9. 700	9. 700	9. 700	9. 700	9. 700	9. 700	9. 700	9. 700	9. 700	9. 700	9. 700
624-1	Silver nitrate, 100-ounce bottle, large lots, f. o. b. New York.	Ounce	. 470	. 470	. 470	. 470	. 470	. 470	. 535	. 538	. 582	. 582	. 582	. 582	. 518
	Sodium compounds:														
625	Ash (anhydrous sodium carbonate), 58 percent, light, bags, carlots, f. o. b. works.	100 pounds	1. 050	1. 050	1. 050	1. 050	1. 050	1. 050	1. 050	1. 050	1. 076	1. 102	1. 142	1. 200	1. 076

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Relative importance, year 1946	INDEXES (1926=100) OF PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	CHEMICALS AND ALLIED PRODUCTS—Continued														
	Chemicals—Continued														
[3]616-3.2	Lead arsenate, powdered, standard, bags, carlots, f. o. b. plant, freight allowed on 96 pounds or more (composite price).	0.01	75.2	75.2	75.2	75.2	75.2	75.2	77.3	78.6	79.8	80.7	84.3	103.6	79.9
617.1	Logwood extract, solid, boxes, No. 1 f. o. b. New York.	.01	208.9	208.9	208.9	208.9	208.9	208.9	208.9	208.9	208.9	208.9	208.9	208.9	208.9
618-1	Napthalene, crude, 74°, domestic, tanks, carloads, f. o. b. works, freight equalized.	(6)	163.9	163.9	163.9	163.9	163.9	163.9	163.9	163.9	163.9	163.9	172.8	208.6	168.2
618-2.1	Nicotine sulfate, 40 percent, drums, f. o. b. plant or warehouses, freight prepaid on lots of 100 pounds or more.	(6)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
618-3	Nitrocellulose, 5-6, 15-20 second viscosity, ester soluble, barrels, carlots, f. o. b. plant.	.01	52.2	52.2	52.2	52.2	53.6	53.6	53.6	53.6	53.6	53.6	53.6	69.6	54.6
618-4	Phenol (carbolic acid), U. S. P., drums, carloads, f. o. b. works, freight equalized.	(6)	53.3	53.3	53.3	53.3	53.3	53.3	56.2	53.3	53.3	53.3	54.1	57.1	53.9
618-5	Phthalic anhydride, refined, barrels, carlots, f. o. b. works, freight allowed east of Denver.	(6)	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	66.5	72.5	65.7
620-1	Potash, caustic, solid, 88-92 percent, domestic, drums, carlots, f. o. b. works.	(6)	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7
621	Quebracho extract, 63 percent, solid, bags, carlots, ex-dock New York, excluding duty.	.01	108.9	108.9	108.9	119.0	122.3	122.3	122.3	122.3	122.3	122.3	122.3	122.3	118.8
623.1	Salt cake, ground, bulk, large lots, f. o. b. works.	.01	98.1	98.1	98.1	98.1	98.1	98.1	98.1	98.1	98.1	98.1	98.1	98.1	98.1
624	Salt, granulated, bulk, carlots, f. o. b. Chicago.	.05	129.2	129.2	129.2	129.2	129.2	129.2	129.2	129.2	129.2	129.2	129.2	129.2	129.2
624-1	Silver nitrate, 100-ounce bottle, large lots, f. o. b. New York.	(6)	109.9	109.9	109.9	109.9	109.9	109.9	125.1	125.7	136.3	136.3	136.3	136.3	121.2
	Sodium compounds:														
625	Ash (anhydrous sodium carbonate), 58 percent, light, bags, carlots, f. o. b. works	.05	73.4	73.4	73.4	73.4	73.4	73.4	73.4	73.4	75.3	77.1	79.8	83.9	75.3

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Unit	AVERAGE PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	CHEMICALS AND ALLIED PRODUCTS—Continued														
	Sodium compounds—Continued														
[3] 626.2	Bicarbonate, U. S. P., granulated, bags, carlots, f. o. b. works.	100 pounds	$2.100	$2.100	$2.100	$2.100	$2.100	$2.100	$2.100	$2.100	$2.152	$2.205	$2.250	$2.250	$2.138
626–1	Bichromate, casks, carlots, f. o. b. works.	Pound	.079	.079	.079	.079	.079	.079	.079	.079	.079	.079	.079	.083	.079
627	Caustic (ammonia process), 76 percent, solid, drums, carlots, f. o. b. works.	100 pounds	2.300	2.300	2.300	2.300	2.300	2.300	2.300	2.300	2.358	2.415	2.436	2.500	2.340
627–1	Cyanide, 96–98 percent, domestic, drums, large lots, f. o. b. New York.	Pound	.145	.145	.145	.145	.145	.145	.145	.145	.145	.145	.145	.145	.145
627–2	Phosphate, tribasic, crystal, bags, carlots, f. o. b. works, freight equalized.	100 pounds	2.700	2.700	2.700	2.700	2.700	2.700	2.700	2.700	2.700	2.700	2.700	2.700	2.700
628	Silicate (water glass), 40°, turbid, drums, carlots, f. o. b. works.	do	.800	.800	.800	.800	.800	.800	.800	.800	.800	.800	.800	.800	.800
629	Sulfide, crystals, domestic, barrels, carlots, f. o. b. works.	do	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400
630	Sulfur, crude, bulk, 1,000-ton contracts, f. o. b. mines.	Long ton	16.000	16.000	16.000	16.000	16.000	16.000	16.000	16.000	16.000	16.000	16.000	16.000	16.000
630–1	Sulfur dioxide, liquid, commercial, tank carlots, f. o. b. works.	Pound	.040	.040	.040	.040	.040	.040	.040	.040	.040	.040	.040	.040	.040
630–2	Tin tetrachloride, anhydrous, drums, large lots, f. o. b. works.	do	.310	.310	.310	.310	.310	.310	.310	.310	.310	.310	.310	.310	.310
632	Toluene, 1°, nitration, tank carlots, f. o. b. plant, freight allowed east of Omaha.	Gallon	.270	.270	.270	.270	.270	.270	.270	.230	.220	.220	.220	.220	.250
632–1	Vanillin, domestic, ex-eugenol, tins, large lots, f. o. b. New York.	Pound	2.600	2.600	2.600	2.600	2.600	2.600	4.500	4.500	4.500	4.500	4.500	4.500	3.550
632–2	Zinc chloride, fused, drums, carlots, f. o. b. works.	do	.050	.050	.050	.050	.050	.050	.050	.050	.050	.050	.050	.050	.050

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Relative importance, year 1946	INDEXES (1926=100) OF PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	CHEMICALS AND ALLIED PRODUCTS—Continued														
	Chemicals—Continued														
	Sodium compounds—Continued														
[3] 626.2	Bicarbonate, U. S. P. granulated, bags, carlots, f. o. b. works.	0.01	97.4	97.4	97.4	97.4	97.4	97.4	97.4	97.4	99.8	102.2	104.3	104.3	99.1
626-1	Bichromate, casks, carlots f. o. b. works.	.01	124.1	124.1	124.1	124.1	124.1	124.1	124.1	124.1	124.1	124.1	124.1	131.3	124.6
627	Caustic (ammonia process), 76 percent, solid, drums, carlots, f. o. b. works.	.04	71.9	71.9	71.9	71.9	71.9	71.9	71.9	71.9	73.8	75.5	76.1	78.1	73.1
627-1	Cyanide, 96-98 percent, domestic, drums, large lots, f. o. b. New York.	.01	76.3	76.3	76.3	76.3	76.3	76.3	76.3	76.3	76.3	76.3	76.3	76.3	76.3
627-2	Phosphate, tribasic, crystal, bags, carlots f. o. b. works, freight equalized.	.01	69.0	69.0	69.0	69.0	69.0	69.0	69.0	69.0	69.0	69.0	69.0	69.0	69.0
628	Silicate (water glass), 40°, turbid, drums, carlots, f. o. b. works.	.01	102.6	102.6	102.6	102.6	102.6	102.6	102.6	102.6	102.6	102.6	102.6	102.6	102.6
629	Sulfide, crystals, domestic, barrels, carlots, f. o. b. works.	(6)	98.5	98.5	98.5	98.5	98.5	98.5	98.5	98.5	98.5	98.5	98.5	98.5	98.5
630	Sulfur, crude, bulk, 1,000-ton contracts, f. o. b. mines.	.04	87.9	87.9	87.9	87.9	87.9	87.9	87.9	87.9	87.9	87.9	87.9	87.9	87.9
630-1	Sulfur dioxide, liquid, commercial, tank carlots, f. o. b. works.	(6)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
630-2	Tin tetrachloride, anhydrous, drums, large lots, f. o. b. works.	.01	84.2	84.2	84.2	84.2	84.2	84.2	84.2	84.2	84.2	84.2	84.2	84.2	84.2
632	Toluene, 1°, nitration, tank carlots, f. o. b. plant, freight allowed east of Omaha.	(6)	77.1	77.1	77.1	77.1	77.1	77.1	77.1	65.7	62.9	62.9	62.9	62.9	71.4
632-1	Vanillin, domestic, ex-eugenol, tins, large lots, f. o. b. New York.	(6)	35.9	35.9	35.9	35.9	35.9	35.9	62.1	62.1	62.1	62.1	62.1	62.1	49.0
632-2	Zinc chloride, fused, drums, carlots, f. o. b. works.	(6)	91.6	91.6	91.6	91.6	91.6	91.6	91.6	91.6	91.6	91.6	91.6	91.6	91.6

See footnotes at end of table.

TABLE 12.—*Primary market prices. index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Unit	AVERAGE PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	CHEMICALS AND ALLIED PRODUCTS—Continued														
	Drug and pharmaceutical materials, U.S. P. grades:														
	Acid:														
634-1	Acetylsalicylic, standard, barrels large lots, f. o. b. New York, freight equalized.	Pound	$0. 400	$0. 400	$0. 400	$0. 400	$0. 400	$0. 400	$0. 400	$0. 400	$0. 400	$0. 400	$0. 400	$0. 450	$0. 404
635	Citric, crystals, barrels, carlots, f. o. b. New York.	do	. 200	. 200	. 200	. 200	. 200	. 200	. 200	. 200	. 200	. 200	. 200	. 200	. 200
635-1	Salicylic, barrels, 100 pounds to carlot, f. o. b. New York.	do	. 350	. 350	. 350	. 350	. 350	. 350	. 350	. 350	. 350	. 350	. 350	. 350	. 350
636	Tartaric, domestic, crystals, granulated, powdered, barrels, 1 shipment of 10,000 pounds or more, f. o. b. New York.	do	. 685	. 625	. 625	. 625	. 625	. 625	. 625	. 625	. 605	. 545	. 545	. 545	. 608
	Alcohol, ethyl, 190 proof, ex-molasses, drums, carlots, f. o. b. New York:														
(7)	Full tax included [8]	Gallon	17. 725	17. 725	17. 725	17. 725	17. 725	17. 725	17. 725	17. 725	17. 725	17. 725	17. 896	18. 010	17. 763
637-1	Less partial tax refund	do	6, 325	6, 325	6, 325	6, 325	6. 325	6. 325	6. 325	6. 325	6. 325	6. 325	6. 496	6. 610	6. 363
637-2	Bismuth subnitrate, powdered, barrels, lot, f. o. b. New York.	Pound	1. 200	1. 200	1. 200	1. 200	1. 200	1. 200	1. 200	1. 200	1. 200	1. 200	1. 536	2. 000	1. 294
638	Caffeine alkaloid, drums, lots of 1,000 to 2,000 pounds, f. o. b. New York.	do	2. 850	2. 850	2. 850	2. 850	2. 850	2. 850	2. 850	2. 850	2. 850	2. 850	3. 040	3. 800	2. 941
639-1	Camphor, synthetic, domestic, granulated or powdered, barrel, 2,000 pounds or more, f. o. b. works.	do	. 690	. 690	. 690	. 690	. 690	. 690	. 690	. 690	. 690	. 690	. 714	. 810	. 702
640	Castor oil (medicinal), cold-pressed, drums (returnable), carlots, f. o. b. New York.	do	. 138	. 141	. 150	. 150	. 150	. 150	. 150	. 150	. 176	. 202	. 287	. 300	. 175
642	Chloroform, drums, large lots, f. o. b. New York.	do	. 300	. 300	. 300	. 300	. 300	. 300	. 300	. 300	. 300	. 300	. 300	. 300	. 300
642-1	Codeine sulfate, cans, 100-ounce lots, f. o. b. New York.	Ounce	9. 500	9. 500	9. 500	9. 500	9. 500	. 500	9. 500	9. 500	9. 500	9. 500	9. 500	9. 500	9. 500
644	Epsom salts, domestic, crystals, barrels, less than carlots, 5,000 pounds 1 withdrawal, f. o. b. New York, freight equalized.	100 pounds	2. 350	2. 350	2. 350	2. 350	2. 350	2. 350	2. 350	2. 350	2. 350	2. 350	2. 350	2. 350	2. 350

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Relative importance, year 1946	INDEXES (1926=100) OF PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	CHEMICALS AND ALLIED PRODUCTS—Continued														
	Drug and pharmaceutical materials, U. S. P. grades.	0.18	112.1	111.5	111.7	112.4	112.4	109.4	112.6	110.1	110.3	111.5	152.8	181.2	120.8
	Acid:														
634-1	Acetylsalicylic, standard, barrels, large lots, f. o. b. New York, freight equalized.	(6)	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	62.2	55.8
635	Citric, crystals, barrels, carlots, f. o. b. New York.	(6)	44.7	44.7	44.7	44.7	44.7	44.7	44.7	44.7	44.7	44.7	44.7	44.7	44.7
635-1	Salicylic, barrels, 100 to carlot. f. o. b. New York.	(6)	102.2	102.2	102.2	102.2	102.2	102.2	102.2	102.2	102.2	102.2	102.2	102.2	102.2
636	Tartaric, domestic, crystals, granulated, powdered, barrels, 1 shipment of 10,000 pounds or more, f. o. b. New York.	.01	233.6	213.2	213.2	213.2	213.2	213.2	213.2	213.2	206.3	185.9	185.9	185.9	207.4
	Alcohol, ethyl, 190 proof, ex-molasses, drums, carlots, f. o. b. New York:														
(7)	Full tax included [8]	----------	371.4	371.4	371.4	371.4	371.4	371.4	371.4	371.4	371.4	371.4	375.2	377.4	372.5
637-1	Less partial tax refund	.04	132.5	132.5	132.5	132.5	132.5	132.5	132.5	132.5	132.5	132.5	136.1	138.5	133.4
637-2	Bismuth subnitrate, powdered, barrels, f. o. b. New York.	.01	41.1	41.1	41.1	41.1	41.1	41.1	41.1	41.1	41.1	41.1	52.6	68.5	44.3
638	Caffeine alkaloid, drums, lots of 1,000 to 2,000 pounds, f. o. b. New York.	(6)	85.7	85.7	85.7	85.7	85.7	85.7	85.7	85.7	85.7	85.7	91.4	114.3	88.5
639-1	Camphor, synthetic, domestic, granulated or powdered, barrel, 2,000 pounds or more, f. o. b. works.	.02	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
640	Castor oil (medicinal), cold-pressed, drums (returnable), carlots, f. o. b. New York.	(6)	108.9	111.3	118.8	118.8	118.8	118.8	118.8	118.8	139.5	160.3	227.0	237.5	138.4
642	Chloroform, drums, large lots, f. o. b. New York.	(6)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
642-1	Codeine sulfate, cans, 100-ounce lots, f. o. b. New York.	.01	122.6	122.6	122.6	122.6	122.6	122.6	122.6	122.6	122.6	122.6	122.6	122.6	122.6
644	Epsom salts, domestic, crystals, barrels, less than carlots, 5,000 pounds 1 withdrawal, f. o. b. New York, freight equalized.	(6)	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Unit	AVERAGE PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	CHEMICALS AND ALLIED PRODUCTS—Continued														
	Drug and pharmaceutical materials, U. S. P. grades—Continued														
644-1	Ergot, drums, large lots, f. o. b. New York.	Pound	$1.600	$1.600	$1.710	$1.650	$1.650	$1.650	$1.650	$1.650	$.1600	$1.550	$1.550	$1.550	$1.619
644-2.1	Ether, anesthesia, 1-pound cans, f. o. b. New York.	do	.600	.600	.600	.600	.600	.600	.600	.600	.600	.600	.600	.600	.600
645	Glycerin, chemically pure, drums, carlots, delivered.	do	.182	.182	.182	.182	.182	.182	.198	.182	.182	.182	.404	.552	.234
646	Iodine resublimed, jars, large lots, f. o. b. New York.	do	1.750	1.750	1.750	1.750	1.750	1.750	1.750	1.750	1.750	1.750	1.820	2.100	1.784
[3] 647.1	Menthol, natural, cans, large lots, f. o. b. New York.	do	4.550	4.375	4.900	5.075	5.690	6.688	8.188	8.250	8.188	8.138	7.840	7.612	6.628
647-1	Morphine, sulfate, cans, large lots, f. o. b. New York.	Ounce	8.800	8.800	8.800	8.800	8.800	8.800	8.800	8.800	8.800	8.800	8.800	8.800	8.800
647-2	Nux vomica, whole, bales, large lots, f. o. b. New York.	Pound	.100	.100	.100	.100	.100	.100	.098	.095	.095	.095	.095	.095	.098
648	Opium, gum, cans, large lots, f. o. b. New York.	do	13.000	13.000	13.000	13.000	13.000	13.000	13.000	13.000	13.000	19.225	21.300	21.300	14.915
651	Potassium iodide, drums, large lots, f. o. b. New York.	do	1.350	1.350	1.350	1.350	1.350	1.350	1.350	1.350	1.350	1.350	1.400	1.600	1.374
652-1	Quinine sulfate, cans, 100-ounce lots, f. o. h. New York.	Ounce	.805	.805	.805	.805	.805	.805	.805	.805	.805	.805	.805	.805	.805
[3] 654.1	Strychnine alkaloid, powdered, cans, 100-ounce lots, f. o. b. New York.	do	(2)	.600	1.250	1.250	1.250	1.250	1.250	1.250	1.250	1.250	1.250	1.250	[10] 1.196
	Fertilizer materials:														
[3] 656.1	Ammonium sulfate, domestic, bulk, large lots, f. o. b. inland producing ovens.	Ton	28.200	28.200	28.200	28.200	28.200	28.200	28.200	30.000	30.000	3.0000	30.000	30.000	28.962
657	Bones, ground, 1 percent ammonia, 60 percent bone phosphate, steamed, domestic, bags, large lots, f. o. b. Chicago.	do	50.000	50.000	50.000	50.000	50.000	50.000	56.750	65.000	65.000	65.000	76.000	80.000	59.077
657-1	Cottonseed meal, prime, 8 percent ammonia, carlots, f. o. b. cars, Memphis.	do	49.250	49.250	49.250	49.250	49.250	63.250	92.000	94.625	61.500	77.100	92.750	80.200	67.745

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Relative importance, year 1946	INDEXES (1926=100) OF PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	CHEMICALS AND ALLIED PRODUCTS—Continued														
	Drug and pharmaceutical materials, U. S. P. grades—Continued														
644-1	Ergot, drums, large lots, f. o. b. New York.	(6)	149.6	149.6	159.9	154.3	154.3	154.3	154.3	154.3	149.6	144.9	144.9	144.9	151.4
644-2.1	Ether, anesthesia, 1-pound cans, f. o. b. New York.	(6)	166.6	166.6	166.6	166.6	166.6	166.6	166.6	166.6	166.6	166.6	166.6	166.6	166.6
645	Glycerin, chemically pure, drums, carlots, delivered.	.06	66.3	66.3	66.3	66.3	66.3	66.3	71.7	66.3	66.3	66.3	146.9	200.7	84.8
646	Iodine resublimed, jars, large lots, f. o. b. New York.	(6)	37.6	37.6	37.6	37.6	37.6	37.6	37.6	37.6	37.6	37.6	39.1	45.2	38.4
[3] 647.1	Menthol, natural, cans, large lots, f. o. b. New York.	.01	89.2	85.8	96.1	99.5	111.5	131.1	160.5	161.7	160.5	159.5	153.7	149.2	129.9
647-1	Morphine, sulfate, cans, large lots, f.o.b. New York.	(6)	121.4	121.4	121.4	121.4	121.4	121.4	121.4	121.4	121.4	121.4	121.4	121.4	121.4
647-2	Nux vomica, whole, bales, large lots, f. o. b. New York.	(6)	183.5	183.5	183.5	183.5	183.5	183.5	178.9	174.3	174.3	174.3	174.3	174.3	179.3
648	Opium, gum, cans, large lots, f. o. b. New York.	.01	108.3	108.3	108.3	108.3	108.3	108.3	108.3	108.3	108.3	160.2	177.5	177.5	124.3
651	Potassium iodide, drums, large lots, f. o. b. New York.	(6)	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	37.3	42.7	36.6
652-1	Quinine sulfate, cans, 100-ounce lots, f. o. b. New York.	.01	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
[3] 654.1	Strychnine alkaloid, powdered, cans, 100-ounce lots, f. o. b. New York.	(6)	(2)	119.7	249.3	249.3	249.3	249.3	249.3	249.3	249.3	249.3	249.3	249.3	[10] 238.5
	Fertilizer materials	.18	81.9	81.9	81.9	81.9	81.9	82.7	88.2	94.4	90.2	91.9	96.3	95.1	87.4
[3] 656.1	Ammonium sulfate, domestic, bulk, large lots, f. o. b. inland producing ovens.	.03	47.6	47.6	47.6	47.6	47.6	47.6	47.6	50.7	50.7	50.7	50.7	50.7	48.9
657	Bones, ground, 1 percent ammonia, 60 percent bone phosphate, steamed, domestic, bags, large lots, f. o. b. Chicago.	.01	188.5	188.5	188.5	188.5	188.5	188.5	214.0	245.1	245.1	245.1	286.6	301.7	222.8
657-1	Cottonseed meal, prime, 8 percent ammonia, carlots, f. o. b. cars, Memphis.	.02	164.1	164.1	164.1	164.1	164.1	210.7	309.8	315.2	214.8	256.8	309.0	267.1	225.7

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Unit	AVERAGE PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	CHEMICALS AND ALLIED PRODUCTS—Continued														
	Fertilizer materials—Continued														
657-2.2	Cyanamid, calcium, pulverized (25-26 percent ammonia, 21 percent nitrogen), paper bags, any quantity, f. o. b. cars, Niagara Falls, Ontario.	Ton	$32.025	$32.025	$32.025	$32.025	$32.025	$32.025	$32.025	$32.025	$32.025	$32.025	$32.025	$35.805	$32.382
[3] 657-3.2	Fish scrap, unground, dried, 60 percent protein, f. o. b. fish factory.	do	53.850	53.850	53.850	53.850	64.350	80.100	113.775	80.100	80.100	96.060	120.000	120.000	80.272
658-1	Phosphate rock, Florida land pebble, 72-70 percent b. p. l. minimum, bulk, large lots, f. o. b. mines.	Long ton	3.200	3.200	3.200	3.200	3.200	3.400	3.600	3.600	3.600	3.600	3.600	3.600	3.415
	Potash:														
659-1	Kainit, high grade, basis 20 percent K_2O, bulk, any quantity, c. i. f. ports.	Ton	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
660-1.1	Manure salts, basis 25 percent K_2O, bulk, any quantity, f. o. b. mines.	do	5.250	5.250	5.250	5.250	5.250	4.620	4.620	4.620	4.620	4.620	5.250	5.250	4.988
661-1.1	Muriate, domestic, basis 60 percent K_2O, bulk, any quantity, New York.	do	32.100	32.100	32.100	32.100	32.100	28.248	28.248	28.248	28.248	28.248	32.100	32.100	30.501
661-2	Muriate, imported, basis 50 percent K_2O, bulk, any quantity, New York.	do	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
662-1	Sulfate, 90 percent K_2SO_4, basis 48.65 percent K_2O, bulk, any quantity, c. l. f. Gulf and Atlantic ports.	do	36.250	36.250	36.250	36.250	36.250	31.900	31.900	31.900	31.900	31.900	36.250	36.250	34.444
663.1	Sodium nitrate, crude, imported, 100-pound bags, f. o. b. cars, port warehouses.	do	33.000	33.000	33.000	33.000	33.000	33.000	33.000	38.500	38.500	38.500	38.500	38.500	35.327
664	Superphosphate, pulverized, 16-percent basis, run of pile, bulk, large lots, f. o. b. Baltimore.	do	10.400	10.400	10.400	10.400	10.400	10.400	10.400	11.200	11.200	11.200	11.200	11.200	10.738
[3] 665.1	Tankage, 10-11 percent ammonia, ground, f. o. b. Chicago.	do	43.175	43.175	43.175	43.175	43.175	43.175	68.420	70.812	43.175	43.175	68.544	68.750	51.813
666-1 to 666-22	**Mixed fertilizers (22 series which vary with States and seasons).**														

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale.	Relative importance, year 1946	INDEXES (1926=100) OF PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	CHEMICAL AND ALLIED PRODUCTS—Continued														
	Fertilizer materials—Continued														
657-2.2	Cyanamid, calcium, pulverized (25-26 percent ammonia, 21 percent nitrogen), paper bags, any quantity, f. o. b. cars, Niagara Falls, Ontario.	0.01	88.2	88.2	88.2	88.2	88.2	88.2	88.2	88.2	88.2	88.2	88.2	98.6	89.2
[3] 657-3.2	Fish scrap, unground, dried, 60 percent protein, f. o. b. fish factory.	.01	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
658-1	Phosphate rock, Florida land pebble, 72-70 percent b. p. l. minimum, bulk, large lots, f. o. b. mines.	.01	79.6	79.6	79.6	79.6	79.6	84.6	89.5	89.5	89.5	89.5	89.5	89.5	85.0
	Potash:														
659-1	Kainit, high grade, basis 20 percent K_2O, bulk, any quantity, c. i. f. ports.	(6)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
660-1.1	Manure salts, basis 25 percent K_2O, bulk, any quantity, f. o. b. mines.	.01	110.4	110.4	110.4	110.4	110.4	97.2	97.2	97.2	97.2	97.2	110.4	110.4	105.0
661-1.1	Muriate, domestic, basis 60 percent K_2O, bulk, any quantity, New York.	(6)	91.6	91.6	91.6	91.6	91.6	80.6	80.6	80.6	80.6	80.6	91.6	91.6	87.1
661-2	Muriate, imported, basis 50 percent K_2O, bulk, any quantity, New York.	(6)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
662-1	Sulfate, 90 percent K_2SO_4, basis 48.65 percent K_2O, bulk, any quantity, c. i. f. Gulf and Atlantic ports.	(6)	88.4	88.4	88.4	88.4	88.4	77.8	77.8	77.8	77.8	77.8	88.4	88.4	84.0
663.1	Sodium nitrate, crude, imported, 100-pound bags, f. o. b. cars, port warehouses.	.04	63.4	63.4	63.4	63.4	63.4	63.4	63.4	74.0	74.0	74.0	74.0	74.0	68.0
664	Superphosphate, pulverized, 16-percent basis, run of pile, bulk, large lots, f. o. b. Baltimore.	.03	108.4	108.4	108.4	108.4	108.4	108.4	108.4	116.8	116.8	116.8	116.8	116.8	111.9
[3] 665.1	Tankage, 10-11 percent ammonia, ground, f. o. b. Chicago.	.01	110.0	100.0	110.0	110.0	110.0	110.0	174.4	180.5	110.0	110.0	174.7	175.2	132.0
666-1 to 666-22	**Mixed fertilizers** (22 series which vary with States and seasons).	.18	86.6	86.6	86.6	86.6	86.6	86.6	86.8	87.7	90.0	90.5	91.1	93.8	88.2

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Unit	AVERAGE PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	CHEMICALS AND ALLIED PRODUCTS—Continued														
	Oils and fats:														
[3] 671-1.1	Copra, bulk, c. i. f. Pacific ports	Ton	(2)	(2)	(2)	(2)	(2)	$109.500	$109.500	$109.650	$110.250	$110.250	$110.250	$168.812	(2)
	Oils:														
671-2	Castor, technical (No. 3), drums (returnable), carlots, f. o. b. New York.	Pound	$0.135	$0.138	$0.148	$0.148	$0.148	.148	.148	.148	.174	.200	.284	.298	$0.172
671-3.1	Coconut, Manila, crude, bulk, c. i. f. New York.	do	.084	.084	.084	.084	.084	.084	.084	.084	.084	.085	.250	(2)	[10].091
[3] 671-4.2	Palm, Niger, drums, f. o. b. New York.	do	.086	.086	.086	.086	.086	.086	.086	.086	.086	.086	(2)	(2)	(2)
671-5	Palm kernel, imported, denatured, drums, carlots, f. o. b. New York Harbor.	do	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
671-6.1	Pine, tanks, large lots, f. o. b. works	Gallon	.550	.550	.550	.550	.550	.550	.625	.650	(2)	(2)	.610	.610	(2)
671-7.1	Soybean, domestic, crude, tankcars, f. o. b. mill.	Pound	.118	.118	.118	.118	.118	.118	.118	.137	.118	.173	.244	.249	.145
671-8	Sulfur olive (foots), imported, drums (nonreturnable), carlots, ex-dock New York.	do	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	(2)	(2)	(2)
671-9	Whale, refined, natural, drums, f. o. b. New York.	do	.119	.119	.119	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
671-10	Tallow, inedible, packers prime, tankcars, f. o. b. Chicago.	do	.086	.886	.086	.086	.086	.086	.122	.086	.086	.104	.212	.218	.111
	HOUSEFURNISHING GOODS:														
	Furnishings:														
	Blankets:														
672	Cotton, f. o. b. factory	Pair	1.519	1.519	1.613	1.645	1.645	1.645	1.860	1.896	1.940	2.062	2.062	2.062	1.793
673.1	Part wool, 4 pounds, f. o. b. factory	do	2.842	2.842	2.842	2.842	2.842	3.055	(2)	3.490	(2)	(2)	(2)	(2)	(2)
[3] 674.1	Wool, 4 pounds, f. o. b. factory	Pound	9.408	9.408	9.408	9.408	9.408	9.408	9.408	9.408	9.408	9.408	9.408	9.408	9.408
[3] 675.2	50 percent cotton, 50 percent wool, 4 pounds, f. o. b. factory.	Each	4.851	4.851	4.851	4.851	4.851	4.851	4.851	4.851	4.851	4.851	4.851	5.145	4.879
	Cutlery, f. o. b. factory:														
676.1	Carvers, 7-inch	Dozen	3.283	3.283	3.283	3.283	2.283	4.410	4.410	4.410	4.410	4.410	4.410	4.410	3.942
[3] 677-1.1	Flatware, silver plated, 34 pieces	Set	(2)	(2)	(2)	7.987	7.987	7.987	7.987	7.987	7.987	7.987	7.987	7.987	(2)

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Sontinued

Code No.	Commodity—Description and terms of sale	Relative importance, year 1946	INDEXES (1926=100) OF PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	CHEMICALS AND ALLIED PRODUCTS—Continued														
	Oils and fats	0.25	101.7	101.8	102.1	102.1	102.1	102.1	114.2	102.5	103.3	111.1	191.0	203.0	119.1
[3] 671-1.1	Copra, bulk, c. i. f. Pacific ports	.04	(2)	(2)	(2)	(2)	(2)	91.8	94.8	95.0	95.5	95.5	95.9	146.2	(2)
	Oils:														
671-2	Castor, technical (No. 3), drums (returnable), carlots, f. o. b. New York.	.01	111.3	113.8	121.6	121.6	121.6	121.6	121.6	121.6	143.3	164.9	234.3	245.3	142.6
[3] 671-3.1	Coconut, Manila, crude, bulk, c. i. f. New York.	.06	87.1	87.1	87.1	87.1	87.1	87.1	87.1	87.2	87.7	89.1	260.8	(2)	[10] 95.6
[3] 671-4.2	Palm, Niger, drums, f. o. b. New York.	.03	103.0	103.0	103.0	103.0	103.0	103.0	103.0	103.0	103.0	103.0	(2)	(2)	(2)
671-5	Palm kernel, imported, denatured, drums, carlots, f. o. b. New York Harbor.	.01	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
671-6.1	Pine, tanks, large lots, f. o. b. works	(6)	115.3	115.3	115.3	115.3	115.3	115.3	131.0	136.2	(2)	(2)	127.8	127.8	(2)
671-7.1	Soybean, domestic, crude, tank cars, f. o. b. mill.	(6)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
671-8	Sulfur olive (foots) imported drums, (nonreturnable), carlots, ex-dock, New York.	.01	207.4	207.4	207.4	207.4	207.4	207.4	207.4	207.4	207.4	207.4	(2)	(3)	(2)
671-9	Whale, refined, natural, drums, f. o. b. New York.	.01	114.1	114.1	114.1	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
671-10	Tallow, inedible, packers, prime, tank cars, f. o. b. Chicago.	.08	99.1	99.1	99.1	99.1	99.1	99.1	140.1	99.1	99.1	120.1	244.2	250.0	121.1
	HOUSEFURNISHING GOODS	**2.39**	**106.2**	**106.5**	**106.9**	**107.5**	**108.3**	**110.4**	**111.9**	**112.6**	**113.6**	**115.3**	**118.2**	**120.2**	**111.6**
	Furnishings	**1.31**	**109.7**	**110.1**	**110.9**	**112.1**	**113.4**	**114.5**	**117.3**	**118.5**	**119.4**	**121.3**	**124.4**	**126.3**	**116.6**
	Blankets:														
672	Cotton, f. o. b. factory	.02	100.2	100.2	106.4	108.5	108.5	108.5	122.7	125.1	127.9	136.1	136.1	136.1	118.2
673.1	Part wool, 4 pounds, f. o. b. factory	.04	116.2	116.2	116.2	116.2	116.2	124.8	(2)	142.6	(2)	(2)	(2)	(2)	(2)
[3] 674.1	Wool, 4 pounds, f. o. b. factory	.03	133.4	133.4	133.4	133.4	133.4	133.4	133.4	133.4	133.4	133.4	133.4	133.4	133.4
[3] 675.2	50 percent cotton, 50 percent wool, 4 pounds, f. o. b. factory.	.03	80.8	80.8	80.8	80.8	80.8	80.8	80.8	80.8	80.8	80.8	80.8	85.7	81.3
	Cutlery f. o. b. factory:														
676.1	Carvers, 7-inch	.01	100.0	100.0	100.0	100.0	100.0	134.3	134.3	134.3	134.3	134.3	134.3	134.3	120.1
[3] 677-1.1	Flatware, silver plated, 34 pieces	.01	(2)	(2)	(2)	83.8	83.8	83.8	83.8	83.8	83.8	83.8	83.8	83.8	(2)

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Unit	AVERAGE PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	HOUSEFURNISHING GOODS—Con.														
	Furnishings—Continued														
	Floor covering, f. o. b. mill:														
	Axminister (composite price):														
678-1.2	Carpet, 27-inch width	Linear yard	$2.238	$2.264	$2.264	$2.340	$2.366	$2.366	$2.366	$2.366	(2)	(2)	(2)	(2)	(2)
[3]678-2.5	Rugs, 9 by 12 feet	Each	(2)	(2)	30.596	31.615	31.974	31.974	31.974	31.974	(2)	(2)	(2)	(2)	(2)
	Velvet carpet, plain (composite price):														
679-1	27-inch width	Linear yard	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
679-2	9-foot width	Square yard	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
[3]680-1.6	Wilton rugs, 9 by 12 feet (composite price).	Each	(2)	(2)	58.256	60.188	60.875	60.875	60.875	60.875	$60.875	$61.331	(2)	(2)	(2)
	Felt base, printed enamel, heavy weight:														
681	6-foot width	Square yard	.242	.247	.264	.267	.282	.282	.282	.282	.289	.292	$0.333	$0.351	$0.285
682	Rugs, 9 by 12 feet	Each	3.135	3.210	3.435	3.478	3.647	3.647	3.647	3.647	3.757	3.786	4.313	4.458	3.682
	Linoleum:														
683	Inlaid, straight line, standard gage.	Square yard	.827	.846	.904	.915	.959	.959	.959	.959	.984	.992	(2)	(2)	(2)
684.1	Plain, standard gage	do	.677	.693	.739	.748	.783	.783	.783	.783	.809	.814	.922	.933	.789
685.1	Irons, electric, automatic, f. o. b. factory	Each	(2)	(2)	(2)	(2)	5.155	5.155	5.155	5.155	5.155	5.155	5.448	5.821	(2)
[3]687.1	Ironers, electric, automatic, 26-inch roll, on stand, f. o. b. factory.	do	51.708	54.400	54.400	54.400	56.182	59.063	61.944	61.944	61.944	61.944	64.419	66.894	59.130
	Oilcloth, f. o. b. factory:														
688	Shelf, 12-inch, per 24 yards	Piece	1.546	1.546	1.546	1.546	1.546	1.795	1.795	1.795	1.795	1.903	1.930	1.930	1.725
689	Table, 46-inch, per 12 yards	do	2.765	2.765	2.765	2.765	2.765	3.130	3.130	3.130	3.130	3.322	3.370	3.370	3.037
690	Wall, 45-inch, plain tints, per 12 yards.	do	3.370	3.370	3.370	3.370	3.370	3.821	3.821	3.821	3.821	4.059	4.118	4.118	3.706
692	Pillowcases, 64 by 64 inches, plain, 36 by 45 inches, f. o. b. mill.	Dozen	3.626	3.626	3.867	3.947	3.947	3.947	4.697	(2)	4.784	4.900	4.900	4.900	(2)
[3]693.2	Sewing machines, electric, f. o. b. factory (composite price).	Each	(2)	(2)	(2)	(2)	(2)	78.892	78.892	78.892	78.892	80.887	87.260	88.313	(2)
695	Shades, window, 36-inch, f. o. b. Chicago.	Dozen	4.888	4.888	4.888	4.888	5.434	5.617	5.617	5.617	5.617	6.603	6.603	6.603	5.616
696	Sheets, bed, plain, 81 by 99 inches, f. o. b. mill.	do	15.113	15.113	16.118	16.453	16.453	16.453	19.579	(2)	20.007	20.610	20.610	20.610	(2)

See footnotes at end of table.

TABLE 1.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Relative importance, year 1946	INDEXES (1926=100) OF PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	HOUSEFURNISHING GOODS—Con.														
	Furnishings—Continued														
	Floor covering, f. o. b. mill:														
	Axminster (composite price):														
678-1.2	Carpet, 27-inch width	0.03	[5] 144.2	[5] 145.8	[5] 145.8	[5] 150.8	[5] 152.4	[5] 152.4	[5] 152.4	[5] 152.4	(2)	(2)	(2)	(2)	(2)
[3] 678-2.5	Rugs, 9 by 12 feet	.13	(2)	(2)	[5] 139.6	[5] 144.3	[5] 145.9	[5] 145.9	[5] 145.9	[5] 145.9	(2)	(2)	(2)	(2)	(2)
	Velvet carpet, plain (composite price):														
[3] 679-1	27-inch width	.03	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
679-2	9-foot width	.06	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
[4] 680-1.6	Wilton, rugs, 9 by 12 feet (composite price):	.07	(2)	(2)	[5] 155.7	[5] 160.8	[5] 162.7	[5] 162.7	[5] 162.7	[5] 162.7	[5] 162.7	[5] 163.9	(2)	(2)	(2)
	Felt base, printed enamel, heavy weight:														
681	6-foot width	.02	83.4	85.3	91.0	92.2	97.3	97.3	97.3	97.3	99.8	100.8	115.0	121.0	98.2
682	Rugs, 9 by 12 feet	.02	44.5	45.5	48.7	49.3	51.7	51.7	51.7	51.7	53.3	53.7	61.2	63.2	52.2
	Linoleum:														
683	Inlaid, straight line, standard gage.	.03	88.8	90.9	97.1	98.3	103.0	103.0	103.0	103.0	105.7	106.5	(2)	(2)	(2)
684.1	Plain, standard gage	.02	81.6	83.5	89.1	90.2	94.4	94.4	94.4	94.4	97.5	98.2	111.2	112.5	95.2
685.1	Irons, electric, automatic, f. o. b. factory.	.01	(2)	(2)	(2)	(2)	73.2	73.2	73.2	73.2	73.2	73.2	77.9	82.6	(2)
[3] 687.1	Ironers, electric, automatic, 26-inch roll, on stand, f. o. b. factory.	.01	105.3	110.8	110.8	110.8	114.5	120.3	126.2	126.2	126.2	126.2	131.2	136.3	120.5
	Oilcloth, f. o. b. factory														
688	Shelf, 12-inch, per 24 yards	.01	119.9	119.9	119.9	119.9	119.9	139.3	139.3	139.3	139.3	147.7	149.7	149.7	133.8
689	Table, 46-inch, per 12 yards	.02	122.7	122.7	122.7	122.7	122.7	138.9	138.9	138.9	138.9	147.5	149.6	149.6	134.8
690	Wall, 45-inch, plain tints, per 12 yards.	.01	111.4	111.4	111.4	111.4	111.4	126.4	126.4	126.4	126.4	134.2	136.2	136.2	122.6
692	Pillowcases, 64 by 64 inches, plain, 36 by 45 inches, f. o. b. mill.	.01	114.5	114.5	122.1	124.7	124.7	124.7	148.4	(2)	151.1	154.8	154.8	154.8	(2)
[3] 693.2	Sewing machines, electric, f. o. b. factory (composite price).	.05	(2)	(2)	(2)	(2)	(2)	99.3	99.3	99.3	99.3	101.8	109.8	111.1	(2)
695	Shades, window, 36-inch, f. o. b. Chicago	.06	95.8	95.8	95.8	95.8	106.6	110.1	110.1	110.1	110.1	129.5	129.5	129.5	110.1
696	Sheets, bed, plain, 81 by 99 inches, f. o. b. mill.	.03	113.1	113.1	120.6	123.1	123.1	123.1	146.5	(2)	149.7	154.2	154.2	154.2	(2)

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Unit	AVERAGE PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	HOUSEFURNISHING GOODS—Con.														
	Furnishings—Continued														
	Stoves, cooking, f. o. b. factory (composite price):														
[3] 697.1	Coal	Each	$32.948	$32.948	$33.813	$34.678	$34.678	$36.655	$37.314	$37.314	$37.314	$37.314	$37.314	$37.314	$35.811
698.1	Electric	do	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
[3] 699.2	Gas	do	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
[3] 700.3	Oil	do	(2)	(2)	(2)	(2)	52.301	55.295	56.293	56.293	56.293	56.293	57.421	(2)	(2)
701	Tablecloth, mercerized, colored border, 64 by 64 inches, f. o. b. mill.	do	1.343	1.343	1.343	1.343	(2)	(2)	1.611	1.884	1.919	1.960	1.970	1.970	(2)
	Tableware, f. o. b. factory:														
	Dinner, sets, semivitreous:														
702	100 pieces, gold lace border	Set	23.360	23.360	23.360	23.360	23.360	24.180	25.000	25.000	25.000	25.000	26.750	26.750	24.554
703	95 pieces, 3-spray	do	19.000	19.000	19.000	19.000	19.000	19.000	19.000	19.000	20.330	20.330	20.330	20.330	19.452
705	Pitchers, glass, ½-gallon	Doz	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
706	Plates, white granite, 7-inch	do	.920	.920	.920	.920	.920	.950	.980	.980	.980	.980	1.180	1.180	.987
707	Teacups and saucers, white granite	do	1.150	1.150	1.150	1.150	1.150	1.190	1.230	1.230	1.230	1.230	1.480	1.480	1.236
708	Tumblers, glass, pressed, 8 to 10 ounces.	do	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
[3] 710.3	Vacuum cleaners, electric, floor type, without attachments, f. o. b. factory.	Each	(2)	(2)	(2)	(2)	(2)	21.207	22.971	22.971	22.971	22.971	27.433	28.920	(2)
[3] 711.3	Washing machines, electric, nonautomatic, 8-pound capacity, with drain pump, f. o. b. factory.	do	(2)	(2)	(2)	(2)	(2)	(2)	58.989	59.615	59.553	59.553	62.616	63.637	(2)
	Furniture, f. o. b. factory (composite price):														
	Bedroom:														
	Beds:														
[3] 712.1	Metal, 1½-2-inch posts, 4-foot 6-inch width.	do	5.307	5.341	5.341	5.414	5.488	5.488	5.488	5.488	5.488	5.841	5.880	5.880	5.542
[3] 713.5	Wood, 4-foot 6-inch width [9]	do	------	------	------	------	------	------	------	------	------	------	------	------	------
[3] 714-1.4	Chests [9]	do	------	------	------	------	------	------	------	------	------	------	------	------	------
[3] 716.6	Dressers and vanities, including mirrors [9].	do	------	------	------	------	------	------	------	------	------	------	------	------	------
[3] 717.2	Mattresses, cotton, layer-felt, 50 pound.	do	(2)	10.100	10.192	10.902	10.902	10.902	10.902	10.902	10.902	12.167	12.666	12.666	[10] 11.239
[3] 717-1	Mattresses, innerspring, 180-210 coils	do	13.688	13.699	13.703	13.703	13.928	13.982	13.982	13.982	14.113	14.923	15.058	15.462	14.201
718.4	Springs, bed, 90-99 coils	do	(2)	(2)	(2)	(2)	(2)	7.803	7.803	7.803	7.803	8.107	8.312	8.514	(2)

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Relative importance, year 1946	INDEXES (1926=100) OF PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	HOUSEFURNISHING GOODS—Con.														
	Furnishings—Continued														
	Stoves, cooking, f. o. b. factory (composite price):														
[3] 697.1	Coal	.07	116.8	116.8	119.9	123.0	123.0	130.0	132.3	132.3	132.3	132.3	132.3	132.3	127.0
698.1	Electric	.02	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
[3] 699.2	Gas	.12	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
[3] 700.3	Oil	.02	(2)	(2)	(2)	(2)	99.3	105.0	106.9	106.9	106.9	106.9	109.0	(2)	(2)
701	Tablecloth, mercerized, colored border, 64 by 64 inches, f. o. b. mill.	.01	110.7	110.7	110.7	110.7	(2)	(2)	132.8	155.4	158.2	161.6	162.4	162.4	(2)
	Tableware, f. o. b. factory:														
	Dinner sets, semivitreous:														
702	100 pieces, gold lace border	.02	147.8	147.8	147.8	147.8	147.8	153.0	158.2	158.2	158.2	158.2	169.3	169.3	155.4
703	95 pieces, 3-spray	.02	145.4	145.4	145.4	145.4	145.4	145.4	145.4	145.4	155.6	155.6	155.6	155.6	148.8
705	Pitchers, glass, ½-gallon	.13	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
706	Plates, white granite, 7-inch	.01	93.9	93.9	93.9	93.9	93.9	96.9	100.0	100.0	100.0	100.0	120.4	120.4	100.7
707	Teacups and saucers, white granite	.01	91.3	91.3	91.3	91.3	91.3	94.4	97.6	97.6	97.6	97.6	117.5	117.5	98.1
708	Tumblers, glass, pressed, 8 to 10 ounces.	.05	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
[3] 710.3	Vacuum cleaners, electric, floor type, without attachments, f. o. b. factory.	.02	(2)	(2)	(2)	(2)	(2)	61.0	66.1	66.1	66.1	66.1	78.9	83.2	(2)
[3] 711.3	Washing machines, electric, nonautomatic, 8 pound capacity, with drain pump, f. o. b. factory.	.05	(2)	(2)	(2)	(2)	(2)	(2)	52.7	53.2	53.2	53.2	55.9	56.8	(2)
	Furniture, f. o. b. factory (composite price).	1.06	102.6	102.9	102.9	102.9	102.9	106.1	106.4	106.6	107.5	109.2	111.6	113.9	106.4
	Bedroom:														
	Beds:														
[3] 712.1	Metal, 1½-2-inch posts, 4-foot 6-inch width.	.02	81.9	82.4	82.4	83.5	84.7	84.7	84.7	84.7	84.7	90.1	90.7	90.7	85.5
[3] 713.5	Wood, 4-foot 6-inch width [9]	.05	109.3	110.0	111.1	111.9	112.6	114.6	114.6	114.6	114.3	114.7	117.4	119.6	113.7
[3] 714-1.4	Chests [9]	.03	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
[3] 716.6	Dressers and vanities, including mirrors.[9]	.09	103.6	104.0	105.0	105.5	106.2	108.4	108.4	108.4	108.7	109.1	111.7	113.6	107.7
[3] 717.2	Mattresses, cotton, layer-felt, 50 pound.	.05	(2)	113.6	114.6	122.6	122.6	122.6	122.6	122.6	122.6	136.8	142.4	142.4	[10] 126.4
[3] 717-1	Mattresses, innerspring, 180-210 coils	.13	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
[3] 718.4	Springs, bed, 90-99 coils	.05	(2)	(2)	(2)	(2)	(2)	101.6	101.6	101.6	101.6	105.5	108.2	110.8	(2)

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Unit	AVERAGE PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	HOUSEFURNISHING GOODS—Con.														
	Furniture, f. o. b. factory—Continued														
	Dining room:														
[3] 719.3	Buffets and chinas [9]	Each	----	----	----	----	----	----	----	----	----	----	----	----	----
[3] 720.3	Chairs [9]	Set of 6	----	----	----	----	----	----	----	----	----	----	----	----	----
[3] 721.3	Tables [9]	Each	----	----	----	----	----	----	----	----	----	----	----	----	----
[3] 721–1.3	Dinette table and 4 chairs [9]	Set	----	----	----	----	----	----	----	----	----	----	----	----	----
	Kitchen:														
[3] 722.1	Cabinets [9]	Each	----	----	----	----	----	----	----	----	----	----	----	----	----
[3] 724.2	Refrigerators, electric, 7 cubic foot	do	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
725	Tables [9]	do	----	----	----	----	----	----	----	----	----	----	----	----	----
	Living room:														
[3] 726.2	Chairs, upholstered [9]	do	----	----	----	----	----	----	----	----	----	----	----	----	----
[3] 727.2	Sofas, upholstered [9]	do	----	----	----	----	----	----	----	----	----	----	----	----	----
[3] 728.2	Tables [9]	do	----	----	----	----	----	----	----	----	----	----	----	----	----
	Office:														
	Chairs, arm, oak:														
729.1	Side	do	$9.239	$9.239	$9.239	$9.239	$9.239	$9.239	$9.239	$9.457	$9.530	$9.530	(2)	(2)	(2)
730.1	Swivel	do	11.698	11.698	11.698	11.698	11.698	11.698	11.698	12.000	12.100	12.100	(2)	(2)	(2)
	Desks, oak:														
731.3	Flat-top	do	41.734	42.137	42.390	42.644	42.644	42.695	42.746	43.604	44.254	45.347	$47.889	$47.889	$43.854
732.5	Typewriter	do	42.046	42.642	42.929	43.215	43.215	43.215	43.215	43.672	44.352	45.937	50.619	50.901	44.701
	MISCELLANEOUS:														
	Automobile tires and tubes, f. o. b. factory (composite price):														
	Tires:														
733	Balloon	do	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
734	Truck and bus	do	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
735	Tubes, inner	do	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	Cattle feed:														
736	Bran, f. o. b. Minneapolis	Ton	37.750	37.750	37.750	37.750	40.250	47.750	62.950	52.312	47.375	51.500	46.550	38.500	44.957

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Relative importance, year 1946	INDEXES (1926=100) OF PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	HOUSEFURNISHING GOODS—Con.														
	Furniture, f. o. b. factory—Continued														
	Dining room:														
[3]719.3	Buffets and chinas [9]	0.05	128.2	128.5	128.5	128.5	130.7	137.3	137.3	137.3	137.3	137.3	143.9	145.3	135.0
[3]720.3	Chairs [9]	.07	128.7	129.3	129.3	129.3	131.3	137.1	137.1	137.1	137.1	137.1	140.5	143.0	134.7
[3]721.3	Tables [9]	.05	118.5	118.9	118.9	118.9	121.8	126.9	126.9	126.9	126.9	126.9	131.9	133.0	124.7
[3]721-1.3	Dinette table and 4 chairs [9]	.02	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	Kitchen:														
[3]722.1	Cabinets [9]	.03	113.1	113.1	113.1	113.1	113.1	113.1	113.1	124.3	124.3	124.3	124.9	125.0	117.9
[3]724.2	Refrigerators, electric, 7 cubic feet	.11	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
725	Tables [9]	.01	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	Living room:														
[3]726.2	Chairs, upholstered [9]	.08	122.7	122.7	122.7	122.7	122.7	122.7	125.1	125.0	125.0	125.0	125.0	126.6	124.0
[3]727.2	Sofas, upholstered [9]	.16	110.5	110.5	110.5	110.5	110.5	110.5	113.5	116.3	116.3	116.3	116.3	116.9	113.2
[3]728.2	Tables [9]	.04	95.6	95.6	95.6	95.6	105.7	105.7	106.4	108.9	108.9	108.9	113.9	115.6	104.7
	Office:														
	Chairs, arm, oak:														
729.1	Side	(6)	98.6	98.6	98.6	98.6	98.6	98.6	98.6	100.9	101.7	101.7	(2)	(2)	(2)
730.1	Swivel	.01	111.1	111.1	111.1	111.1	111.1	111.1	111.1	114.0	115.0	115.0	(2)	(2)	(2)
	Desks, oak:														
731.3	Flat-top	.02	24.1	125.3	126.0	126.8	126.8	126.9	127.1	129.6	131.6	134.8	142.4	142.4	130.4
732.5	Typewriter	.01	119.6	121.3	122.1	122.9	122.9	122.9	122.9	124.2	126.2	130.7	144.0	144.8	127.2
	MISCELLANEOUS	**9.28**	**95.3**	**95.6**	**95.6**	**95.7**	**97.0**	**96.5**	**101.3**	**102.0**	**102.1**	**104.0**	**106.5**	**108.9**	**100.3**
	Automobile tires and tubes, f. o. b. factory (composite price).	**1.96**	**73.0**	**73.0**	**73.0**	**73.0**	**73.0**	**73.0**	**73.0**	**73.0**	**73.0**	**73.0**	**73.0**	**73.0**	**73.0**
	Tires:														
733	Balloon	1.30	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
734	Truck and bus	.35	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
735	Tubes, inner	.33	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	Cattle feed	**.77**	**159.6**	**159.6**	**159.6**	**159.6**	**173.6**	**197.6**	**246.3**	**221.1**	**201.8**	**217.2**	**210.6**	**193.6**	**191.1**
736	Bran, f. o. b. Minneapolis	.26	163.5	163.5	163.5	163.5	174.4	206.9	272.7	226.6	205.2	223.1	201.7	166.8	194.8

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Unit	AVERAGE PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	MISCELLANEOUS:														
	Cattle feed—Continued														
	Meal:														
[3] 737.2	Cottonseed, 41 percent protein, f.o.b. Memphis.	Ton	(2)	(2)	(2)	$48.750	$59.250	$62.750	$100.000	$95.000	$62.750	$73.750	$92.400	$80.300	(3)
738-1	Soybean, 41 percent bulk, f. o. b. Decatur, Ill.	do	$45.000	$45.000	$45.000	45.000	45.000	55.500	75.600	89.375	63.100	72.938	90.625	75.500	$62.495
739	Middings, standard, f. o. b. Minneapolis	do	37.750	37.750	37.750	37.750	40.250	47.750	64.750	53.312	47.750	53.052	50.350	38.750	45.740
	Paper and pulp:														
	Paperboard, earlots, delivered manufacturers' net price to fabricators (composite price):														
	Chip, No. 90 or heavier sheets:														
	Unlined:														
740-1	Central territory	do	49.946	53.262	53.460	53.460	53.460	53.460	53.460	54.846	57.420	57.420	60.538	64.944	55.508
740-2	Eastern territory	do	49.582	53.295	53.460	53.460	53.460	54.120	54.120	55.935	57.420	57.420	60.472	63.855	55.735
	Single manila lined:														
741-1	Central territory	do	61.380	64.202	64.350	64.350	64.350	64.350	64.825	66.330	66.330	66.330	71.107	79.398	66.519
741-2	Eastern territory	do	61.380	64.350	64.350	64.350	64.350	64.350	64.548	66.330	66.330	66.330	71.311	79.942	66.570
	Liner, 85-pound test:														
742-1	Central territory	M square feet.	2.090	2.090	2.090	2.090	2.146	2.146	2.175	2.327	2.327	2.327	2.449	2.668	2.246
742-2	Eastern territory	do	2.089	2.089	2.089	2.089	2.089	2.089	2.132	2.307	2.307	2.307	2.680	3.054	2.282
	0.009-corrugating paper (rolls):														
742-3.1	Central territory	do	.917	.917	.917	.944	.944	.967	.997	1.023	1.023	1.023	1.046	1.158	.991
742-4.1	Eastern territory	do	.917	.917	.917	.944	.944	.967	.997	1.023	1.023	1.023	1.046	1.158	.991
	Paper, earlots, f. o. b. mill:														
743	Book, grade B, sheets, zone 1, freight allowed.	100 pounds	7.580	8.000	8.000	8.000	8.000	8.000	8.000	8.275	8.550	8.550	8.550	9.300	8.239
744	Newsprint, standard, rolls, freight allowed, New York basis, contract.	Ton	67.000	67.000	67.000	67.000	67.000	67.000	69.720	72.150	74.000	80.000	84.000	84.000	72.287
745	Tissue, white, No. 1	Ream	1.125	1.125	1.125	1.125	1.125	1.125	1.125	1.125	1.125	1.185	(2)	(2)	(2)
746.1	Wrapping, standard, kraft rolls, zone A, freight allowed.	100 pounds	4.750	4.750	4.750	4.750	4.750	4.750	4.750	4.750	4.750	4.750	4.750	5.375	4.798
	Wood pulp, delivered consuming mill:														
747.1	Northern unbleached sulphate	Ton	73.000	73.000	73.000	74.200	76.000	76.000	76.000	76.000	81.625	83.500	86.250	89.000	78.019
748.1	Sulfite, domestic, unbleached	do	74.000	74.000	74.000	74.000	82.000	82.000	82.000	82.000	88.000	90.000	92.000	94.000	82.308

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Relative importance, year 1946	INDEXES (1926=100) OF PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	MISCELLANEOUS—Continued														
	Cattle feed—Continued														
	Meal:														
[3] 737.2	Cottonseed, 41 percent protein, f. o. b. Memphis.	0.20	(2)	(2)	(2)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(2)
738-1	Soybean, 41 percent bulk, f. o. b. Decatur, Ill.	.05	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
739	Middlings, standard, f. o. b. Minneapolis.	.26	161.1	161.1	161.1	161.1	171.8	203.8	276.4	227.5	203.8	226.5	214.9	165.4	195.2
	Paper and pulp	1.97	112.0	113.7	113.7	113.9	115.3	115.6	117.1	119.6	121.9	124.6	127.7	136.4	119.4
	Paperboard, carlots, delivered manufacturers' net price to fabricators (composite price).	.39	110.4	113.7	113.9	114.2	114.2	115.6	117.0	121.7	122.9	122.9	128.4	142.2	120.2
	Chip, No. 90 or heavier sheets:														
	Unlined:														
740-1	Central territory	.06	118.4	126.3	126.8	126.8	126.8	126.8	126.8	130.0	136.2	136.2	143.5	154.0	131.5
740-2	Eastern territory	.04	116.9	125.5	126.0	126.0	126.0	127.5	127.5	131.8	135.3	135.3	142.5	154.8	131.8
	Single manila lined:														
741-1	Central territory	.07	122.0	127.6	127.9	127.9	127.9	127.9	128.9	131.9	131.9	131.9	141.4	157.9	132.3
741-2	Eastern territory	.04	113.2	118.6	118.6	118.6	118.6	118.6	119.1	122.3	122.3	122.3	131.5	147.4	122.8
	Liner, 85-pound test:														
742-1	Central territory	.08	104.4	104.4	104.4	104.4	107.2	107.2	108.7	116.3	116.3	116.3	122.3	133.3	112.2
742-2	Eastern territory	.06	104.3	104.3	104.3	104.3	104.3	104.3	106.6	115.2	115.2	115.2	135.9	152.6	114.0
	0.009 corrugating paper (rolls):														
742-3.1	Central territory	.02	99.4	99.4	99.4	102.2	102.2	104.7	107.9	110.8	110.8	110.8	113.3	125.4	107.4
742-4.1	Eastern territory	.02	95.0	95.0	95.0	97.7	97.7	100.1	103.2	105.9	105.9	105.9	108.3	120.0	102.7
	Paper, carlots, f. o. b. mill	1.30	105.8	107.3	107.3	107.3	107.3	107.3	109.2	111.4	112.5	115.8	118.0	125.6	111.2
743	Book, grade B, sheets, zone 1, freight allowed.	.34	120.3	127.0	127.0	127.0	127.0	127.0	127.0	131.4	135.8	135.8	135.8	147.6	130.8
744	Newsprint, standard, rolls, freight allowed, New York basis, contract.	.39	93.3	93.3	93.3	93.3	93.3	93.3	97.1	100.5	103.1	111.4	117.0	117.0	100.7
745	Tissue, white, No. 1	.12	140.6	140.6	140.6	140.6	140.6	140.6	140.6	140.6	140.6	148.1	(2)	(2)	(2)
746.1	Wrapping, standard, kraft rolls, zone A, freight allowed.	.45	90.3	90.3	90.3	90.3	90.3	90.3	90.3	90.3	90.3	90.3	90.3	102.2	91.2
	Wood pulp, delivered consuming mill	.28	140.6	140.6	140.6	141.7	154.1	154.1	154.1	154.1	165.6	169.4	173.1	178.5	155.3
747.1	Northern unbleached sulphate	.06	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
748.1	Sulfite, domestic, unbleached	.19	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Unit	AVERAGE PRIMARY MARKET PRICES, 1946.												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	MISCELLANEOUS—Continued														
	Paper and pulp—Continued														
	Wood pulp, etc.—Continued														
749.1	Mechanical, No. 1	Ton	$50.000	$50.000	$50.000	$53.200	$58.000	$58.000	$58.000	$58.000	$62.500	$64.000	$64.000	$70.100	$58.085
750	Soda bleached	100 pounds	3.800	3.800	3.800	3.800	4.200	4.200	4.200	4.200	4.556	4.675	4.675	5.025	4.162
	Rubber, crude, delivered, ex-dock and/or warehouse, New York:														
751	Amber, No. 3	Pound	.211	.211	.211	.211	.211	.211	.211	.211	.211	.211	.211	.211	.211
752	Latex, standard thick	do	.225	.225	.225	.225	.225	.225	.225	.225	.225	.225	.225	.225	.225
753	Plantation, ribbed, smoked sheets	do	.225	.225	.225	.225	.225	.225	.225	.225	.225	.225	.225	.225	.225
	Other miscellaneous:														
	Batteries:														
755	Dry, radio, f. o. b. distribution point	do	.230	.230	.230	.230	.230	.230	.230	.235	.250	.250	.240	.240	.236
756	Storage, auto, f. o. b. factory	do	7.321	7.321	7.321	7.321	7.321	7.321	7.321	7.321	7.928	7.928	8.604	10.633	7.833
	Caskets, adult size, delivered (composite price):														
[3] 757.2	Metal	do	(2)	(2)	(2)	(2)	(2)	(2)	99.788	99.788	99.788	99.788	103.316	103.316	(2)
758.3	Wood, covered	do	45.496	45.496	45.496	45.496	45.496	45.496	45.496	45.496	45.496	45.496	45.496	48.926	45.820
759	Cigar boxes, cedar veneer, f. o. b. factory	100	11.025	11.025	11.025	11.025	11.025	11.025	11.025	11.025	11.025	11.025	11.025	11.025	11.025
	Matches, f. o. b. factory:														
760	Regular (composite price)	Case	4.767	4.767	4.767	4.767	4.767	4.767	4.723	4.723	4.723	4.723	5.190	5.190	4.824
761	Safety	Gross	.846	.846	.846	.846	.846	.846	.846	.846	.846	.846	.906	.906	.856
762	Mirrors, beveled, circular, 24-inch, f. o. b. factory.	Each	4.455	4.455	4.455	4.455	4.455	4.455	4.455	4.826	4.950	4.950	5.198	5.445	4.716
	Oil, lubricating, f. o. b. refinery:														
763	Bright stock, Oklahoma, 150-160 viscosity at 210° F.	Gallon	.220	.220	.220	.220	.220	.220	.220	.220	.240	.240	.240	.260	.229
764	Cylinder, Pennsylvania, 600 flash	do	.160	.160	.160	.160	.160	.160	.160	.200	.214	.248	.250	.274	.193
	Neutral:														
765	South Texas, 300 viscosity at 100° F.	do	.092	.092	.092	.092	.092	.092	.092	.098	.102	.102	.104	.105	.097
766	Pennsylvania, 180 viscosity at 100° F.	do	.280	.280	.280	.280	.280	.280	.280	.330	.330	.338	.338	.348	.304
767	Pipe covering, asbestos, 1 inch, f. o. b. Chicago.	Linear foot	.078	.078	.078	.078	.078	.078	.078	.089	.089	.089	.089	.091	.083

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Relative importance, year 1946	AVERAGE PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	MISCELLANEOUS—Continued														
	Paper and pulp—Continued														
	Wood pulp, etc.—Continued														
749.1	Mechanical No. 1	0.02	122.1	122.1	122.1	130.0	141.7	141.7	141.7	141.7	152.7	156.3	156.3	171.2	141.9
750	Soda bleached	.01	98.6	98.6	98.6	98.6	109.0	109.0	109.0	109.0	118.2	121.3	121.3	130.4	108.0
	Rubber, crude, delivered, ex-dock and/or warehouse, New York.	**.42**	**46.2**	**46.2**	**46.2**	**46.2**	**48.2**	**46 2**	**46.2**	**48.2**	**46.2**	**48.2**	**46.2**	**46.2**	**46.2**
751	Amber, No. 3	.04	46.7	46.7	46.7	46.7	46.7	46.7	46.7	46.7	46.7	46.7	46.7	46.7	46.7
752	Latex, standard thick	.04	45.5	45.5	45.5	45.5	45.5	45.5	45.5	45.5	45.5	45.5	45.5	45.5	45.5
753	Plantation, ribbed, smoked sheets	.34	46.2	46.2	46.2	46.2	46.2	46.2	46.2	46.2	46.2	46.2	46.2	46.2	46.2
	Other miscellaneous	**4.14**	**98.9**	**98.9**	**98.9**	**99.2**	**100.2**	**101.0**	**101.9**	**105.0**	**108.5**	**108.2**	**113.3**	**117.0**	**104.3**
	Batteries:														
755	Dry, radio, f. o. b. distribution point.	.19	112.2	112.2	112.2	112.2	112.2	112.2	112.2	114.7	122.0	122.0	117.1	117.1	114.9
756	Storage, auto, f. o. b. factory	.09	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3	70.7	70.7	76.7	94.8	69.8
	Caskets, adult size, delivered (composite price):														
[3] 757.2	Metal	.03	(2)	(2)	(2)	(2)	(2)	(2)	103.4	103.4	103.4	103.4	107.1	107.1	(2)
[3] 758.3	Wood, covered	.06	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	96.8	90.6
759	Cigar boxes, cedar veneer, f. o. b. factory.	.01	93.7	93.7	93.7	93.7	93.7	93.7	93.7	93.7	93.7	93.7	93.7	93.7	93.7
	Matches, f. o. b. factory:														
760	Regular (composite price)	.04	108.3	108.3	108.3	108.3	108.3	108.3	106.4	106.4	106.4	106.4	116.9	116.9	108.6
761	Safety	.01	105.8	105.8	105.8	105.8	105.8	105.8	105.8	105.8	105.8	105.8	113.2	113.2	107.0
762	Mirrors, beveled, circular, 24-inch, f. o. b. factory.	.09	167.8	167.8	167.8	167.8	167.8	167.8	167.8	181.8	186.5	186.5	195.8	205.1	177.7
	Oil, lubricating, f. o. b. refinery:														
763	Bright stock, Oklahoma, 150–160 viscosity at 210° F.	.12	122.2	122.2	122.2	122.2	122.2	122.2	122.2	122.2	133.3	133.3	133.3	144.4	127.2
764	Cylinder, Pennsylvania, 600 flash	.10	67.3	67.3	67.3	67.3	67.3	67.3	67.3	84.1	90.0	104.1	105.1	115.2	81.0
	Neutral:														
765	South Texas, 300 viscosity at 100° F.	.05	71.9	71.9	71.9	71.9	71.9	71.9	71.9	75.8	79.7	79.7	80.7	81.6	75.2
766	Pennsylvania, 180 viscosity at 100° F.	.16	100.1	100.1	100.1	100.1	100.1	100.1	100.1	117.9	117.9	120.6	120.6	124.4	108.5
767	Pipe covering, asbestos, 1 inch, f. o. b. Chicago.	.22	116.0	116.0	116.0	116.0	116.0	116.0	116.0	132.0	132.0	132.0	132.0	134.4	122.8

See footnotes at end of table.

TABLE 12.—*Primary market prices, index numbers, and relative importance of individual commodities, 1946*—Continued

Code No.	Commodity—Description and terms of sale	Unit	AVERAGE PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	MISCELLANEOUS—Continued														
	Other miscellaneous—Continued														
	Rubber heels (composite price), delivered:														
768	Men's	Dozen	$1.065	$1.065	$1.065	$1.065	$1.065	$1.106	$1.213	$1.284	$1.281	$1.284	$1.284	$1.281	$1.195
769	Women's	do	.699	.699	.699	.699	.699	.719	.805	.862	.862	.862	.862	.862	.778
[3] 770.2	Rubber hose, garden, ⅝-inch, delivered	Foot	.057	.057	.057	.062	.063	.063	.063	.063	.063	.065	.067	.067	.062
771	Rubbers, men's, f. o. b. destination	Pair	1.274	1.274	1.274	1.421	1.421	1.421	1.421	1.421	1.421	1.421	1.421	1.421	1.389
772	Shipping case, pine, adult size, delivered.	Each	9.800	9.800	9.800	9.800	11.760	11.760	11.760	11.760	11.760	11.760	11.760	11.760	11.094
	Soap, delivered (composite price):														
773-1	Chips or flakes, for laundry use, bulk	Pound	.107	.108	.108	.108	.109	.110	.117	.110	.110	.110	.184	.215	.126
[3] 773-2.4	Flakes, for household use, packaged, carlots.	do	.151	.151	.151	.151	.151	.151	.156	.151	.151	.151	.227	.266	.168
773-3	Cleansers, packaged, carlots	do	.051	.051	.051	.051	.051	.051	.051	.051	.051	.051	.056	.058	.052
774-1.3	Laundry bars, white, carlots	do	.061	.061	.061	.061	.061	.061	.061	.061	.061	.061	.078	.081	.064
[3] 775-1.3	Laundry bars, yellow, carlots	do	(2)	(2)	.068	.068	.068	.069	.076	.076	.076	.076	.092	.100	(2)
776-1	Powdered or granulated, for laundry use, bulk.	do	.111	.111	.111	.111	.112	.112	.118	.113	.113	.113	.186	.224	.129
776-2.1	Powdered or granulated, packaged, carlots.	do	.132	.132	.132	.132	.132	.132	.131	.132	.130	.130	.171	.194	.141
776-3.1	Textile (industrial), bulk, carlots	do	.133	.133	.133	.133	.135	.135	.137	.135	.135	(2)	(2)	(2)	(2)
777-1.1	Toilet, bars or cakes	do	.228	.228	.228	.228	.228	.228	.230	.228	.228	.228	.292	.324	.242
[3] 777-2.1	Washing powder, bulk, carlots	do	.037	.037	.037	.037	.037	.037	.040	.037	.038	.039	.061	.066	.042
[3] 777-3.1	Washing powder, packaged, carlots	do	.054	.054	.054	.054	.054	.054	.055	.054	.054	.054	.068	(2)	(2)
778	Starch, laundry, f. o. b. New York	do	.066	.066	.066	.066	.066	.066	.066	.066	.066	.066	.066	.076	.067
	Tobacco products, f. o. b. destination:														
779	Cigarettes, list price (composite price).	1,000	6.006	6.006	6.006	6.056	6.255	6.255	6.255	6.255	6.255	6.424	6.509	6.509	6.234
[3] 780.3	Cigars, list price (composite price)	do	62.221	62.221	62.221	62.221	62.221	62.221	62.727	65.636	66.355	67.418	68.169	68.169	64.339
781	Plug	Pound	.770	.770	.770	.770	.770	.770	.770	.770	.770	.782	.834	.834	.782
[3] 782.1	Smoking, 1-ounce bags	Gross	1.353	1.353	1.353	1.365	1.365	1.364	1.364	1.364	1.364	1.364	1.364	1.364	1.362
783	Snuff, 1½-ounce can	½ gross	4.768	4.768	4.768	4.768	4.979	5.049	5.049	5.049	5.107	5.165	5.165	5.165	4.983
[3] 784.1	Wax, crude white, f. o. b. New York refinery.	Pound	(2)	(2)	(2)	(2)	.042	.042	.042	.050	.058	.058	.058	.059	(2)

See footnotes at end of table.

Code No.	Commodity—Description and terms of sale	Relative importance, year 1946	INDEXES (1926=100) OF PRIMARY MARKET PRICES, 1946												
			January	February	March	April	May	June	July	August	September	October	November	December	Year
	MISCELLANEOUS—Continued														
	Other miscellaneous—Continued														
	Rubber heels (composite price), delivered:														
768	Men's	0.02	72.2	72.2	72.2	72.2	72.2	75.0	82.3	87.1	87.1	87.1	87.1	87.1	81.1
769	Women's	.01	74.8	74.8	74.8	74.8	74.8	77.0	86.2	92.3	93.2	92.3	92.3	92.3	83.3
[3] 770.2	Rubber hose, garden, 5/8-inch, delivered	.02	85.0	85.0	85.0	93.2	95.3	95.3	95.3	95.3	95.3	98.3	100.4	100.4	93.8
771	Rubbers, men's, f. o. b. destination	.07	117.0	117.0	117.0	130.5	130.5	130.5	130.5	130.5	130.5	130.5	130.5	130.5	127.6
772	Shipping case, pine, adult size, delivered	.01	128.9	128.9	128.9	128.9	154.7	154.7	154.7	154.7	154.7	154.7	154.7	154.7	146.0
	Soap, delivered (composite price)	.49	101.0	101.0	101.1	101.1	101.2	101.3	103.8	102.6	102.0	102.0	136.8	152.1	108.9
773-1	Chips or flakes, for laundry use, bulk	.02	112.8	113.4	113.4	113.7	114.9	115.1	123.5	116.2	116.2	116.2	193.3	226.5	132.0
[3] 773-2.4	Flakes, for household use, packaged, carlots.	.05	97.9	97.9	97.9	97.9	97.9	97.9	101.1	97.9	97.9	97.9	147.2	172.8	109.0
773-3	Cleansers, packaged, carlots	.02	96.6	96.6	96.6	96.6	96.6	96.6	97.6	96.6	96.6	96.6	106.3	111.1	98.9
774-1.3	Laundry bars, white, carlots	.09	104.0	104.0	104.0	104.0	104.0	104.0	104.0	104.0	104.0	104.0	133.5	143.2	109.9
[3] 775-1.3	Laundry bars, yellow, carlots	.07	(2)	(2)	117.2	117.2	117.2	119.1	130.9	129.9	129.9	129.9	158.6	171.3	(2)
776-1	Powdered or granulated, for laundry use, bulk.	.01	113.0	113.4	113.4	113.6	114.5	114.8	120.0	115.7	115.7	115.7	189.5	228.7	131.4
776-2.1	Powdered or granulated, packaged, carlots.	.07	106.1	106.1	106.1	106.1	106.1	106.1	107.8	106.1	104.7	104.7	138.0	156.5	113.2
776-3.1	Textile (industrial), bulk, carlots	.02	131.8	131.8	131.8	132.2	133.6	133.6	135.9	134.1	134.1	(2)	(2)	(2)	(2)
777-1.1	Toilet, bars or cakes	.12	86.9	86.9	86.9	86.9	86.9	86.9	87.8	86.9	86.9	86.9	111.5	123.6	92 3
[3] 777-2.1	Washing powder, bulk, carlots	(6)	96.2	96.2	96.2	96.2	96.2	96.2	103.0	97.5	99.8	100.6	159.5	171.8	109.5
[3] 777-3.1	Washing powder, packaged, carlots	.02	88.7	88.7	88.7	88.7	88.7	88.7	91.4	88.7	88.7	88.7	112.6	(2)	(2)
778	Starch, laundry, f. o. b. New York	.07	114.1	114.1	114.1	114.1	114.1	114.1	114.1	114.1	114.1	114.1	114.1	131.2	115.6
	Tobacco products, f. o. b. destination:														
779	Cigarettes, list price (composite price).	1.17	106.1	106.1	106.1	107.0	110.5	110.5	110.5	110.5	110.5	113.5	115.0	115.0	110.2
[3] 780.3	Cigars, list price (composite price)	.70	116.3	116.3	116.3	116.3	116.3	116.3	117.3	122.7	124.1	126.1	127.5	127.5	120.3
781	Plug	.11	110.6	110.6	110.6	110.6	110.6	110.6	110.6	110.6	110.6	112.4	119.8	119.8	112.3
[3] 782.1	Smoking, 1-ounce bags	.20	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
783	Snuff, 1½-ounce can	.05	90.1	90.1	90.1	90.1	94.1	95.4	95.4	95.4	96.5	97.6	97.6	97.6	94.2
[3] 784.1	Wax, crude white, f. o. b. New York refinery.	.05	(2)	(2)	(2)	(2)	88.5	88.5	88.5	104.2	119.8	119.8	119.8	122.9	(2)

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[1] Base period price not available.

[2] Insufficient data.

[3] New series.

[4] Reintroduction of earlier specifications. (During the war period, prices on a substitute series of different specifications were used to represent price movements of this commodity. The substitute series has now been replaced by the series formerly used.)

[5] 1935-39=100.

[6] Less than 0.005

[7] Not included in wholesale price index.

[8] Includes tax of $17.10 per gallon.

[9] Indexes for this article of furniture are based on prices for a number of qualities, materials, finishes, and size. Average prices for combinations of such different specifications are not meaningful, and therefore are not shown. Price changes due solely to changes in specifications are handled so that they do not affect the index for the commodity.

[10] Average of 11 months.

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